

Minnesota Public Utilities Commission
Staff Briefing Papers

Meeting Date: **December 10, 2015** Agenda Item #2

Companies: Minnesota Power

Docket No. E015/M-15-323

In the Matter of the Minnesota Power Company's (MP) 2014 Annual Safety, Reliability, Service Quality Report, and Proposed Annual Reliability Standards for 2015.

Issue(s): Should the Commission Accept MP's April 1, 2015 Safety, Reliability, Service Quality Reports for 2014 and Its Proposed Annual Reliability Standards for 2015?

Staff: Marc Fournier651-201-2214

Relevant Documents

Commission, *Order Accepting Reports, Setting 2014 Reliability Standards, and Requiring Filings* Docket No. E015/M-14-281 December 12, 2014

Minnesota Power Initial Filing *Safety, Reliability and Service Quality Standards Report*..... April 1, 2015

Comments, Minnesota Power..... July 30, 2015

Comments, Minnesota Department of Commerce Division of Energy Resources. July 31, 2015

Reply Comments, Minnesota Power. August 10, 2015

Response to Reply Comments, Minnesota Department of Commerce

Division of Energy Resources. September 23, 2015
Supplemental Comments, Minnesota Power.....November 4, 2015
Supplemental Response Comments, Minnesota Department of Commerce
Division of Energy Resources.November 16, 2015

The attached materials are workpapers of the Commission Staff. They are intended for use by the Public Utilities Commission and are based upon information already in the record unless noted otherwise.

This document can be made available in alternative formats (e.g., large print or audio) by calling 651-296-0406 (voice). Persons with hearing loss or speech disabilities may call us through their preferred Telecommunications Relay Service.

Statement of the Issue(s)

Should the Commission Accept MP's April 1, 2015 Safety, Reliability, Service Quality Reports for 2014 and its Proposed Annual Reliability Standards for 2015?

Background

Minnesota Statute §216B.029, Standards for Distribution Utilities stipulates that the Commission shall adopt standards for safety, reliability, and service quality for distribution utilities.

Minnesota Rules Chapter 7826 were developed as a means for the Commission to establish safety, reliability, and service quality standards for electric distribution utilities and to monitor the performance of each utility as measured against those standards. There are three main annual reporting requirements set forth in the rule. These are:

1. The annual safety report (Minnesota Rules Part 7826.0400);
2. The annual reliability report (Minnesota Rules Parts 7826.0500, subp.1 and 7826.0600, subp. 1); and
3. The annual service quality report (Minnesota Rules Part 7826.1300).

These rules became effective on January 28, 2003. On April 1, 2015, MP filed its annual Electric Safety, Reliability, and Service Quality Performance Report and its request for approval of proposed reliability standards.¹

1 Minnesota Rules part 7826.0500 require MP'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.

Reliability Report

<i>Metric/Term</i>	<i>Explanation</i>
SAIDI (System Average Interruption Duration Index)	average customer minutes of interruptions per customer (SAIDI = Total Customer Minutes of Sustained Outages ÷ Number of Customers)
SAIFI (System Average Interruption Frequency Index)	average number of interruptions per customer per year (Total Number of Sustained Customer Interruptions ÷ Number of Customers)
CAIDI (Customer Average Interruption Duration Index)	average customer minutes of interruption per customer interruption (Total Customer Minutes of Sustained Outages ÷ Total number of Sustained Customer Interruptions = SAIDI ÷ SAIFI)
Interruption	an interruption of electricity service to a customer greater than five minutes in duration
Major Service Interruption	an interruption of service at the feeder level or above and affecting 500 or more customers for one or more hours
Storm-normalized data	data that has been adjusted to neutralize the effects of outages due to major storms

Since 2003, the Commission has adopted measures to make the annual reports more comprehensive and useful for the Commission and the utilities. Staff has been focused on the service quality measures.

DOC

The DOC recommends that the Commission accept MP's April 1, 2015 Safety, Reliability, and Service Quality Standards Report in fulfillment of the requirements of Minnesota Rules, Chapter 7826 and the Commission's December 12, 2014 Order. Additionally, the DOC recommends that the Commission set the Company's reliability standards for 2015 as proposed by the Company.

Staff Analysis

Staff's main reason for writing briefing papers in this service quality docket is that the record contains several sets of comments, many of which ask for or provide additional information. Staff has reviewed the record and notes that in the Department's most recent comments, filed on November 16, 2015, the Department now agrees that the service quality report should be accepted.

Staff has consulted with the Consumer Affairs Office (CAO) regarding the restoration of involuntarily disconnected customers within 24 hours. CAO expressed no additional concerns with MP's decline in restoring involuntarily disconnected customers within 24 hours over the past two years.

Staff appreciates the effort by MP in its April 1, 2015 Annual Safety, Reliability and Service Quality Reports which continues to provide informative data that promotes focused decision making as it Relates to reliability.

The Department examined all the factors required by the rules. Staff will concentrate its comments on the reliability factors. Staff believes the DOC did an outstanding job in analyzing and reviewing the information contained in the submitted annual reports and will not repeat those efforts here. Staff concurs with the findings by DOC.

Staff believes that MP's April 1, 2015 filing complies with the applicable rules and Commission Order. The purpose of the reliability statues is to assure the Commission that reasonable standards of reliability performance are being properly measured and maintained.

MP's proposed and the DOC recommended the Commission adopt the following for 2015 reliability standards:

	SAIDI	SAIFI	CAIDI
2015 Standard	97.13	1.01	96.17

MP's Past Standards and Performance

Staff has compiled both charts and graphs showing MP's past performance.

The table below depicts MP's past standards:

Year	SAIDI		SAIFI		CAIDI	
	Performance	Standard	Performance	Standard	Performance	Standard
2003	94.31	142.00	1.04	1.20	90.68	118.00
2004	119.58	137.54	1.33	1.09	90.02	125.72
2005	113.22	136.28	1.11	1.14	101.81	119.58
2006	118.30	143.33	1.13	1.19	105.05	120.45
2007	125.18	122.70	1.09	1.20	115.32	102.25

2008	85.95	114.12	0.98	1.14	87.81	100.10
2009	90.21	119.31	1.02	1.22	88.61	97.79
2010	96.51	106.57	1.11	1.06	86.70	100.54
2011	90.59	103.23	0.92	1.06	98.47	97.39
2012	89.75	97.69	0.93	1.02	95.99	95.40
2013	120.43	90.60	1.14	0.99	105.64	91.52
2014	88.35	97.5	.96	1.02	92.03	95.59
2015 Proposed		97.13		1.01		96.17

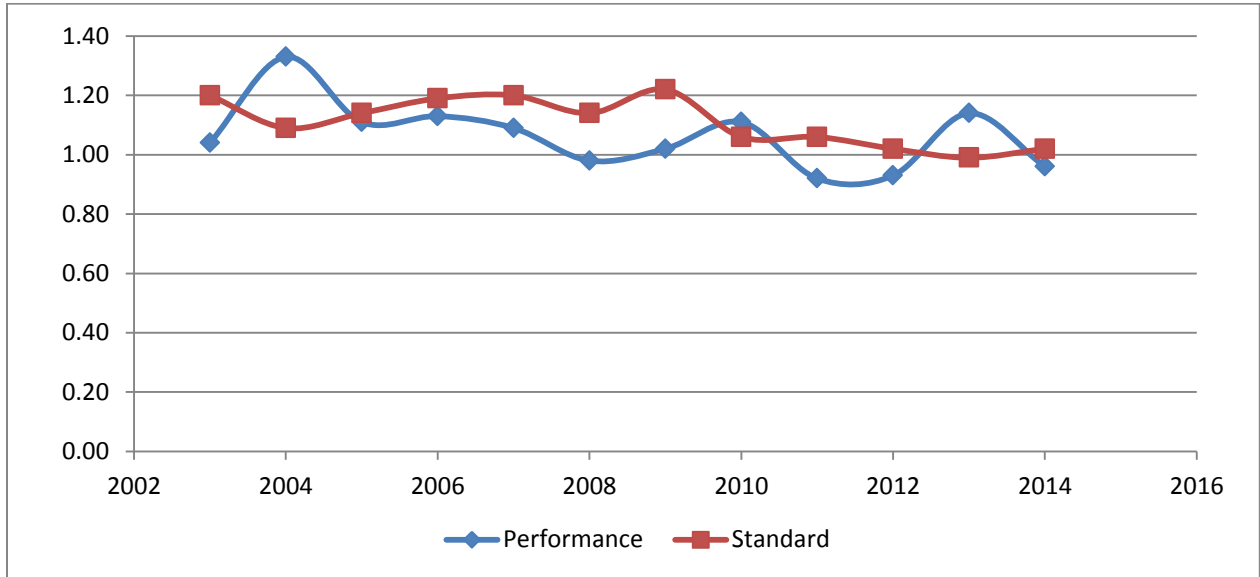
With the exception of two years (2007 and 2013), MP has consistently met its targets over the eleven year period. In addition, the last five years of observations have yielded a lower average SAIDI and a SAIDI that is more consistent with less variation than the SAIDI observations in the first five years of observations. The trends in SAIDI performance and standards can be seen below in the following diagram.

SAIDI Performance and Standard



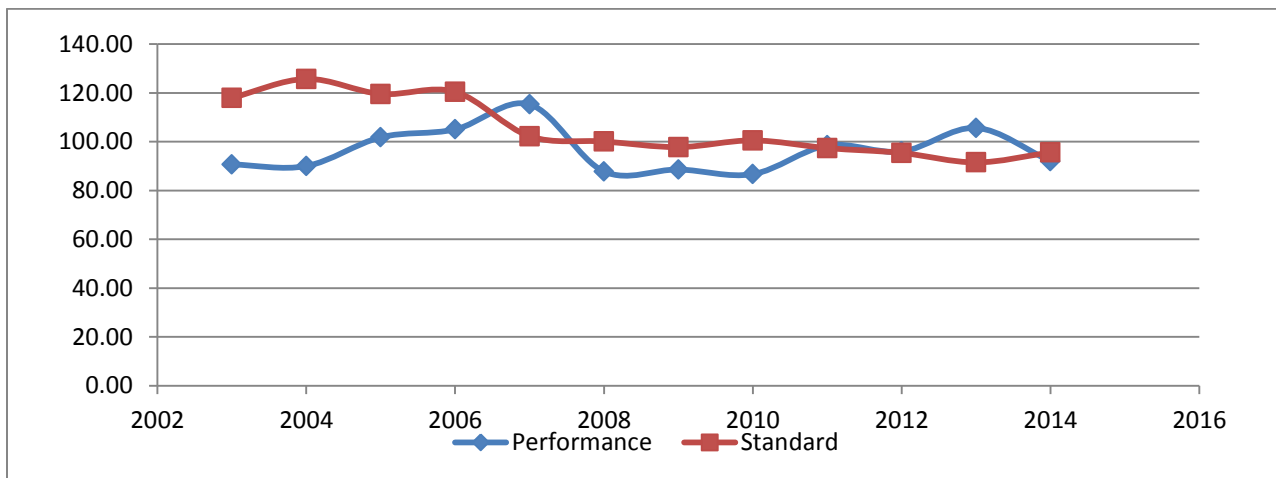
Likewise, SAIFI Performance and Standards have shown a similar trend. In most years, MP met the SAIFI performance standard set by the Commission. However, the improvement in SAIFI performance and standards has been significant over the ten-year period. The following diagram shows improvement in the number of customer interruption experienced by a typical customer over the ten-year period.

SAIFI Performance and Standards



Also, MP has met the performance standard for most years in the same period for CAIDI. The performance standard for CAIDI has gone down since 2003. During the first five years of observations, the average CAIDI (number of minutes per outage) performance was 100.58 and during the most recent five years it was 95.76.

CAIDI Performance and Standards



Commission Options

- I. Should the Commission accept MP’s April 1, 2015 Report on 2014 Results?
 - A. Accept MP’s April 1, 2015 safety, reliability and service quality reports, as complying with Minn. Rules, Chapter 7826 and relevant Commission orders.
 - B. Do not accept MP’s April 1, 2015 safety, reliability and service quality reports, as complying with Minn. Rules, Chapter 7826 and relevant Commission orders.

II. Whether the Commission should Accept MP’s proposed reliability standards for 2015?

- A. Accept MP’s 2015 proposed reliability standards at the levels indicated below:

	SAIDI	SAIFI	CAIDI
2015 Standard	97.13	1.01	96.17

- B. Accept some other reliability standard for 2015.

Recommendation

Staff recommends I A and II A.