

BEFORE THE MINNESOTA PUBLIC UTILITIES COMMISSION

Dan Lipschultz	Commissioner
Matthew Schuenger	Commissioner
Katie J. Sieben	Commissioner
John A. Tuma	Commissioner

In the Matter of Minnesota Power's 2018  
Safety, Reliability and Service Quality  
Standards Report

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ORDER ACCEPTING REPORT,  
SETTING 2018 RELIABILITY  
STANDARDS, AND SETTING  
FUTURE REPORTING  
REQUIREMENTS

**PROCEDURAL HISTORY**

On April 2, 2018, Minnesota Power filed its 2017 Annual Safety, Reliability, and Service Quality report.

On August 1, 2018, the Department of Commerce, Division of Energy Resources (the Department) filed comments recommending that the Commission accept Minnesota Power's report and set 2018 reliability standards at 2017 levels.

On August 20, 2018, Minnesota Power filed reply comments requesting that the Commission set the Company's 2018 reliability standards using a five-year rolling average, rather than at the 2017 levels.

On September 10, 2018, the Department filed response comments recommending that the Commission set the 2018 reliability standards at 2017 levels, or at an average between 2017 levels and the five-year rolling average proposed by the Company.

On January 31, 2019, the reliability portions of the report came before the Commission; the Commission will separately consider the service quality portions of the report.

**FINDINGS AND CONCLUSIONS**

**I. Introduction**

On or before April 1 of each year, each public utility providing retail electric service in Minnesota must file a report on its safety, reliability, and service-quality performance during the

last calendar year.<sup>1</sup> Utilities must also propose reliability performance standards for the current year.<sup>2</sup> The Commission annually sets reliability standards for each utility.<sup>3</sup>

The Department analyzed Minnesota Power's report and recommended that the Commission accept it.

In its report, Minnesota Power reported data on three key indices: system average interruption duration index (SAIDI); system average interruption frequency index (SAIFI); and customer average interruption duration index (CAIDI).

SAIDI is determined by dividing the annual sum of customer-minutes of interruption by the average number of customers served during the year, using storm-normalized data.<sup>4</sup> SAIFI is determined by dividing the total annual number of customer interruptions by the average number of customers served during the year, using storm-normalized data.<sup>5</sup> CAIDI is determined by dividing SAIDI by SAIFI.<sup>6</sup>

The Department evaluated Minnesota Power's reliability performance using data utilities are required to report, including the following:<sup>7</sup>

- Reliability performance (SAIDI, SAIFI, and CAIDI)
- Storm-normalization method
- Action plan for remedying failure to comply with reliability standards
- Bulk power supply interruptions
- Major service interruptions
- Circuit interruption data
- Known instances in which nominal voltages did not meet American National Standards Institute standards
- Work center staffing levels
- Any other relevant information

## II. 2018 Reliability Standards

Minnesota Power proposed using a five-year rolling average to set the Company's 2018 reliability standards, stating that although the Company did not reach the standards set in 2017, the Company has made progress in increasing its reporting accuracy using Advanced Metering Infrastructure. The Company also noted that unique circumstances, including weather and equipment failure, adversely affected the Company's ability to meet the 2017 standards.

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<sup>1</sup> Minn. R. 7826.0400; .0500, subp. 1.; and .1300.

<sup>2</sup> Minn. R. 7826.0600, subp. 1.

<sup>3</sup> *Id.*, subp. 2.

<sup>4</sup> Minn. R. 7820.0200, subp. 10.

<sup>5</sup> *Id.* at subp. 11.

<sup>6</sup> *Id.* at subp. 4.

<sup>7</sup> Minn. R. 7826.0500, subp. 1, items A-K.

The Department recommended that the Commission set the SAIDI, SAIFI, and CAIDI standards at the 2017 levels, as follows:

	<b>SAIDI</b>	<b>SAIFI</b>	<b>CAIDI</b>
2017 Standard	98.19	1.02	96.26

The Department also supported using an average of the five-year rolling average and the levels above to reflect the Company's concerns regarding performance. The Department emphasized the need to incentivize the Company to further invest in reliability by establishing standards that are more stringent than the rolling five-year average the Company proposed.

The Commission concurs with the Department on establishing standards for 2018 that would reasonably motivate the Company to further its efforts to improve reliability. The Commission will therefore accept the safety and reliability portions of Minnesota Power's report and set the Company's 2018 reliability standards at the 2017 levels shown in the table above.

Further, the Commission will establish the following reporting requirements for future annual reports:

- Non-normalized SAIDI, SAIFI, and CAIDI values.
- SAIDI, SAIFI, and CAIDI values calculated using the Institute of Electrical and Electronics Engineers (IEEE) 2.5 beta method.
- Customers Experiencing Multiple Interruptions (CEMI) – at normalized and non-normalized outage levels of 4, 5, and 6.
- Customers Experiencing Lengthy Interruptions (CELI) – at intervals of greater than 6 hours, 12 hours, and 24 hours.
- CELI.
- Estimated restoration times.
- IEEE benchmarking.
- Performance by customer class.
- More discussion of leading causes of outages and mitigation strategies.

Finally, the Commission will require Minnesota Power to include in its April 1, 2019 report, a discussion of how grid modernization initiatives could impact reliability metrics and what technologies are needed to advance tracking of additional metrics.

### **ORDER**

1. The Commission hereby accepts the safety and reliability portions of Minnesota Power's annual service quality report.
2. The Commission hereby sets Minnesota Power's 2018 reliability standards at the levels shown above.

3. In future annual reports, Minnesota Power must file the following:
  - a. Non-normalized SAIDI, SAIFI, and CAIDI values.
  - b. SAIDI, SAIFI, and CAIDI values calculated using the IEEE 2.5 beta method.
  - c. CEMI – at normalized and non-normalized outage levels of 4, 5, and 6.
  - d. CELI – at intervals of greater than 6 hours, 12 hours, and 24 hours.
  - e. CELI.
  - f. Estimated restoration times.
  - g. IEEE benchmarking.
  - h. Performance by customer class.
  - i. More discussion of leading causes of outages and mitigation strategies.
4. In its next annual report due April 1, 2019, Minnesota Power must file a discussion of how grid modernization initiatives could impact reliability metrics and what technologies are needed to advance of tracking additional metrics.
5. This order shall become effective immediately.

BY ORDER OF THE COMMISSION

Daniel P. Wolf  
Executive Secretary



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