

June 7, 2019

Daniel P. Wolf  
Executive Secretary  
Minnesota Public Utilities Commission  
121 7<sup>th</sup> Place East, Suite 350  
St. Paul, Minnesota 55101-2147

RE: **Comments of the Minnesota Commerce Department, Division of Energy Resources**  
Docket No. E015/M-19-254

Dear Mr. Wolf:

Attached are the comments of the Minnesota Commerce Department, Division of Energy Resources (Department) in the following matter:

Minnesota Power's 2019 Safety, Reliability and Service Quality Standards Report.

The 2017 report was filed on April 12, 2019 by:

Jenna Warmuth  
Senior Public Policy Advisor  
Minnesota Power  
30 West Superior Street  
Duluth, Minnesota 55802-2093

The Department recommends that the Minnesota Public Utilities Commission (Commission) **accept Minnesota Power's Safety, Reliability and Service Quality Standards Report and set reliability goals for 2018 at 2017 levels.** The Department is available to answer any questions that the Commission may have on this matter.

Sincerely,

/s/ DANIELLE D. WINNER  
Rates Analyst

DDW/  
Attachment



## Before the Minnesota Public Utilities Commission

---

### Comments of the Minnesota Department of Commerce Division of Energy Resources

Docket No. E015/M-19-254

#### I. INTRODUCTION

Minnesota Rules, Chapter 7826 (effective January 28, 2003) were developed as a means for the Minnesota Public Utilities Commission (Commission) to establish safety, reliability and service quality (SRSQ) standards for utilities “engaged in the retail distribution of electric service to the public” and to monitor their performance 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, part 7826.0500, subp. 1 and 7826.0600, subp. 1), and
- (3) the annual service quality report (Minnesota Rules, part 7826.1300).

On April 12, 2019, Minnesota Power (MP or the Company) filed its 2019 Annual SRSQ Report (2019 Report) to comply with the Commission’s Orders concerning MP’s 2018 Annual SRSQ Report (2018 Report) and the requirements of Minnesota Rules, Chapter 7826. The Commission’s March 19, 2019 Order addressed the Safety and Reliability components of Minnesota Power’s 2018 Report.<sup>1</sup> The Commission’s May 14, 2019 Order addressed the Service Quality components of Minnesota Power, Otter Tail Power, and Xcel Energy.<sup>2</sup> The May 14, 2019 Order also addressed Minnesota Power’s proposed Reconnect Pilot Program.

Minnesota Power filed its 2019 Report after the Commission’s March 19, 2019 Order and before the Commission’s May 14, 2019 Order. In its May 14, 2019 Order, the Commission did not direct Minnesota Power to file any additions or amendments to its already-filed 2019 Report. Therefore, the Minnesota Commerce Department, Division of Energy Resources (Department) concludes that only the only the March 19, 2019 directives are applicable to the Company’s instant filing.

In its March 19, 2019 Order, the Commission:

1. Accepted the safety and reliability portions of Minnesota Power’s annual service quality report.

---

<sup>1</sup> See March 19, 2019 Order Accepting Report, Setting 2018 Reliability Standards, and Setting Future Reporting Requirements.

<sup>2</sup> See May 14, 2019 Order Accepting Reports, Setting Filing Requirements, and Granting Withdrawal of Reconnect Pilot Proposal in Docket E015/M-18-250.

2. Set Minnesota Power's 2018 reliability standards at the 2017 levels of:
  - SAIDI (average number of minutes a customer was without power) = 98.19
  - SAIFI (average number of times a customer was without power) = 1.02
  - CAIDI (average minutes per outage for customers who lose power) = 96.26
3. Required that Minnesota Power include the following in future annual reports:
  - 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. Required that 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. Became effective immediately.

Section II of these Comments addresses the Company's 2019 Report. Section III of these Comments provides the Department's recommendations.

## **II. SUMMARY OF REPORT AND DEPARTMENT ANALYSIS**

The Department reviewed MP's 2019 Report to assess compliance with Minnesota Rules, Chapter 7826 and the Commission's March 19, 2019 Order. Information from past annual reports was used to facilitate the identification of issues and trends regarding MP's performance.

### *A. ANNUAL SAFETY REPORT*

The Annual Safety Report consists of two parts:

1. A summary of all reports filed with the United States Occupational Safety and Health Administration (OSHA) and the Occupational Safety and Health Division of the Minnesota Department of Labor and Industry (OSHD) during the calendar year; and
2. A description of all incidents during the calendar year in which an injury requiring medical attention or property damage resulting in compensation occurred as a result of downed wires or other electrical system failures and all remedial action taken as a result of any injuries or property damage described.

The following tables are a compilation of MP’s summaries of the reports the Company filed with OSHA and OSHD for the previous 10 years.

**Table 1: Number of Cases**

	Number of Deaths	Number of Cases with Days Away from Work	Number of Cases with Job Transfer or Restriction	Other Recordable Cases
2009	0	5	8	17
2010	1	6	8	19
2011	0	3	10	14
2012	0	4	10	8
2013	0	4	3	17
2014	0	3	8	10
2015	0	5	4	8
2016	0	8	5	15
2017	0	10	6	15
2018	0	1	3	14

According to press reports, the fatality in 2010 was due to electrocution. The OSHA investigation found no hazards at the location that may have contributed to the death. No citations were issued to MP in the matter.

**Table 2: Number of Work Days Impacted by Cases**

	Days of Job Transfer or Restriction	Days Away from Work
2009	215	56
2010	641	139
2011	353	43
2012	598	105
2013	218	29
2014	267	26
2015	115	26
2016	171	107
2017	629	139
2018	87	2

**Table 3: Injury & Illness Types**

	Injuries	Skin Disorders	Respiratory Conditions	Poisonings	All Other Illnesses
2009	27	3	0	0	0
2010	32	1	1	0	0
2011	26	1	0	0	0
2012	22	0	0	0	0
2013	23	1	0	0	0
2014	21	0	0	0	0
2015	17	0	0	0	0
2016	28	0	0	0	0
2017	31	0	0	0	0
2018	18	0	0	0	0

MP stated that there were no incidents in 2018 in which injuries requiring medical attention occurred because of downed wires or other electrical system failures.

The following table summarizes MP's current and past reporting on incidents in which property damage resulting in compensation occurred as a result of downed wires or other electrical system failures.

**Table 4: Property Damage Claims**

	Number of Claims	Amount Paid
2009	35	\$46,626.53
2010	22	\$50,634.22
2011	28	\$26,883.41
2012	17	\$12,796.63
2013	35	\$71,796.27
2014	23	\$26,939.32
2015	29	\$76,375.92
2016	16	\$15,466.26
2017	4	\$4,364.27
2018	10	\$22,374.13

Between 2017 and 2018, there was a 150% increase in the number of claims filed and 413% increase in the dollar amount paid for claims. A majority of the claims paid in 2018 (\$15,210.52, or 68%) were as a result of "vehicle damage." This is unlike many past years, where a majority of claims filed were due to "work procedure."

The Department acknowledges MP's fulfillment of Minnesota Rules, part 7826.0400.

*B. ANNUAL RELIABILITY REPORT*

Minnesota Rules, part 7826.0500 requires each utility to file an annual report that includes the following information:

1. reliability performance,
2. storm-normalization method,
3. action plan for remedying any failure to comply with reliability goals,
4. bulk power supply interruption,
5. major service interruptions,
6. circuit interruption data (identify worst-performing circuit),
7. known instances in which nominal voltages did not meet American National Standards Institute (ANSI) standards,
8. work center staffing levels, and
9. any other relevant information.

In addition, the Commission's March 19, 2019 Order required Minnesota Power to include the following information:

- 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.
- j. a discussion of how grid modernization initiatives could impact reliability metrics and what technologies are needed to advance tracking of additional metrics.

The Department attempted to combine topics where appropriate.

*1. Reliability Performance (SAIDI, SAIFI, and CAIDI)*

MP considers its entire service area as a single work center. In Docket No. E015/M-18-250, the Commission set the Company's reliability goals for 2018 as follows:<sup>3</sup>

---

<sup>3</sup> For ease of reference, the Department provides in Attachment A to these comments Minnesota Rules, Chapter 7826. Minnesota Rules, part 7826.0200 defines SAIDI, SAIFI and CAIDI. The Department also notes that the three indices are mathematically related: SAIDI / SAIFI = CAIDI.

- SAIDI (average number of minutes a customer was without power) = 98.19
- SAIFI (average number of times a customer was without power) = 1.02
- CAIDI (average minutes per outage for customers who lose power) = 96.26

On page 6 of Appendix A of its filing, MP stated that the IEEE 2.5 beta method was used to exclude major events from calculations of reliability indices in 2018. This method allows the Company to better reveal trends in their normal operation that would otherwise be obscured by the large statistical effect of Major Event Days (MEDs). The Company noted that, using this method, two major events were excluded from the data used to calculate SAIDI, SAIFI, and CAIDI in 2018.

In its March 19, 2019 Order in Docket No. E015/M-18-250, the Commission directed MP to file non-normalized SAIDI, SAIFI, and CAIDI values, along with the values calculated using the IEEE 2.5 beta method. The following table summarizes the normalized versus non-normalized values:

**Table 5. Minnesota Power’s Reported 2018 Non-Normalized versus Normalized SAIDI, SAIFI, CAIDI**

	Actual Performance Non-Normalized (Major Events included)	Actual Performance Normalized using the IEEE 2.5 beta method (Major Events not included)
SAIDI	158.51	134.00
SAIFI	1.49	1.39
CAIDI	106.04	96.50

The Department calculates different CAIDI values than what are reported by Minnesota Power. Since  $CAIDI = SAIDI/SAIFI$ , the Department calculates CAIDI to be 106.38 for non-normalized performance and 96.40 for normalized performance. It is unclear to the Department why MP reported a CAIDI value of 96.50; the Department asks MP to explain its calculation of CAIDI in Reply Comments.

Since the Commission has previously used the normalized data to set reliability goals for Minnesota Power, it is appropriate to use the 2018 normalized data to compare to the 2018 goals. MP’s reported reliability performance in 2018 is as follows:

**Table 6. MP's 2018 SAIDI, SAIFI, and CAIDI Performance, Actual versus Goals**

<b>2018</b>	<b>Actual Performance</b>	<b>Performance Goals</b>	<b>Results</b>
SAIDI	134	98.19	Did not meet goal
SAIFI	1.39	1.02	Did not meet goal
CAIDI	96.50	96.26	Did not meet goal

The Department notes that MP did not meet its goals for SAIDI, SAIFI, or CAIDI in 2018. Further discussion of MP's 2018 reliability performance is provided in section II.B.2 below.

The Department acknowledges MP's fulfillment of the requirements of Minnesota Rules, part 7826.0500, subp. 1A, B, C, and D. The Department notes that the Company appears to have fulfilled Order Point 3.a and b. of the Commission's March 19, 2019 Order.

### *2. Action Plan to Improve Reliability*

As noted above, MP did not meet the reliability standard established for SAIDI, SAIFI, or CAIDI in 2018. The Company identified weather and equipment failure as the primary reasons for not meeting the SAIDI and CAIDI goals.

The Company hired two Assistant Engineers in 2017, who in 2018 implemented a new "trouble order tracking and remediation system" as well as a "switch replacement blanket." They also began auditing the Company's system and developed an asset management preventative maintenance program. The Department looks forward to seeing the effectiveness of MP's efforts as reflected in future reports. As discussed below, the Department recommends that, rather than including 2018 reliability results in the calculation of 2019 goals, the Commission set the goals at 2018 levels.

The Department acknowledges MP's fulfillment of the requirements of Minnesota Rules, Part 7826.0500, subp. 1D.

### *3. CEMI*

In its March 19, 2019 Order in Docket No. E015/M-18-250, the Commission directed MP to file information on the Customers Experiencing Multiple Interruptions (CEMI).

On pages 22-23 of its filing, Minnesota Power reported that the Company calculates CEMI at a feeder level and does not currently have a method to track this measurement at the customer level. The Company reported that in 2018, 7.07% of customers experienced three outages, 1.30% of customers experienced four outages, and 0.36% of customers experienced six outages or more. In total, the Company reports that 8.73% of Minnesota Power customers experienced 3 or more outages in 2018. These figures seem to be fairly consistent with 2015 and 2016 figures (which total approximately 10% and 9%, respectively), but are much greater than 2014



and 2017 figures (which total approximately 3% and 4%, respectively). The Company provided a bar graph of CEMI at the feeder level from 2014 through 2018.

The Department notes that the Commission's Order directed Minnesota Power to provide CEMI "at normalized and non-normalized outage levels of 4, 5, and 6." The Company does not appear to identify whether the provided data is normalized or not. Therefore to comply with Order Point 3.c. of the Commission's March 19, 2019 Order, the Company should provide both the normalized and non-normalized data in its Reply Comments.

#### 4. *CELI*

In its March 19, 2019 Order in Docket No. E015/M-18-250, the Commission directed MP to file information on the Customers Experiencing Lengthy Interruptions (CELI).

On pages 23-24 of its filing, Minnesota Power reported that the Company calculates CELI at a feeder level and does not currently have a method to track this measurement at the customer level. The Company reported that in 2018, 0.57% of customers experienced outages greater than 12 hours, using IEEE normalized values. This figure appears to be much greater than the percentage of CELI in recent years: Minnesota Power reports that for 2014-2017, between 0.04% and 0.27% of customers experienced outages greater than 12 hours. The Company provided a bar graph of CELI greater than 12 hours at the feeder level from 2014 through 2018, using normalized results.

The Department notes that the Commission's March 19, 2019 Order specified that the Company should report CELI levels "at intervals of greater than 6 hours, 12 hours, and 24 hours." Since the Company only provided data for the 12-hour interval, to comply with Order Points 3.d. and 3.e. of the Commission's March 19, 2019 Order, the Company should provide data for each of the specified intervals. Further, since the Commission's Order did not specify whether the Company should provide normalized or non-normalized data, the Department recommends that the Company provide both in Reply Comments.

#### 5. *Estimated Restoration Times*

In its March 19, 2019 Order in Docket No. E015/M-18-250, the Commission directed MP to file information on estimated restoration times.

On pages 21-22 of its filing, Minnesota Power stated that it does not collect data regarding the comparison between actual and estimated restoration times, but will develop a method for capturing this data during the third quarter of 2019. The Company stated that currently, a crew arrives onsite and makes an initial restoration time assessment; the estimated restoration time is updated in the Company's Outage Management System and in the customer-facing Outage App. Estimated restoration times are updated in the Outage App on an ongoing basis until the

restoration process is complete. For larger events, a bulletin may be sent out through the Interactive Voice Response system, as well as through local media outlet and social media.

The Department notes that MP appears to have fulfilled Order Point 3.f. of the Commission's March 19, 2019 Order; however, MP should report further details on estimated restoration times in its next filing, once the Company has developed a method for capturing more data.

#### *6. IEEE Benchmarking*

In its March 19, 2019 Order in Docket No. E015/M-18-250, the Commission directed MP to file information on IEEE Benchmarking.

On page 21 of its filing, Minnesota Power stated that it does not currently provide benchmarking data to IEEE, but will begin doing so in 2019. The Company did state that it provides benchmarking data to the Edison Electric Institute, but did not elaborate further.

The Department notes that MP appears to have fulfilled Order Point 3.g. of the Commission's March 19, 2019 Order; however, MP should report further details on IEEE benchmarking in next filing, once the Company begins providing this data to IEEE.

#### *7. Performance by Customer Class*

In its Orders in Docket E015/M-17-252 and Docket No. E015/M-18-250, the Commission directed MP to file information on reliability performance by customer class.

On page 17 of its Petition, the Company provides a bar graph measuring average reliability for the commercial, industrial, and residential classes. The Company states that its figures were calculated by "taking outage numbers from each class and determining their overall reliability by time served." The Company reports the following reliability percentages: 99.99558% for Commercial, 99.99992% for Industrial, and 99.97500% for Residential.

The Department acknowledges that the Company appears to have fulfilled the compliance requirement with the Commission's Orders, but notes that the information provided does not appear to be especially meaningful. The Department asks that in Reply Comments, Minnesota Power provide the underlying data and calculations behind the provided figure.

#### *8. Bulk Power Supply Interruptions*

MP reported that there were eight events in 2018 resulting in an interruption of a bulk power supply facility. MP's descriptions of the outages include the corrective actions taken to minimize outages and restore service.

The Department acknowledges MP's fulfillment of the requirements of Minnesota rules, part 7826.0500, subp. 1F.

#### *9. Major Service Interruptions*

MP stated that there were 35 Distribution System Status Outage Notification reports in 2018 filed under Minnesota Rules, part 7826.0700. The Company provided copies of the reports in Appendix B of its filing. The Department provides a summary table of these reports in Attachment B to these Comments.

The Company's reports tended to be clustered in the late spring (April-June) and early fall (August-October) months. As noted above, MP indicated that a majority of 2018 outages were due to equipment failure or weather-related events. MP reported five outages in which the cause was unknown. The longest outage was due to tree/weather-related event that took place on October 4, 2018, affected 828 customers in the City of Hoyt Lakes, and lasted 360 minutes (6 hours). This outage time is comparable to the longest outage reported in 2017 (6 hours, 42 minutes) and is much more favorable than the longest outages in 2016, which lasted 5 days, 4 hours.<sup>4</sup> In 2018, the greatest number of customers impacted by one outage took place in Duluth on April 21, 2018, with 3,738 customers impacted for a duration of 65 minutes; this was due to bad underground equipment.

The Department acknowledges MP's fulfillment of the requirements of Minnesota rules, part 7826.0500, subp. 1G and Minnesota Rules, part 7826.0700.

#### *10. Discussion on Leading Causes of Outages and Mitigation Strategies*

In its March 19, 2019 Order in Docket No. E015/M-18-250, the Commission directed MP to file more discussion on causes of outages and mitigation strategies.

The Department is unclear as to where this discussion is located in Minnesota Power's filing. The Company does provide charts on SAIDI and SAIFI by cause, as well as the required Distribution System Outage Notification Reports, and a discussion of System Construction and Protection; however, these do not appear to be markedly different from the information provided in MP's 2018 Report.

---

<sup>4</sup> However, it appears that the outages resulting from the July 2016 storms caused MP to request help from the Midwest Mutual Assistance Group, which provides cooperation between utilities to provide labor and vehicles to utilities unlikely to restore power to all customers within 4 to 7 days. Since other Minnesota utilities were unable to provide help due to their own storm cleanups, MP had to request aid from as far away as Missouri. In a majority of 2016 cases, power was restored within one to three hours.

The Department requests that Minnesota Power clarify in Reply Comments which components of the Report were meant to fulfill this Order Point. If none exist, MP should provide such a discussion to fulfill Order Point 3.i. of the Commission's March 19, 2019 Order.

### *11. Worst Performing Circuit*

Rather than identifying just one circuit, MP identified its four worst performing feeders – two urban and two rural. These were: Verndale 1 (urban), Cloquet 406 (urban), St. Croix 2 (rural) and Colbyville 240 (rural). For each feeder, the Company detailed the causes of the poor performance and the actions planned or completed to improve the performance of these circuits.

The Department uses historical data to identify potential areas of concerns regarding any feeders that appear multiple times as a worst performing feeder. After reviewing ten years of historical data, the Department notes that two of the identified circuits (Colbyville 240 and Cloquet 406) have each been identified before in the past ten years - Colbyville 240 was identified in 2011, 2015, and 2016 and Cloquet 406 in 2015. The outages were due largely to weather events and equipment failure, with one outage due to a vehicle accident, and one outage due to a fallen tree. MP stated that it has addressed the equipment failure issues by fixing the problematic equipment. Finally, the Company noted that one outage on the Cloquet 406 circuit resulted in a small grass fire, and that the Company had to wait for assistance from the fire department before they were able to fix the damage.

The Department has concerns about the Colbyville 240 circuit, given that this was listed as one of the worst performing circuits in four of the past ten years. Minnesota Power has documented the following reasons for outages on this circuit:

#### 2018 (Docket No. E015/M-19-254)

- April 21<sup>st</sup>- 240 locked out due to failed underground equipment. Due to a few circumstances a back feed was not available. This situation coupled with the failed equipment located in close proximity to the substation caused 2,724 customers to be out of power for 65 mins and 655 customers for 376 mins while crews worked to fix the damaged equipment. In addition, the 240-275 tie switch was closed to back feed a section of Ridgeview 275 at the time of the equipment failure. The outage in turn affected 335 customers on this section of feeder for 376 minutes.
  - Crews fixed the damaged underground equipment and power was restored.
- May 29<sup>th</sup>- A storm rolled through a majority of Minnesota Power's service territory damaging many feeders and requiring many crews to work through the night.

- Crews fixed the damage caused by the storm and restored power to the customers.

2016 (Docket No. E015/M-17-252)

- On the 24<sup>th</sup> of February a truck snagged a line causing a phase to phase fault, causing 1880 customers to be without power for an average of 113 minutes while crews worked to safely restore power
- On the 22<sup>nd</sup> of March a switching error caused 3,245 customers to be without power for an average of 17 minutes.
- On the 5<sup>th</sup> of September a lightning strike caused 732 customers to be without power for an average of 203 minutes while the damage was repaired.

2015 (Docket No. E015/M-16-268):

- July 25, 2015- Overhead conductor failure (not overloading) near the substation caused the feeder to trip. Vast majority of customers restored through switching in less than 20 minutes. However, many customers were without power for as long as 224 minutes.
  - Restored through switching when possible. Primary repaired and power restored.
- August 31, 2015- A tree fell on the line between the Lismore F and a tie-switch. One of our reclosers failed to operate.
  - Crews worked quickly and safely to remove the tree and restore power. Some customers were restored via switching.
- November 29, 2015- Crews suspected loading issues although further review rules out overloading. A single-phase bypass fuse melted through.
  - Crews installed a new fuse and restored power.

2011 (Docket No. E015/M-12-308):

- June 21, 2011- Windy conditions knocked multiple trees onto the feeder line causing it to open and lock out. A transformer and pole were replaced due to the fallen tree.
  - No further action is required.
- August 26, 2011- Inclement weather in the Central service area caused the recloser to open and lock out. The device did not auto-reclose due to a programming error.

- The device was re-programmed. Testing showed the device to be working properly. No further action is required.

The Department notes that there does not seem to be any consistent outage causes. Department asks that in Reply Comments, Minnesota Power comment on actions it has taken to improve this circuit, and any planned actions to prevent this circuit from causing problems in the future.

The Department acknowledges MP's fulfillment of the requirements of Minnesota rules, part 7826.0500, subp. 1H.

#### *11. Compliance with ANSI Voltage Standards*

MP reported six instances in 2018 in which nominal electric service voltages did not meet the standards of ANSI Voltage Range B. Between 2006 and 2014, there were on average 6 instances annually, whereas the Company reported 21 instances in 2015, 20 instances in 2016, and 11 instances in 2017. MP's 2018 figures appear to signal a return to historical figures.

The Department acknowledges MP's fulfillment of the requirements of Minnesota Rules, part 7826.0500, subp. 1I.

#### *12. Discussion of Impact on Grid Modernization Initiatives*

In its March 19, 2019 Order in Docket No. E015/M-18-250, the Commission directed MP to provide a "discussion of how grid modernization initiatives could impact reliability metrics and what technologies are needed to advance of tracking [*sic*] additional metrics."

On page 8 of its filing, Minnesota Power provides the requested discussion. MP stated that the Company's increased adoption of Advanced Metering Infrastructure (AMI) has resulted in more real-time data collection; this means that outages where a start time and exact location may have previously been estimated, the Company now has more precise data. MP argued that increased AMI penetration has likely impacted SAIDI because the more precise data "has likely led to an increase in minutes attributed to an outage given the increase in reporting capability of line segments that may have previously been assumed to be in service." The Company stated that it is impossible to make a definitive correlation between AMI and SAIDI, however, given other variables such as weather events.

The Company did not specify how AMI might impact SAIFI, but provided the following figure and stated that AMI adoption has corresponded with increases in both SAIDI and SAIFI:

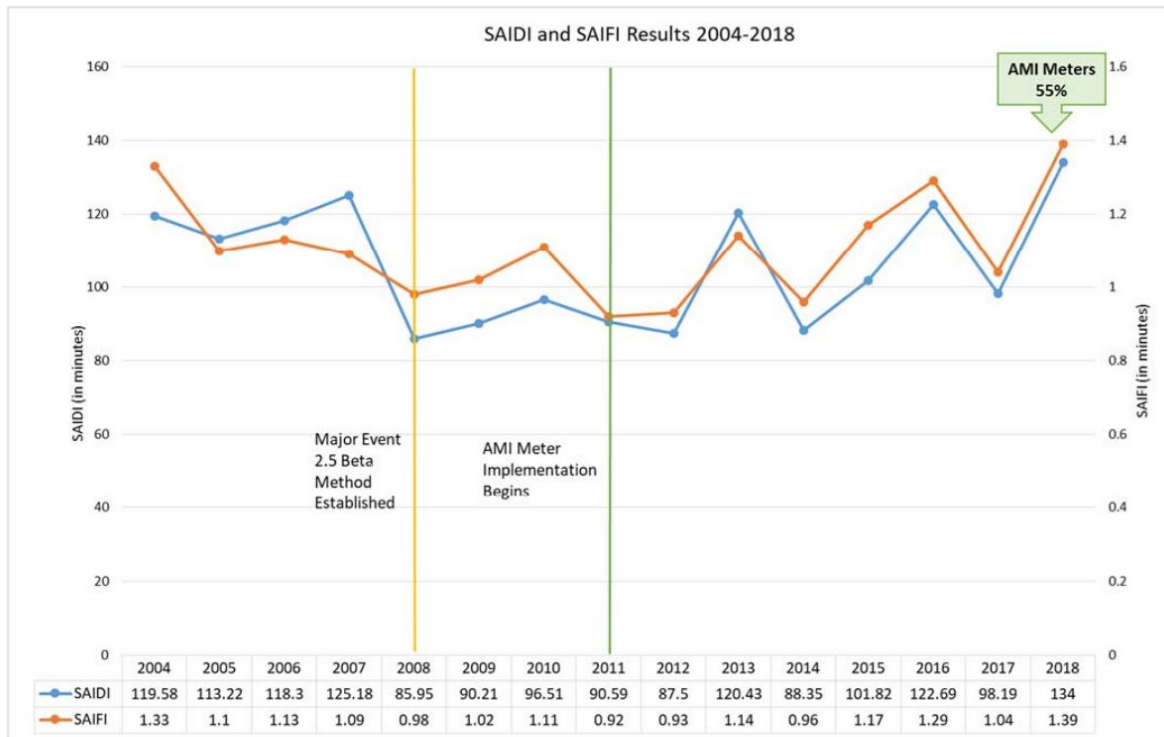


Figure 3: SAIDI and SAIFI Results 2004-2018

The Department notes that the above discussion appears to fulfill the first part of the Commission’s Order Point, but the Company does not appear to provide a discussion of “what technologies are needed to advance [tracking of] additional metrics.” The Department notes that to fulfill Order Point 4 of the Commission’s March 19, 2019 Order, MP should provide the remainder of this discussion.

*14. Work Center Staffing Levels*

MP reported that there were 111 full-time equivalent field employee positions in 2018, 96 of which are responsible for responding to trouble and for the operation and maintenance of distribution lines. The number of employee positions reported by MP in the past has ranged from 100 to 114.

The Department acknowledges MP’s fulfillment of the requirements of Minnesota Rules, part 7825.0500, subp. 1J.

*15. Other Information*

MP noted that it had no additional information to report at this time.

*C. PROPOSED RELIABILITY STANDARDS FOR 2019*

MP proposed two different options for reliability standards for 2019:

Option 1: Set 2019 reliability goals at the same levels used for 2017 and 2018:

- SAIDI = 98.19
- SAIFI = 1.02
- CAIDI = 96.26

Option 2: Set 2019 reliability goals at the average of the previous five years of actual performance:

- SAIDI = 110.53
- SAIFI = 1.17
- CAIDI = 95.04

The Department calculates slightly different five year average results for 2014-2018 than the Company's proposed values in Option 2. This is shown in the following table.

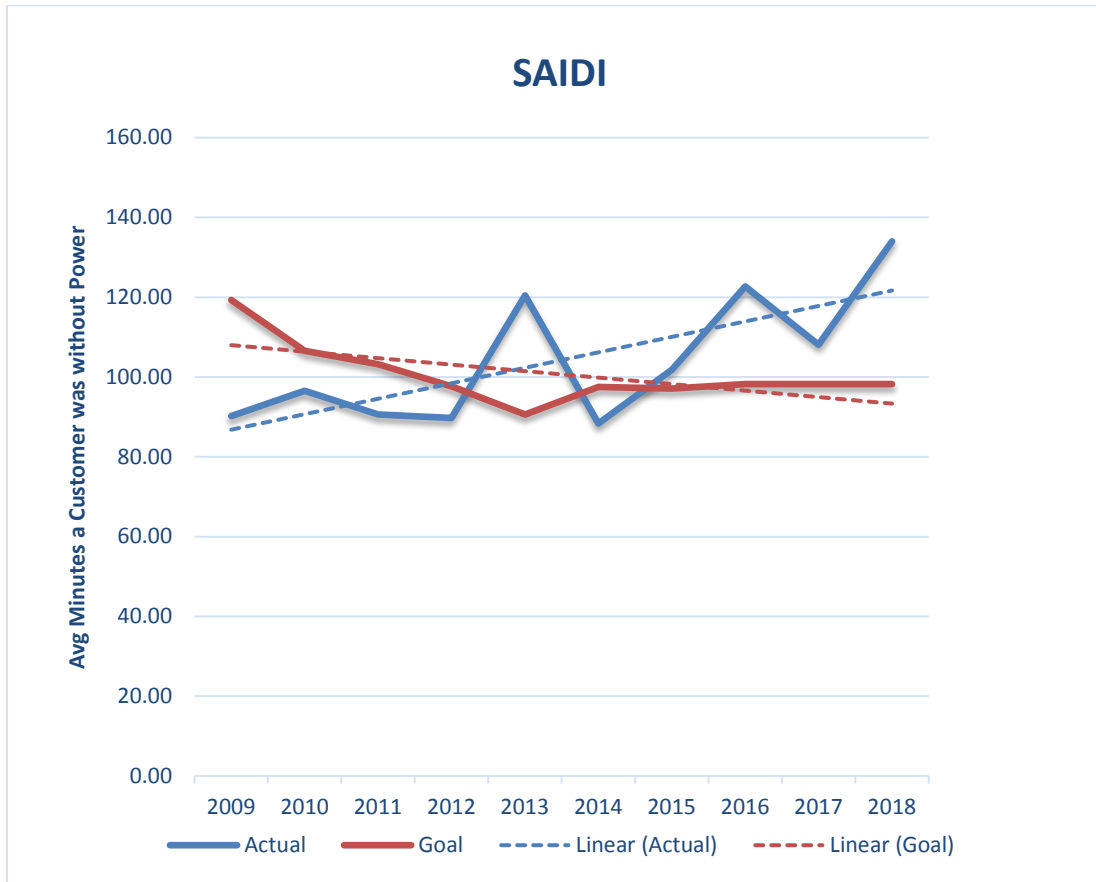
**Table 7. Department's calculation of SAIDI, SAIFI, and CAIDI 5-Year Rolling Average for years 2014-2018, based on Actual Performance**

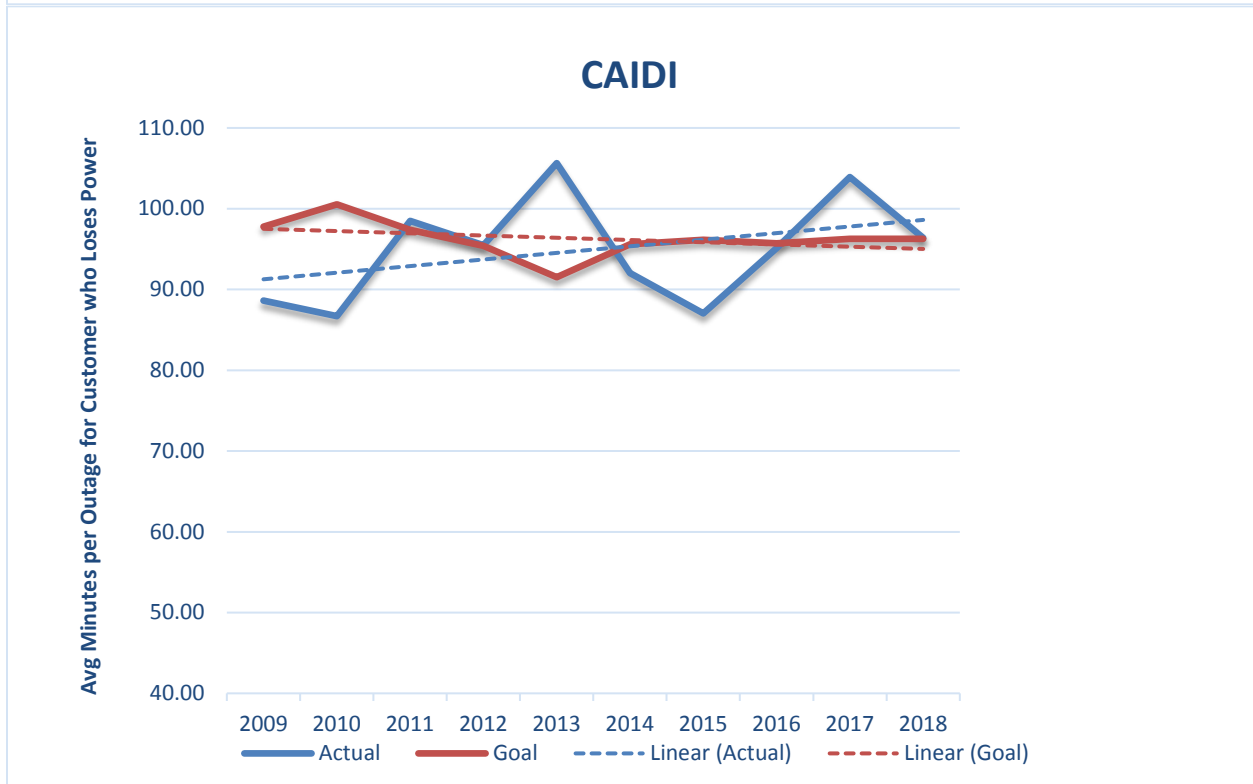
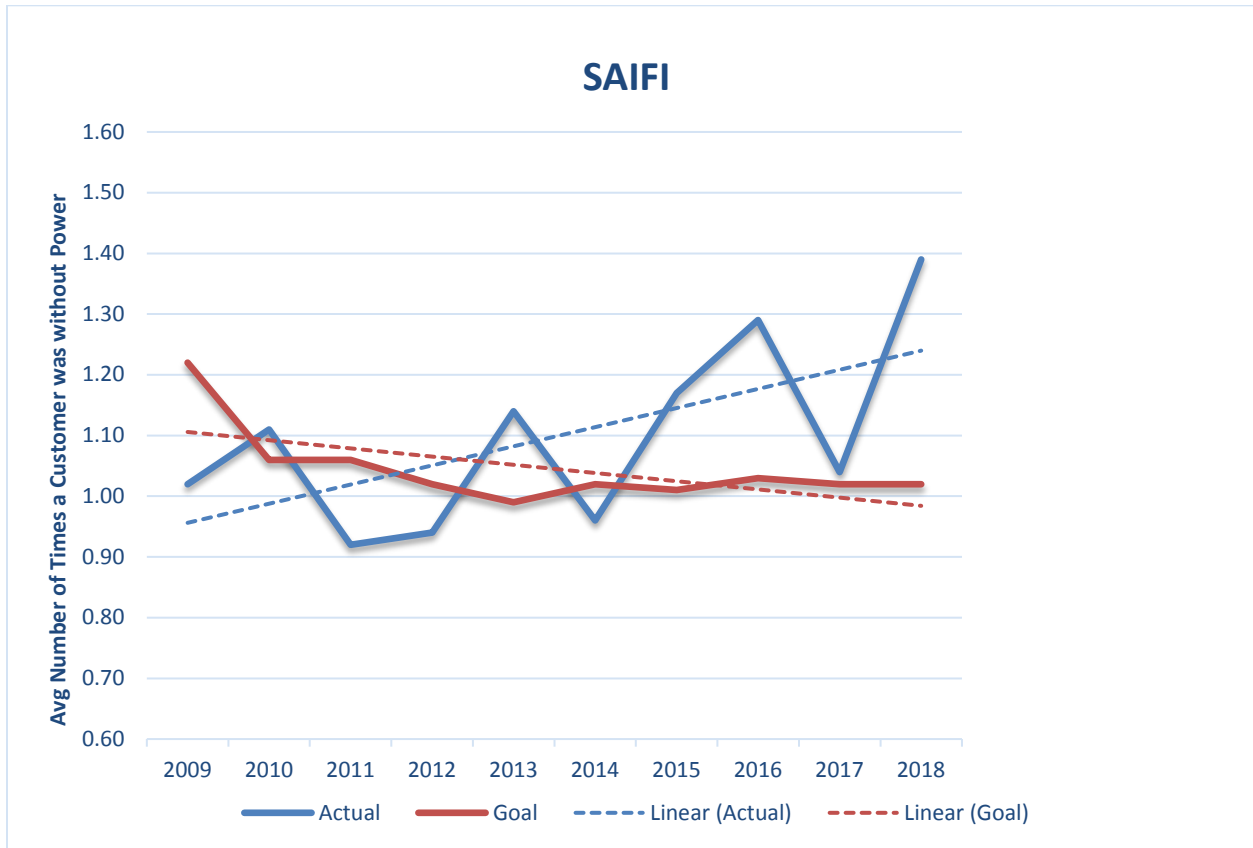
Docket	Year	SAIDI	SAIFI	CAIDI
15-323	2014	88.35	0.96	92.03
16-268	2015	101.82	1.17	87.03
17-252	2016	122.69	1.29	95.11
18-250	2017	108.06	1.04	103.90
19-254	2018	134.00	1.39	96.40
	Average	110.98	1.17	94.86

It is not clear what accounts for the difference between Minnesota Power's results and the Department's results, although as noted above, the Department calculated a slightly different CAIDI result for 2018 based on the Company's reported 2018 values. However, even with this difference, the Option 2 proposed goals are higher (i.e. easier to achieve) than the Option 1 goals, due to the fact that MP has failed to meet its 2018 goals.

As can be seen in the figures below, the Company's performance trend line goes up, indicating worsening performance over the past ten years.







As a result of the Company's increasingly poor reliability performance in recent years, particularly for SAIDI and SAIFI, MP's rolling five year averages have also tended to increase, as shown in the table below.

**Table 8. Department's Calculation of Rolling 5-Year Average of Actual Performance, Past Five Years**

5-Year Rolling Average of Actual Performance	SAIDI	SAIFI	CAIDI
2010-2014	97.13	1.01	95.66
2011-2015	98.19	1.03	95.73
2012-2016	104.61	1.10	95.06
2013-2017	108.27	1.12	96.74
2014-2018	110.98	1.17	94.86

This means that if the goals are set based on the rolling five year average, the Company is holding itself to significantly lower standards than it did even just five years ago. Given that the Company was previously able to meet the stricter standards, and that the Company continues to invest in reliability improvements, the Department recommends that the Commission approve the Company's proposed Option 1, and maintain the SAIDI, SAIFI, and CAIDI goals at 2018 levels.

#### *D. ANNUAL SERVICE QUALITY REPORT*

Minnesota Rules, part 7826.1300 requires each utility to file the following information:

1. Meter Reading Performance (7826.1400),
2. Involuntary Disconnection (7826.1500),
3. Service Extension Response Time (7826.1600),
4. Call Center Response Time (7826.1700),
5. Emergency Medical Accounts (7826.1800),
6. Customer Deposits (7826.1900), and
7. Customer Complaints (7826.2000).

##### *1. Meter Reading Performance*

The following information is required for reporting on monthly meter reading performance by customer class:

- A. the number and percentage of customer meters read by utility personnel;
- B. the number and percentage of customer meters self-read by customers;

- C. the number and percentage of customer meters that have not been read by utility personnel for periods of 6 to 12 months and for periods of longer than 12 months;
- D. data on monthly meter reading staffing levels, by work center or geographical area.

MP reported that in 2018, the Company read 98.76% of residential meters, 99.90% of commercial meters, and 99.98% of industrial meters, 100% of municipal pumping meters, and 99.97% of lighting meters. Minnesota Rules, part 7826.0900, subp. 1 requires that at least 90% of all meters are read monthly from April through November and that at least 80% of all meters are read monthly from December through March. MP’s information reflects that this standard has been met.

MP reported maintaining an average of 6.9 full-time equivalent monthly meter reading staff in 2018, compared to an average of 7.5 in 2017.

The following table summarizes the number of service points not read in one year or more according to MP’s past ten annual reports.

**Table 9. Meters Not Read**

	Company Read		Customer Read	
	12 months	+12 months	12 months	+12 months
2009	1	32	0	1
2010	0	0	0	1
2011	0	3	1	3
2012	7	3	1	3
2013	2	14	0	1
2014	4	8	0	0
2015	2	5	0	0
2016	6	12	1	0
2017	0	0	0	0
2018	0	0	0	0

In 2018, MP was successful in ensuring that each meter was read at least once.

The Department acknowledges MP’s fulfillment of the requirements of Minnesota Rules, part 7826.1400 and the Company’s achievement of the standard set in Minnesota Rules, part 7826.0900, subp. 1.

*2. Involuntary Disconnections*

The following information is required for reporting on involuntary disconnection of service by customer class and calendar month:

- A. the number of customers who received disconnection notices;
- B. the number of customers who sought cold weather rule (CWR) protection under Chapter 7820 and the number of customers who were granted cold weather rule protection;
- C. the total number of customers whose service was disconnected involuntarily and the number of these customers restored to service within 24 hours; and
- D. the number of disconnected customers restored to service by entering into a payment plan.

The following table summarizes residential customer disconnection statistics reported by MP in its annual reports.

**Table 10. Residential Customer Involuntary Disconnection Information**

	Received Disconnect Notice	Sought CWR Protection	% Granted	Disconnected Involuntarily	Restored within 24 Hours	Restored by Entering Payment Plan
2009	33,129	1,429	100%	3,229	1,723	311
2010	35,526	1,698	100%	2,853	1,481	297
2011	37,647	3,465	99%	3,009	1,804	331
2012	37,837	3,227	99.8%	3,518	1,828	569
2013	40,451	2,617	99.8%	3,171	1,122	576
2014	35,796	2,852	100%	3,257	799	443
2015	22,537	2,173	100%	520	154	56
2016	12,191	2,916	100%	1,933	213	634
2017	17,454	3,475	100%	2,668	1,284	1,680
2018	18,961	4,311	100%	2,492	1,219	1,592

The Department acknowledges MP’s fulfillment of the requirements of Minnesota Rules, part 7826.1500.

*3. Service Extension Requests*

The following information is required for reporting on service extension request response times<sup>5</sup> by customer class and calendar month:

- A. the number of customers requesting service to a location not previously served by the utility and the intervals between the date service was installed and the later of the in-service date requested by the customer or the date the premises were ready for service; and

---

<sup>5</sup> MP measures service extension request response times as the interval between the date service was installed and the requested service date, even in cases where the requested service date cannot be met due to a delay caused by the customer.

- B. the number of customers requesting service to a location previously served by the utility, but not served at the time of the request, and the intervals between the date service was installed and the later of the in-service date requested by the customer or the date the premises were ready for service.

**Table 11. New Service Extension Requests: Combined Residential, Commercial, and Industrial**

	<b>Total Number of Installations</b>	<b>Request Date Met</b>	<b>% Request Date Met</b>
2010	712	484	68.0%
2011	603	420	69.7%
2012	653	476	72.9%
2013	794	614	77.3%
2014	857	618	72.1%
2015	1,800	1,070	59.4%
2016	1,476	835	56.6%
2017	1,747	1,338	76.6%
2018	2,118	1,374	64.9%

For 2018, MP reported that 2,118 customers requested service to a location not previously served, a 21% increase in requests from 2017. New installations are significantly higher than the average of 1,080 for the previous 8-year period between 2010 and 2017.

Approximately 65% for 2018 were connected by the date requested. For those that were not, the three most common reasons were: MP delay due to work load (46.35%), customer not ready (18.59%), and the job redesigned (8.23%).

**Table 12. Previously Served Customer Service Extension Requests: Combined Residential, Commercial, and Industrial**

	<b>Total Number of Installations</b>	<b>Request Date Met</b>	<b>% Request Date Met</b>
2010	2,329	2,057	88.3%
2011	2,453	2,198	89.6%
2012	2,526	2,389	94.6%
2013	2,305	2,097	91.0%
2014	2,375	2,216	93.3%
2015	1,671	1,396	83.5%
2016	2,652	2,463	92.9%
2017	4,563	4,032	88.4%
2018	4,544	3,940	86.7%

For locations that previously had service, MP reported approximately the same number of requests in 2017 as in 2018; however, the number of requests are significantly higher than the average of 2,609 for the previous 8-year period between 2010 and 2017. Approximately 87% for 2018 were met by the request date. For those that were not, the three most common reasons were: dates not updated for project (44.88%), MP delay due to workload (34.16%), and work done date incorrect (7.76%).

The Department acknowledges that MP provided the information required by Minnesota Rules, part 7826.1600.

#### *4. Call Center Response Time*

The annual service quality report must include a detailed report on monthly call center response times, including calls to the business office and calls regarding service interruptions. Minnesota Rules, part 7826.1200 requires utilities to answer 80% of calls made to the business office during regular business hours and 80% of all outage calls within 20 seconds.

Minnesota Power reported that in 2018, the Company answered 82% of calls during business hours (7:00 am to 5:30 pm) within 20 seconds, and that the Company met or exceeded the 80% goal threshold in 7 out of 12 months of the year. Minnesota Power also provided a graph showing the number of business hour calls in each month compared to the percentage of calls answered within 20 seconds.

Minnesota Power stated that all calls, regardless of topic, are routed through the Company's Interactive Voice Response (IVR) unit. Calls routed to outage reporting are handled immediately through an automated system, and one option customers may select is to speak directly with a representative at the Call Center. Although the Company can determine the number of calls by call category (e.g. service interruption), MP is unable to track response time by contact type. The Company expects that given the increasing number of contact options for customers under the "My Account" online self-service tool, the types of calls that the Call Center receives will likely become more complex and time consuming.

After reviewing the Company's 2018 Report, the Department directly emailed the Company in order to obtain more detailed information concerning the specific number of calls received and calls answered within 20 seconds, both for business and non-business hours. This year, the Department asks that the Company provide that information in Reply Comments, and also provide that information on a going-forward basis. The Department also requests that in Reply Comments, the Company provide a breakdown of all calls received in 2018 by category. Finally, given the Company's note concerning the changing nature of customer-Company contact, the Department requests that Minnesota Power comment upon the best way that the Commission might measure and track data associated with new forms of self-service communication.

The Department concludes that MP complied with the call response time standard set forth in Minnesota Rules, part 7826.1200 in 2018.

The Department acknowledges that MP has fulfilled the requirements of Minnesota Rules, part 7826.1700.

#### *5. Emergency Medical Accounts*

The reporting on emergency medical accounts must include the number of customers who requested emergency medical account status under Minnesota Statutes, section 216B.098, subd. 5, the number of requests granted, and the number denied, including the reasons for each denial.

MP reported that 206 customers in 2018 requested emergency medical account status; 199 of these requests were granted. Of the seven who were denied, four did not provide proper documentation and did not respond to the Company's outreach attempts. One customer was denied because their request did not include specific life-sustaining equipment, only refrigerated medication that was non-life sustaining, according to the customer. Two customers were denied because, according to the account holders, the patients listed on the request did not reside at the residences in question.

The Department acknowledges MP's fulfillment of the requirements of Minnesota Rules, part 7826.1800.

#### *6. Customer Deposits*

Minnesota Rules, part 7826.1900 requires that reporting on customer deposits must include the number of customers who were required to make a deposit as a condition of receiving service.

MP stated that collection of deposits will be reconsidered in the future, and also stated that all deposits were refunded "in 2014." The Department notes that this 2014 figure has been used in each of MP's SRSQ Reports since 2014. The following table shows the Department's understanding of MP's required deposit history since 2006:



**Table 13. MP's Required Deposits**

<b>Year</b>	<b>Residential</b>	<b>Commercial</b>	<b>Total</b>
<b>2006</b>	153	1	154
<b>2007</b>	5	0	5
<b>2008</b>	74	1	75
<b>2009</b>	161	21	182
<b>2010</b>	190	24	214
<b>2011</b>	222	10	232
<b>2012</b>	315	1	316
<b>2013</b>	326	11	337
<b>2014</b>	0	0	0
<b>2015</b>	0	0	0
<b>2016</b>	0	0	0
<b>2017</b>	0	0	0
<b>2018</b>	0	0	0

The Department therefore requests that in Reply Comments, Minnesota Power confirm that the above table is correct. If it is not, the Department requests that MP provide an updated table with correct values.

#### *7. Customer Complaints*

The reporting on customer complaints must include the following information by customer class and calendar month:

- A. the number of complaints received;
- B. the number and percentage of complaints alleging billing errors, inaccurate metering, wrongful disconnection, high bills, inadequate service, and the number involving service extension intervals, service restoration intervals, and any other identifiable subject matter involved in five percent or more of customer complaints;
- C. the number and percentage of complaints resolved upon initial inquiry, within ten days, and longer than ten days;
- D. the number and percentage of all complaints resolved by taking any of the following actions: (1) taking the action the customer requested; (2) taking an action the customer and the utility agree is an acceptable compromise; (3) providing the customer with information that demonstrates that the situation complained of is not reasonably within the control of the utility; or (4) refusing to take the action the customer requested; and

- E. the number of complaints forwarded to the utility by the Commission’s consumer Affairs Office for further investigation and action.

MP reported monthly information showing that a total of 71 commercial and 663 residential customer complaints were received in 2018. The most frequent category of complaint was “high bill complaint,” which amounted to 62.06% of all complaints. MP reported that 57% of the residential complaints were resolved upon initial inquiry. The Company also reported that 56% of resolved residential complaints were done so by explaining that the situation complained of was not reasonably within the control of Minnesota Power. Table 14 below shows the historical number of complaints received by the Company for the last ten years.

**Table 14. Summary Complaint Totals**

Year	Commercial	Residential	Industrial	Total
2009	137	1,534	0	1,671
2010	141	1,585	0	1,726
2011	76	1,178	0	1,254
2012	81	780	0	861
2013	63	663	0	726
2014	64	1,045	0	1,109
2015	27	540	0	567
2016	46	388	0	434
2017	56	641	0	697
2018	71	559	0	630

Table 15 shows the number of complaints forwarded to the Company by the Commission’s Consumer Affairs Office (CAO) over the past ten years.

**Table 15. Complaints Forwarded by the CAO**

Year	# of Complaints
2009	4
2010	15
2011	10
2012	9
2013	11
2014	13
2015	13
2016	22
2017	14
2018	7

The number of complaints forwarded to the Company by the Commission’s Consumer Affairs Office in 2018 was much lower than the previous ten years’ average of 12.3.

The Department acknowledges MP's fulfillment of the requirements of Minnesota Rules, part 7826.2000.

#### **IV. CONCLUSION AND RECOMMENDATION**

In order to fulfill the requirements of the Commission's March 19, 2019 Order, the Company should provide:

- Normalized and non-normalized CEMI values at outage levels of 4, 5, and 6.
- CELI values at 6 hours, 12 hours, and 24 hours. Since the Commission's Order did not specify whether the Company should provide normalized or non-normalized data, the Department recommends that MP provide both.
- A clarification as to which components of MP's filing were meant to fulfill the Commission's directive to provide more discussion of leading causes of outages and mitigation strategies; if none was provided, MP should provide this discussion.
- A discussion of "what technologies are needed to advance tracking of additional metrics" to fulfill Order Point 4 of the Commission's Order.

Additionally, the Department requests that in Reply Comments, Minnesota Power:

- An explanation of MP's calculation of 2018 CAIDI values, given the stated SAIDI/SAIFI values;
- An explanation as to why MP's rolling 5-year average values for 2014-2018 differ from the Department's calculated values;
- Provide the underlying data and calculations behind MP's Reliability by Customer Class figure;
- Comment on actions it has taken to improve the Colbyville 240 feeder, as well as any planned actions to prevent this circuit from causing problems in the future;
- Provide the specific number of calls received and calls answered within 20 seconds, both for business and non-business hours;
- Provide a breakdown of all calls received in 2018 by complaint/subject matter category;
- Provide a discussion of the best way that the Commission might measure and track data associated with new forms of self-service communication; and
- Confirm that the Department's Required Deposits table is correct; or provide an updated table with correct values.

The Department will make a final recommendation after reviewing the Company's response.

Docket No. E015/M-19-254

Analyst Assigned: Danielle D. Winner

Page 27

Additionally, the Department recommends that the Commission set the Company's reliability standards for 2019 at the levels set for 2018:

- SAIDI = 98.19
- SAIFI = 1.02
- CAIDI = 96.26

/ja

**CHAPTER 7826**  
**PUBLIC UTILITIES COMMISSION**  
**ELECTRIC UTILITY STANDARDS**

7826.0100 APPLICABILITY.

7826.0200 DEFINITIONS.

**SAFETY**

7826.0300 SAFETY STANDARDS.

7826.0400 ANNUAL SAFETY REPORT.

**RELIABILITY**

7826.0500 RELIABILITY REPORTING REQUIREMENTS.

7826.0600 RELIABILITY STANDARDS.

7826.0700 REPORTING MAJOR SERVICE INTERRUPTIONS.

**SERVICE**

7826.0800 CUSTOMER NOTICE OF PLANNED SERVICE INTERRUPTIONS.

7826.0900 METER READING FREQUENCY; CUSTOMER ACCOMMODATION.

7826.1000 REPLACING MALFUNCTIONING METERS.

7826.1100 KEEPING SERVICE CALLS.

7826.1200 CALL CENTER RESPONSE TIME.

7826.1300 ANNUAL SERVICE QUALITY REPORT FILING.

**REPORTING**

7826.1400 REPORTING METER-READING PERFORMANCE.

7826.1500 REPORTING INVOLUNTARY DISCONNECTIONS.

7826.1600 REPORTING SERVICE EXTENSION REQUEST RESPONSE TIMES.

7826.1700 REPORTING CALL CENTER RESPONSE TIMES.

7826.1800 REPORTING EMERGENCY MEDICAL ACCOUNT STATUS.

7826.1900 REPORTING CUSTOMER DEPOSITS.

7826.2000 REPORTING CUSTOMER COMPLAINTS.

**7826.0100 APPLICABILITY.**

This chapter applies to all persons, corporations, or other legal entities engaged in the retail distribution of electric service to the public, with the following exceptions:

- A. cooperative electric associations;
- B. municipal utilities;
- C. persons distributing electricity only to tenants or cooperative or condominium owners in buildings owned, leased, or operated by those persons;
- D. persons distributing electricity only to occupants of a manufactured home or trailer park owned, leased, or operated by those persons; and
- E. persons distributing electricity to fewer than 25 persons.

## 7826.0200 ELECTRIC UTILITY STANDARDS

**Statutory Authority:** *MS s 216B.81*

**History:** *27 SR 1174*

**Published Electronically:** *February 13, 2003*

### 7826.0200 DEFINITIONS.

Subpart 1. **Scope.** The terms used in this chapter have the meanings given them in this part.

Subp. 2. **Bulk power supply facility.** "Bulk power supply facility" means the interconnected system that encompasses the electric generation resource, transmission lines, transmission substations, and associated equipment that, upon a total, simultaneous, and sustained interruption, disrupts service to all distribution feeders exiting that substation when those distribution feeders do not have service restoration interconnections with alternate sources.

Subp. 3. **Cold weather rule.** "Cold weather rule" means the set of protections against disconnection during the heating season set forth in Minnesota Statutes, sections 216B.096 and 216B.097.

Subp. 4. **Customer average interruption duration index or CAIDI.** "Customer average interruption duration index" or "CAIDI" means the average customer-minutes of interruption per customer interruption. It approximates the average length of time required to complete service restoration. It is determined by dividing the annual sum of all customer-minutes of interruption durations by the annual number of customer interruptions, using storm-normalized data.

Subp. 5. **Customer complaint.** "Customer complaint" means any call center communication by a utility customer in which the customer states a grievance related to the utility's provision of service to that customer.

Subp. 6. **Interruption.** "Interruption" means an interruption of service to a customer with a duration greater than five minutes.

Subp. 7. **Major service interruption.** "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.

Subp. 8. **Resolved.** "Resolved," used in regard to customer complaints, means that the utility has examined the complainant's claims, conducted any necessary investigation, and done one of the following:

- A. taken the action the customer requests;
- B. taken an action the customer and the utility agree is an acceptable compromise;
- C. provided the customer with information that demonstrates that the situation complained of is not reasonably within the control of the utility; or
- D. refused to take the action the customer requested and communicated that refusal to the customer.

Subp. 9. **Storm-normalized data.** "Storm-normalized data" means data that has been adjusted to neutralize the effects of outages due to major storms.

Subp. 10. **System average interruption duration index or SAIDI.** "System average interruption duration index" or "SAIDI" means the average customer-minutes of interruption per customer. It 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.

Subp. 11. **System average interruption frequency index or SAIFI.** "System average interruption frequency index" or "SAIFI" means the average number of interruptions per customer per year. It 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.

Subp. 12. **Utility.** "Utility" means any person, corporation, or other legal entity engaged in the retail distribution of electric service to the public, with the following exceptions:

- A. cooperative electric associations;
- B. municipal utilities;
- C. persons distributing electricity only to tenants or cooperative or condominium owners in buildings owned, leased, or operated by those persons;
- D. persons distributing electricity only to occupants of a manufactured home or trailer park owned, leased, or operated by those persons; and
- E. persons distributing electricity to fewer than 25 persons.

Subp. 13. **Work center.** "Work center" means a portion of a utility's assigned service area that it treats as an administrative subdivision for purposes of maintaining and repairing its distribution system.

**Statutory Authority:** *MS s 216B.81*

**History:** *27 SR 1174; L 2009 c 110 s 37*

**Published Electronically:** *June 2, 2009*

## **SAFETY**

### **7826.0300 SAFETY STANDARDS.**

Subpart 1. **National Electrical Safety Code.** When constructing new facilities or reinvesting capital in existing facilities, utilities shall comply with the requirements stated at the time the work is done in the then most recently published edition of the National Electrical Safety Code, as published by the Institute of Electrical and Electronics Engineers, Inc. and approved by the American National Standards Institute. This code is incorporated by reference, is not subject to frequent change, and is conveniently available to the public through the statewide interlibrary loan system.

Subp. 2. **Standards and recommended practices of the Institute of Electrical and Electronics Engineers, Inc. and the American National Standards Institute.** Utilities are encouraged to follow the recommended practices of the Institute of Electrical and Electronics Engineers, Inc. and the American National Standards Institute on electricity metering and standard voltage ratings for electric power systems and equipment. Utility compliance with these recommended practices creates a rebuttable presumption that a practice is reasonable.

Subp. 3. **Occupational Safety and Health Administration rules.** When constructing, installing, refurbishing, or maintaining facilities, utilities shall comply with all regulations promulgated by the United States Occupational Safety and Health Administration and by the Occupational Safety and Health Division of the Minnesota Department of Labor and Industry.

## **7826.0500 ELECTRIC UTILITY STANDARDS**

**Statutory Authority:** *MS s 216B.81*

**History:** *27 SR 1174*

**Published Electronically:** *February 13, 2003*

### **7826.0400 ANNUAL SAFETY REPORT.**

On or before April 1 of each year, each utility shall file a report on its safety performance during the last calendar year. This report shall include at least the following information:

A. summaries of all reports filed with the United States Occupational Safety and Health Administration and the Occupational Safety and Health Division of the Minnesota Department of Labor and Industry during the calendar year; and

B. a description of all incidents during the calendar year in which an injury requiring medical attention or property damage resulting in compensation occurred as a result of downed wires or other electrical system failures and all remedial action taken as a result of any injuries or property damage described.

**Statutory Authority:** *MS s 216B.81*

**History:** *27 SR 1174*

**Published Electronically:** *February 13, 2003*

## **RELIABILITY**

### **7826.0500 RELIABILITY REPORTING REQUIREMENTS.**

Subpart 1. **Annual reporting requirements.** On or before April 1 of each year, each utility shall file a report on its reliability performance during the last calendar year. This report shall include at least the following information:

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;

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;

F. to the extent feasible, a report on each interruption of a bulk power supply facility during the calendar year, including the reasons for interruption, duration of interruption, and any remedial steps that have been taken or will be taken to prevent future interruption;

G. a copy of each report filed under part 7826.0700;

H. to the extent technically feasible, circuit interruption data, including identifying the worst performing circuit in each work center, stating the criteria the utility used to identify the worst performing



circuit, stating the circuit's SAIDI, SAIFI, and CAIDI, explaining the reasons that the circuit's performance is in last place, and describing any operational changes the utility has made, is considering, or intends to make to improve its performance;

I. data on all known instances in which nominal electric service voltages on the utility's side of the meter did not meet the standards of the American National Standards Institute for nominal system voltages greater or less than voltage range B;

J. data on staffing levels at each work center, including the number of full-time equivalent positions held by field employees responsible for responding to trouble and for the operation and maintenance of distribution lines; and

K. any other information the utility considers relevant in evaluating its reliability performance over the calendar year.

Subp. 2. **Initial reporting requirements.** By March 30, 2003, each utility shall file its SAIDI, SAIFI, and CAIDI for each of the past five calendar years, by work center and for its assigned service area as a whole. If this information is not available, the utility shall file an explanation of how it has been tracking reliability for the past five years, together with reliability data for that period of time. If the utility has implemented a new reliability tracking system that makes comparisons between historical data and current data unreliable, the utility shall explain this situation in its filing.

**Statutory Authority:** *MS s 216B.81*

**History:** *27 SR 1174*

**Published Electronically:** *February 13, 2003*

#### **7826.0600 RELIABILITY STANDARDS.**

Subpart 1. **Annually proposed individual reliability standards.** On or before April 1 of each year, each utility shall file proposed reliability performance standards in the form of proposed numerical values for the SAIDI, SAIFI, and CAIDI for each of its work centers. These filings shall be treated as "miscellaneous tariff filings" under the commission's rules of practice and procedure, part 7829.0100, subpart 11.

Subp. 2. **Annually set, utility-specific, reliability standards.** The commission shall set reliability performance standards annually for each utility in the form of numerical values for the SAIDI, SAIFI, and CAIDI for each of its work centers. These standards remain in effect until the commission takes final action on a filing proposing new standards or changes them in another proceeding.

**Statutory Authority:** *MS s 216B.81*

**History:** *27 SR 1174*

**Published Electronically:** *February 13, 2003*

#### **7826.0700 REPORTING MAJOR SERVICE INTERRUPTIONS.**

Subpart 1. **Contemporaneous reporting.** A utility shall promptly inform the commission's Consumer Affairs Office of any major service interruption. At that time, the utility shall provide the following information, to the extent known:

- A. the location and cause of the interruption;
- B. the number of customers affected;

## 7826.0900 ELECTRIC UTILITY STANDARDS

- C. the expected duration of the interruption; and
- D. the utility's best estimate of when service will be restored, by geographical area.

Subp. 2. **Written report.** Within 30 days, a utility shall file a written report on any major service interruption in which ten percent or more of its Minnesota customers were out of service for 24 hours or more. This report must include at least a description of:

- A. the steps the utility took to restore service; and
- B. any operational changes the utility has made, is considering, or intends to make, to prevent similar interruptions in the future or to restore service more quickly in the future.

**Statutory Authority:** *MS s 216B.81*

**History:** *27 SR 1174*

**Published Electronically:** *February 13, 2003*

### SERVICE

## 7826.0800 CUSTOMER NOTICE OF PLANNED SERVICE INTERRUPTIONS.

Utilities shall give customers the most effective actual notice possible of any planned service interruption expected to last longer than 20 minutes. For any planned interruption expected to exceed four hours, the utility shall provide, if feasible, mailed notice one week in advance and notice by telephone or door-to-door household visits 12 to 72 hours before the interruption. Planned service interruptions must be scheduled at times to minimize the inconvenience to customers. When planned service interruptions exceeding four hours are canceled, utilities shall notify, if feasible, the customers who received notice that service would be interrupted.

**Statutory Authority:** *MS s 216B.81*

**History:** *27 SR 1174*

**Published Electronically:** *February 13, 2003*

## 7826.0900 METER READING FREQUENCY; CUSTOMER ACCOMMODATION.

Subpart 1. **Meter reading performance standard.** Utilities shall attempt to read all meters on a monthly basis unless otherwise authorized by the commission. Utilities are assumed to be in compliance with this standard if they read at least 90 percent of all meters during the months of April through November and at least 80 percent of all meters during the months of December through March. Utilities shall contact any customer whose bill has been estimated for two consecutive months and attempt to schedule a meter reading.

Subp. 2. **Evening and weekend meter reading.** Utilities shall read meters during the evening or on Saturday or Sunday for customers whose meters are inaccessible and whose work or other schedule makes meter reading during regular business hours a hardship. When a utility contacts a customer on an individual basis to schedule a meter reading, the utility shall inform the customer of the available alternatives that the utility provides, such as the customer's option to provide a self-read. If alternative arrangements are not acceptable to the customer, the utility shall inform the customer that the utility provides evening and weekend meter reading for customers whose work schedule or other schedule makes meter reading during regular business hours a hardship.

**Statutory Authority:** *MS s 216B.81*

**History:** *27 SR 1174*

**Published Electronically:** *February 13, 2003*

**7826.1000 REPLACING MALFUNCTIONING METERS.**

Utilities shall replace a malfunctioning meter within ten calendar days of receiving a report from a customer questioning its accuracy or within ten calendar days of learning in some other way that it may be inaccurate.

**Statutory Authority:** *MS s 216B.81*

**History:** *27 SR 1174*

**Published Electronically:** *February 13, 2003*

**7826.1100 KEEPING SERVICE CALLS.**

Utilities shall keep service call appointments and shall provide as much notice as possible when an appointment cannot be kept. A service call appointment is kept if the worker arrives within a four-hour period set by the utility and clearly communicated to the customer.

**Statutory Authority:** *MS s 216B.81*

**History:** *27 SR 1174*

**Published Electronically:** *February 13, 2003*

**7826.1200 CALL CENTER RESPONSE TIME.**

Subpart 1. **Calls to business office.** On an annual basis, utilities shall answer 80 percent of calls made to the business office during regular business hours within 20 seconds. "Answer" means that an operator or representative is ready to render assistance or accept the information to handle the call. Acknowledging that the customer is waiting on the line and will be served in turn is not an answer. If the utility uses an automated call-processing system, the 20-second period begins when the customer has selected a menu option to speak to a live operator or representative. Utilities using automatic call-processing systems must provide that option, and they must not delay connecting the caller to a live operator or representative for purposes of playing promotional announcements.

Subp. 2. **Calls regarding service interruptions.** On an annual basis, utilities shall answer 80 percent of calls directed to the telephone number for reporting service interruptions within 20 seconds. "Answer" may mean connecting the caller to a recording providing, to the extent practicable, at least the following information:

- A. the number of customers affected by the interruption;
- B. the cause of the interruption;
- C. the location of the interruption; and
- D. the utility's best estimate of when service will be restored, by geographical area.

## **7826.1500 ELECTRIC UTILITY STANDARDS**

**Statutory Authority:** *MS s 216B.81*

**History:** *27 SR 1174*

**Published Electronically:** *February 13, 2003*

### **7826.1300 ANNUAL SERVICE QUALITY REPORT FILING.**

On or before April 1 of each year, each utility shall file a report on its service quality performance during the last calendar year. These filings must be treated as "miscellaneous tariff filings" under the commission's rules of practice and procedure, part 7829.0100, subpart 11. This report must include at least the information set forth in parts 7826.1400 to 7826.2000.

**Statutory Authority:** *MS s 216B.81*

**History:** *27 SR 1174*

**Published Electronically:** *February 13, 2003*

### **REPORTING**

#### **7826.1400 REPORTING METER-READING PERFORMANCE.**

The annual service quality report must include a detailed report on the utility's meter-reading performance, including, for each customer class and for each calendar month:

- A. the number and percentage of customer meters read by utility personnel;
- B. the number and percentage of customer meters self-read by customers;
- C. the number and percentage of customer meters that have not been read by utility personnel for periods of six to 12 months and for periods of longer than 12 months, and an explanation as to why they have not been read; and
- D. data on monthly meter-reading staffing levels, by work center or geographical area.

**Statutory Authority:** *MS s 216B.81*

**History:** *27 SR 1174*

**Published Electronically:** *February 13, 2003*

#### **7826.1500 REPORTING INVOLUNTARY DISCONNECTIONS.**

The annual service quality report must include a detailed report on involuntary disconnections of service, including, for each customer class and each calendar month:

- A. the number of customers who received disconnection notices;
- B. the number of customers who sought cold weather rule protection under Minnesota Statutes, sections 216B.096 and 216B.097, and the number who were granted cold weather rule protection;
- C. the total number of customers whose service was disconnected involuntarily and the number of these customers restored to service within 24 hours; and
- D. the number of disconnected customers restored to service by entering into a payment plan.

**Statutory Authority:** *MS s 216B.81*

**History:** *27 SR 1174; L 2009 c 110 s 37*

**Published Electronically:** *June 2, 2009*

**7826.1600 REPORTING SERVICE EXTENSION REQUEST RESPONSE TIMES.**

The annual service quality report must include a report on service extension request response times, including, for each customer class and each calendar month:

A. the number of customers requesting service to a location not previously served by the utility and the intervals between the date service was installed and the later of the in-service date requested by the customer or the date the premises were ready for service; and

B. the number of customers requesting service to a location previously served by the utility, but not served at the time of the request, and the intervals between the date service was installed and the later of the in-service date requested by the customer or the date the premises were ready for service.

**Statutory Authority:** *MS s 216B.81*

**History:** *27 SR 1174*

**Published Electronically:** *February 13, 2003*

**7826.1700 REPORTING CALL CENTER RESPONSE TIMES.**

The annual service quality report must include a detailed report on call center response times, including calls to the business office and calls regarding service interruptions. The report must include a month-by-month breakdown of this information.

**Statutory Authority:** *MS s 216B.81*

**History:** *27 SR 1174*

**Published Electronically:** *February 13, 2003*

**7826.1800 REPORTING EMERGENCY MEDICAL ACCOUNT STATUS.**

The annual service quality report must include the number of customers who requested emergency medical account status under Minnesota Statutes, section 216B.098, subdivision 5, the number whose applications were granted, and the number whose applications were denied and the reasons for each denial.

**Statutory Authority:** *MS s 216B.81*

**History:** *27 SR 1174*

**Published Electronically:** *February 13, 2003*

**7826.1900 REPORTING CUSTOMER DEPOSITS.**

The annual service quality report must include the number of customers who were required to make a deposit as a condition of receiving service.

## 7826.2000 ELECTRIC UTILITY STANDARDS

**Statutory Authority:** *MS s 216B.81*

**History:** *27 SR 1174*

**Published Electronically:** *February 13, 2003*

### 7826.2000 REPORTING CUSTOMER COMPLAINTS.

The annual service quality report must include a detailed report on complaints by customer class and calendar month, including at least the following information:

- A. the number of complaints received;
- B. the number and percentage of complaints alleging billing errors, inaccurate metering, wrongful disconnection, high bills, inadequate service, and the number involving service-extension intervals, service-restoration intervals, and any other identifiable subject matter involved in five percent or more of customer complaints;
- C. the number and percentage of complaints resolved upon initial inquiry, within ten days, and longer than ten days;
- D. the number and percentage of all complaints resolved by taking any of the following actions:
  - (1) taking the action the customer requested;
  - (2) taking an action the customer and the utility agree is an acceptable compromise;
  - (3) providing the customer with information that demonstrates that the situation complained of is not reasonably within the control of the utility; or
  - (4) refusing to take the action the customer requested; and
- E. the number of complaints forwarded to the utility by the commission's Consumer Affairs Office for further investigation and action.

**Statutory Authority:** *MS s 216B.81*

**History:** *27 SR 1174*

**Published Electronically:** *February 13, 2003*

**Attachment A, Table 1. Summary of MP's 2018 Outage Reports**

	Impacted Communities	Number of Customers Affected	Duration (Minutes)	Cause
3/13/2018	Downtown Duluth	594	100	Pole fire burnt feeder switch and cable on riser
4/15/2018	Eveleth	1038	85	Unknown
4/21/2018	City of Duluth	3738	65	Bad Underground Equipment
4/24/2018	Brainerd, East Gull Lake	1125	97	BAX-531 locked out due to bad insulator on a switch
4/29/2018	Cloquet	3241	175	Conductor fell off insulator and faulted phase to phase
4/30/2018	Motley	565	99	DOB-503 locked out, cause unknown, potential storm
4/12/2018	Duluth- Lakeside Neighborhood	1852	60	unknown
5/22/2018	Coleraine	682	79	unknown
5/29/2018	Little Falls	1578	63	unknown
5/30/2018	Ely	514	288	Weather on parent feeder WNT-33
5/29/2018	Tower	609	103	Locked out due to weather
6/17/2018	Sandstone, Hinckley	1246	120	Bad overhead equipment
6/20/2018	Duluth	984	70	15th sub out of service, bad pressure sensor relay
6/20/2018	Duluth	978	69	15th sub out of service, bad pressure sensor relay
6/20/2018	Duluth	1914	70	was tied to FIF-220. 15th sub out of service, bad pressure sensor relay
6/29/2018	Babbitt	778	177	BBT-31 locked out due to weather
6/30/2018	Brainerd	1037	208	BAX-531 locked out due to weather
7/4/2018	Ely	514	66	WNT-33L locked out due to weather
8/7/2018	Sandstone	1246	162	Locked out due to distribution recloser failure
8/27/2018	International Falls	1059	120	Weather
8/15/2018	Duluth	2014	101	Bad Substation Switch
8/17/2018	Barnum	940	306	Bad underground cable
8/31/2018	Cloquet	1925	108	Weather
9/15/2018	Duluth	1339	80	tree on primary
9/20/2018	Carlton, Cloquet	547	84	weather
9/20/2018	Carlton	576	115	broken pole from weather
10/4/2018	City of Hoyt Lakes	828	360	tree-weather
10/5/2018	Duluth	748	86	TFT-202 locked out due to a dig in
10/10/2018	Duluth	1022	125	weather
10/10/2018	Wrenshall, Carlton	1240	149	Lost power due to failed 411F switch
10/15/2018	Eveleth	982	134	When tied together with ESS-2, the regulators became unstable, causing damage to conductors
10/22/2018	International Falls	1439	99	mylar balloon in lines
12/16/2018	Tower	609	67	unknown
12/27/2018	Barnum, Moose Lake	940	75	59L locked out from tree falling on primary from weather
12/27/2018	Sturgeon Lake, Moose Lake	1234	75	59L locked out from tree falling on primary from weather

## **CERTIFICATE OF SERVICE**

I, Sharon Ferguson, hereby certify that I have this day, served copies of the following document on the attached list of persons by electronic filing, certified mail, e-mail, or by depositing a true and correct copy thereof properly enveloped with postage paid in the United States Mail at St. Paul, Minnesota.

**Minnesota Department of Commerce  
Comments**

**Docket No. E015/M-19-254**

**Dated this 7<sup>th</sup> day of June 2019**

**/s/Sharon Ferguson**



First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Gail	Baranko	gail.baranko@xcelenergy.com	Xcel Energy	414 Nicollet Mall 7th Floor  Minneapolis, MN 55401	Electronic Service	No	OFF_SL_19-254_M-19-254
Generic Notice	Commerce Attorneys	commerce.attorneys@ag.state.mn.us	Office of the Attorney General-DOC	445 Minnesota Street Suite 1800  St. Paul, MN 55101	Electronic Service	Yes	OFF_SL_19-254_M-19-254
Ian	Dobson	residential.utilities@ag.state.mn.us	Office of the Attorney General-RUD	1400 BRM Tower 445 Minnesota St St. Paul, MN 551012131	Electronic Service	Yes	OFF_SL_19-254_M-19-254
Ron	Elwood	relwood@mnlsap.org	Mid-Minnesota Legal Aid	2324 University Ave Ste 101  Saint Paul, MN 55114	Electronic Service	No	OFF_SL_19-254_M-19-254
Sharon	Ferguson	sharon.ferguson@state.mn.us	Department of Commerce	85 7th Place E Ste 280  Saint Paul, MN 551012198	Electronic Service	No	OFF_SL_19-254_M-19-254
Blaine	Hill	bhill@ci.morris.mn.us	Otter Tail Power Company	PO Box 496 215 S Cascade St Fergus Falls, MN 56538	Electronic Service	No	OFF_SL_19-254_M-19-254
Alexander	Jackson	ajackson@DuluthMN.gov	Minnesota Power	30 W Superior St  Duluth, MN 55802	Electronic Service	No	OFF_SL_19-254_M-19-254
Allen	Krug	allen.krug@xcelenergy.com	Xcel Energy	414 Nicollet Mall-7th fl  Minneapolis, MN 55401	Electronic Service	No	OFF_SL_19-254_M-19-254
Douglas	Larson	dlarson@dakotaelectric.com	Dakota Electric Association	4300 220th St W  Farmington, MN 55024	Electronic Service	No	OFF_SL_19-254_M-19-254
Annie	Levenson Falk	annief@cupminnesota.org	Citizens Utility Board of Minnesota	332 Minnesota Street, Suite W1360  St. Paul, MN 55101	Electronic Service	No	OFF_SL_19-254_M-19-254

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Pam	Marshall	pam@energycents.org	Energy CENTS Coalition	823 7th St E St. Paul, MN 55106	Electronic Service	No	OFF_SL_19-254_M-19-254
Stacy	Miller	stacy.miller@minneapolismn.gov	City of Minneapolis	350 S. 5th Street Room M 301 Minneapolis, MN 55415	Electronic Service	No	OFF_SL_19-254_M-19-254
Herbert	Minke	hminke@allete.com	Minnesota Power	30 W Superior St Duluth, MN 55802	Electronic Service	No	OFF_SL_19-254_M-19-254
David	Moeller	dmoeller@allete.com	Minnesota Power	30 W Superior St Duluth, MN 558022093	Electronic Service	No	OFF_SL_19-254_M-19-254
Joseph	Pereira	josephp@cubminnesota.org	Citizen's Utility Board of Minnesota	332 Minnesota St Ste W1360 Saint Paul, MN 55101	Electronic Service	No	OFF_SL_19-254_M-19-254
William	Phillips	wphillips@aarp.org	AARP	30 E. 7th St Suite 1200 St. Paul, MN 55101	Electronic Service	No	OFF_SL_19-254_M-19-254
Susan	Romans	sromans@allete.com	Minnesota Power	30 West Superior Street Legal Dept Duluth, MN 55802	Electronic Service	No	OFF_SL_19-254_M-19-254
Russ	Stark	Russ.Stark@ci.stpaul.mn.us	City of St. Paul	390 City Hall 15 West Kellogg Boulevard Saint Paul, MN 55102	Electronic Service	No	OFF_SL_19-254_M-19-254
Lynnette	Sweet	Regulatory.records@xcelenergy.com	Xcel Energy	414 Nicollet Mall FL 7 Minneapolis, MN 554011993	Electronic Service	No	OFF_SL_19-254_M-19-254

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Stuart	Tommerdahl	stommerdahl@otpco.com	Otter Tail Power Company	215 S Cascade St PO Box 496 Fergus Falls, MN 56537	Electronic Service	No	OFF_SL_19-254_M-19-254
Jenna	Warmuth	jwarmuth@mnpower.com	Minnesota Power	30 W Superior St  Duluth, MN 55802-2093	Electronic Service	No	OFF_SL_19-254_M-19-254
Daniel P	Wolf	dan.wolf@state.mn.us	Public Utilities Commission	121 7th Place East Suite 350 St. Paul, MN 551012147	Electronic Service	Yes	OFF_SL_19-254_M-19-254