



414 Nicollet Mall  
Minneapolis, MN 55401

**PUBLIC DOCUMENT: NOT  
PUBLIC DATA HAS BEEN EXCISED**

March 30, 2018

**—VIA ELECTRONIC FILING—**

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

RE: 2017 ANNUAL REPORT AND PETITION  
SERVICE QUALITY PERFORMANCE AND PROPOSED RELIABILITY MEASURES  
DOCKET NO. E002/M-18-\_\_\_\_

Dear Mr. Wolf:

Northern States Power Company, doing business as Xcel Energy, submits the enclosed Electric Annual Service Quality Performance Report and Petition of Northern States Power Company, requesting the Commission accept our 2017 report and approve our proposed reliability standards for 2018.

**Security, Trade Secret, and Private Data on Individuals Justification**

This submission contains information regarding the Company's feeders and other system components, and associated customers served. This information is "security information" as defined by Minn. Stat. § 13.37, subd. 1(a). Xcel Energy believes the information could be manipulated to reveal the location and size of facilities serving our customers. The public disclosure or use of this information creates an unacceptable risk because those who want to disrupt the electrical grid for political or other reasons may learn which facilities to target to create the greatest disruption. For this reason, pursuant to Minn. Stat. § 13.37, subd. 2, we have excised this data from the public version of our filing.

This submission also contains proprietary programs Xcel Energy has developed and maintained internally to plan and manage system reliability. This information is "trade secret" information as defined by Minn. Stat. §13.37(1)(b). This information derives

independent economic value from not being generally known or readily ascertainable by others who could obtain a financial advantage from its use. For this reason, pursuant to Minn. Stat. § 13.37, subd. 2, we have excised this data from the public version of our filing.

In addition, this submission includes “private data on individuals,” such as customer names and outage events from which they were impacted. This information is maintained by the Company as private customer data, and for this reason, pursuant to Minn. Stat. § 13.679, we have excised this data from the public version of our filing.

Finally, our report includes customer satisfaction survey data from internal and external sources. The internal customer survey data contains information that has been marked as Non-Public. These internal metrics has been designated as Trade Secret information as defined by Minn. Stat. § 13.37, subd. 1(b), in that this information has not been publicly released. It also derives independent economic value from not being generally known to, and not being readily ascertainable by proper means. The external customer survey data has been marked Non-Public as defined by Minn. Stat. § 13.37, subd. 1(b). This data came from a subscription with J.D. Power. Because this information derives independent economic value from not being generally known to, and not being readily ascertainable by proper means by, other persons who can obtain economic value from its disclosure or use, Xcel Energy maintains this information as a trade secret pursuant to Minn. Rule 7829.0500, subp 3.

We have electronically filed this document with the Minnesota Public Utilities Commission, and notice of the filing has been served on the parties on the attached service list.

Please contact Cyndee Harrington at [cynthia.d.harrington@xcelenergy.com](mailto:cynthia.d.harrington@xcelenergy.com) or (612) 330-5953 or me at [gail.baranko@xcelenergy.com](mailto:gail.baranko@xcelenergy.com) or (612) 330-6935 if you have any questions regarding this filing.

Sincerely,

/s/

GAIL BARANKO  
MANAGER, REGULATORY PROJECT MANAGEMENT

Enclosures

c: Service List

STATE OF MINNESOTA  
BEFORE THE  
MINNESOTA PUBLIC UTILITIES COMMISSION

|                   |              |
|-------------------|--------------|
| Nancy Lange       | Chair        |
| Dan Lipschultz    | Commissioner |
| Matthew Schuerger | Commissioner |
| Katie J. Sieben   | Commissioner |
| John Tuma         | Commissioner |

IN THE MATTER OF NORTHERN STATES  
POWER COMPANY'S ANNUAL REPORT ON  
SAFETY, RELIABILITY, AND SERVICE  
QUALITY FOR 2017; AND PETITION FOR  
APPROVAL OF ELECTRIC RELIABILITY  
STANDARDS FOR 2018

DOCKET NO. E002/M-18-\_\_\_

**ANNUAL REPORT AND  
PETITION**

### **INTRODUCTION**

Northern States Power Company, doing business as Xcel Energy, submits to the Minnesota Public Utilities Commission this Annual Report on our safety, reliability, and service quality performance for 2017. We make this filing pursuant to Minn. R. 7826.0400, 7826.0500, and 7826.1300. This filing also includes our Petition for approval of the Company's proposed reliability standards for the year 2018, as required under Minn. R. 7826.0600. In addition, this Annual Report contains several compliance items from various dockets.

We respectfully request that the Commission accept our annual report for 2017 and approve our proposed reliability standards for 2018.

### **I. SUMMARY OF FILING**

A one-paragraph summary of this filing accompanies this Petition pursuant to Minn. R. 7829.1300, subp. 1.

## **II. SERVICE ON OTHER PARTIES**

Xcel Energy has filed this document in eDockets and served a summary of the filing on all parties on Xcel Energy's miscellaneous electric service list, pursuant to Minn. R. 7829.1300, subp. 2.

## **III. GENERAL FILING INFORMATION**

Xcel Energy provides the following required information pursuant to Minn. R. 7829.1300, subp. 3.

### **A. Name, Address, and Telephone Number of Utility**

Northern States Power Company, doing business as Xcel Energy  
414 Nicollet Mall  
Minneapolis, MN 55401  
(612) 330-5500

### **B. Name, Address, and Telephone Number of Utility Attorney**

Mara K. Ascheman  
Senior Attorney  
Xcel Energy  
414 Nicollet Mall – 401 8<sup>th</sup> Floor  
Minneapolis, MN 55401  
(612) 215-4605

### **C. Date of Filing and Date Standards Take Effect**

The date of this filing is March 30, 2018. Xcel Energy requests that the Commission accept this annual report on the Company's performance for 2017. Additionally, we request that our proposed reliability standards be approved for the year 2018. Our report on reliability performance for 2018, subject to the standards approved by the Commission, will be filed on or before April 1, 2019, as required under Minn. R. 7826.0500, subp. 1, for the January 1 through December 31, 2018 period.

### **D. Statute Controlling Schedule for Processing the Filing**

No specific statute imposes a schedule controlling the processing of this filing. Pursuant to Minn. R. 7826.1300, this report is to be filed as a miscellaneous filing under Minn. R. 7829.0100, subp. 11. Under Minn. R. 7829.1400 governing

miscellaneous filings, initial comments are due within 30 days of filing, with reply comments due ten days thereafter.

**E. Utility Employee Responsible for Filing**

Gail Baranko  
Regulatory Manager  
Xcel Energy  
414 Nicollet Mall – 401 7<sup>th</sup> Floor  
Minneapolis, MN 55401  
(612) 330-6935

**IV. DESCRIPTION AND PURPOSE OF FILING**

Legislation passed in 2001 required that the Commission establish safety, reliability, and service quality standards for electric distribution utilities. After a rulemaking process, the Commission adopted rules that became effective on January 28, 2003. These rules contain both performance standards and reporting requirements. Additionally, the rules require individual utilities to propose electric reliability standards each year for approval by the Commission.

In compliance with the rules, this filing is organized into the following sections:

- Safety Performance for 2017
- Reliability Performance for 2017
- Service Quality Performance for 2017
- Additional Reporting Requirements
- Proposed Electric Reliability Standards for 2018

On March 31, 2017, the Company filed proposed reliability standards for 2017. The Commission approved our proposed standards in its February 9, 2018 Order in Docket No. E002/M-17-249. This filing contains information on our proposed reliability standards for 2018, as well as information on our performance for 2017 under the approved standards. The standards we propose for 2018 are calculated using the same methodology as previously approved for our 2017 reliability standards.

## NEW ITEMS IN THIS REPORT

The Commission’s Order accepting/approving our 2016 and 2017 Annual Reports required we include additional information in our next Annual Report. We provide below, a quick reference of where these items are in this report.

|   |                   |
|---|-------------------|
| Information on the number of applicants and participants in the Company’s new Medical Affordability Program                                   | Pg. 21            |
| Continue to report MAIFI performance  | Pg. 23,<br>Att. N |
| Benchmarking Company reliability performance with national Institute of Electrical and Electronics Engineers (IEEE) Reliability Standards     | Pg. 24            |
| Additional options for reporting Customers Experiencing Multiple Interruptions (CEMI) and Customers Experiencing Lengthy Interruptions (CELI) | Pg. 24,<br>Att. P |
| Summary of the Estimated Response Time data and steps taken to increase accuracy of response times to customers                               | Pg. 24            |
| Comparison of Company’s internal customer satisfaction goals and actual performance along with an explanation for the basis of the goals.     | Pg. 27,<br>Att. R |
| A qualitative discussion of reviewing reliability performance with increased granularity  | Pg. 28            |
| Inclusion of the locational labels, substation names and region in the distribution feeder information  | Att. E            |

## SAFETY PERFORMANCE FOR 2017

***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 United States Occupational Safety and Health Administration (OSHA) and the Occupational Safety and Health Division of Minnesota Department of Labor & Industry during the calendar year.*

During 2017, we continued our commitment to provide a safe work environment for our employees and to promote awareness of safe work practices.

Each year, the U.S. Department of Labor, Bureau of Labor Statistics Survey of Occupational Injuries and Illnesses requests information on randomly selected plants and facilities operated by Xcel Energy. We provide as **Attachment A** to this Annual Report, a table containing a summary of the data requested by the U.S. Department of Labor for 2017. Additionally, this table includes the required information from the U.S. Occupational Safety and Health Administration Form 300.

- 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 inquiries or property damage described.*

**Attachment B** to this Annual Report includes the required information regarding claims received in 2017 related to property damage resulting from downed wires or other electrical system failures. In general, when an incident occurs from a downed wire or failed equipment, the Company takes the necessary action to replace, repair or otherwise fix its equipment.

In 2017, the Company made no payments in compensation for injuries requiring medical attention resulting from downed wires or other electrical system failures. In preparing this report, however, we became aware that a number of claims were filed in one year and the compensation occurred in a subsequent year. In this filing, we are providing claims made to the Company in 2017, even if the event date preceded 2017. On a going forward basis payments made during the current reporting period for any past-year qualifying events, will be include in Attachment B.

## RELIABILITY PERFORMANCE FOR 2017

### *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.*

In addition to providing our SAIDI, SAIFI and CAIDI results and storm normalization data for 2017, we also provide a discussion related to the Commission's December 12, 2014 Order in Docket No. E002/M-14-131,<sup>1</sup> which specified that the Company provide additional information in this Annual Report describing the policies, procedures and actions that we have implemented, or are planned, to assure reliability as follows:

- 3. *Required Xcel to augment its next filing to include a description of the policies, procedures and actions that it has implemented, and plans to implement, to assure reliability, including information on how it is demonstrating pro-active management of the system as a whole, increased reliability, and active contingency planning.*
- 4. *Required Xcel to incorporate into its next filing a summary table that allows the reader to more easily assess the overall reliability of the system and identify the main factors that affect reliability.*

We provide information in compliance with Order Points 3 and 4 in our Distribution System Performance Summary as **Attachment M** to this report.

- 5. *Required Xcel to report on the major causes of outages for major event days.*

We provide information in compliance with Order Point 5, as well as our Momentary Average Interruption Frequency Index (MAIFI) results as **Attachment N** to this report.

- 6. *Required Xcel to consider other factors, in addition to historical data, on which to base its reliability indices for 2014 in an effort to demonstrate its commitment toward improving reliability performance.*

We provide information in compliance with Order Point 6 in the Section, "Proposed Electric Reliability Standards for 2018" below.

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<sup>1</sup> The Commission affirmed these additional requirements in its Order dated October 23, 2015 in Docket No. E002/M-15-324.



7. *Required Xcel to continue reporting major service interruptions to the Commission's Consumer Affairs Office.*

We discuss our major service interruptions in Compliance with Order Point 7 in this Annual Report in the Section discussing Minn. Rule 7826.0700.

In our last annual Service Quality report,<sup>2</sup> filed on March 31, 2017 and as required by Minn. R. 7826.0600, we proposed reliability standards for 2017 for each of our four Minnesota work centers.<sup>3</sup> The table below presents our 2017 reliability performance results compared to the proposed standards which were approved in Docket No. E002/M-17-249.

**2017 RELIABILITY PERFORMANCE RESULTS**

|            |       | <b>2017 Performance Results</b> | <b>2017 Proposed Standard</b> |
|------------|-------|---------------------------------|-------------------------------|
| Minnesota  | SAIDI | 70.85                           | NA                            |
|            | SAIFI | 0.72                            | NA                            |
|            | CAIDI | 98.63                           | NA                            |
| Metro East | SAIDI | 66.17                           | 89.13                         |
|            | SAIFI | 0.69                            | 0.87                          |
|            | CAIDI | 95.33                           | 102.42                        |
| Metro West | SAIDI | 69.51                           | 92.06                         |
|            | SAIFI | 0.71                            | 0.89                          |
|            | CAIDI | 97.84                           | 103.98                        |
| Northwest  | SAIDI | 75.77                           | 95.88                         |
|            | SAIFI | 0.76                            | 0.81                          |
|            | CAIDI | 100.28                          | 118.45                        |
| Southeast  | SAIDI | 87.67                           | 99.16                         |
|            | SAIFI | <b>0.80</b>                     | 0.74                          |
|            | CAIDI | 109.73                          | 134.40                        |

<sup>2</sup> Docket No. E002/M-17-249.

<sup>3</sup> The four Minnesota work centers include Metro East, Metro West, Northwest, and Southeast.

As shown above, in 2017 we met eleven of twelve standards, bolding the standard we did not meet.<sup>4</sup> We note these reliability statistics are calculated using the methodology previously-approved by the Commission, which we outline below:

- Include outages occurring at all levels (distribution, substation, and transmission).
- Include all outage cause codes.
- Where applicable, include credit for partial restoration.
- Base calculations on the number of customers' billing accounts and meters.
- Base calculations on storm-normalized data.

We determine regional storm day thresholds based on the average number of sustained outages per day.<sup>5</sup> Any day that meets or exceeds the threshold is considered a storm day for the qualifying region.<sup>6</sup> This means that all outages that start on a storm day (which lasts from midnight to midnight) for a particular work center are excluded from the calculation of the various reliability indices for that work center.

For 2017, we used the following storm day threshold calculation procedures:

- Using the previous five years of outage history for each region, we:
  - Calculate the number of sustained outages per day;
  - Calculate the average number of sustained outages per day; and
  - Calculate the standard deviation of sustained outages per day.
- Based on the above methodology, we set a unique storm day threshold for each region. A storm day is defined as any day meeting or exceeding the average number of sustained outages per day plus three standard deviations.

2017 was a mild weather year which is reflected in our reliability results. In the following section, we provide a summary as to why we did not meet the SAIFI standard for the Southeast region.

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<sup>4</sup> We note that Xcel Energy operates under two sets of reliability standards – those approved by the Commission under Minn. R. 7826.0600, and those included in the Company's service quality tariff. The Commission approved the reliability measures in our service quality tariff in its Order dated August 12, 2013 in Docket No. E,G002/M-12-383. We will file an annual report in that docket on or by May 1, 2018.

<sup>5</sup> A "sustained outage" is an outage with duration greater than five minutes.

<sup>6</sup> While storms and weather related events are the most common cause for a day to be excluded as part of the normalization process, outages driven by all causes are used to calculate the exclusion days.

- 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.*

As we have noted in previous annual reports, due to the fact that these goals are five-year averages, we would expect to achieve target results 50 percent of the time and miss the target 50 percent of the time. Taken together, several days of storms that cause extensive outages but do not qualify for storm days can quickly erode a standard that is based on average performance.

As described in our Distribution System Performance Summary provided as Attachment M to this Annual Report, the Company will continue our on-going assessments of reliability, seeking to implement system improvements and maintenance to achieve the largest improvements in reliability measurements. We are committed to providing reliable service to our customers and discuss the specific work centers below.

1. *Metro East*

We are pleased to report that our SAIDI, SAIFI, and CAIDI for the Metro East work center were within the standard for the year.

2. *Metro West*

We are pleased to report that our SAIDI, SAIFI, and CAIDI for the Metro West work center were within the standard for the year.

3. *Northwest*

We are pleased to report that our SAIDI, SAIFI, and CAIDI for the Northwest work center were within the standard for the year.

4. *Southeast*

Our SAIDI and CAIDI in the Southeast work center were both within the standard for the year. SAIFI for the Southeast work center region did not meet the thresholds by the relatively small amount of 0.06 interruptions. In 2017, we experienced several significant events, each of which substantially impacted the fact that we did not meet the SAIFI metric for this work center.

On June 6, an outage that was the result of an intentional lockout at a Transmission substation contributed 0.03 interruptions to SAIFI. Intentional outages are deliberate switching operations of the system to de-energize a circuit or location for emergencies, safety, or system performance (overloads, construction etc.) In this instance, a transmission breaker was opened to clear a defective regulator that was on fire. In addition, on March 30, an animal contact failure at the Distribution Substation level contributed 0.02 interruptions to SAIFI. Furthermore, on November 13, an animal contact failure at the Distribution Substation level contributed 0.02 interruptions to SAIFI. Also, there were seven other mainline Feeder level outages that each contributed 0.02 interruptions to SAIFI. Three of the mainline outages were from Public Damage caused events.

- 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.*

During 2017, there were no generation outages on Xcel Energy's system that caused an interruption of service to firm electric customers. All curtailments of customers subject to load management rates or Demand-Side Management programs were consistent with the terms of the load management tariffs and DSM programs.

We provide the required information regarding transmission outages as **Attachment C** to this annual report. Since the incidents shown were reactionary due to storms, public damage, or other activities associated with random and unforeseen events, no plans have been developed to address the specific issues encountered. However, the Transmission Line Performance work area works very closely with the area account representatives and trouble men, Transmission Construction, System Operations, and other work areas to proactively inspect and maintain our infrastructure.

The transmission line names in Attachment C have been marked as protected data. This information is "security information" as defined by Minn. Stat. § 13.37, subd. 1(a). Xcel Energy believes the information could in some circumstances be manipulated to reveal potential vulnerabilities in our system. The public disclosure or use of this information creates an unacceptable risk because those who want to disrupt the electrical grid for political or other reasons may learn which facilities to target to create the greatest disruption. For this reason, pursuant to Minn. Stat. § 13.37, subd. 2, we have excised this data from the public version of our filing.

*G. A copy of each report filed under part 7826.0700.*

Minn. R. 7826.0700, subp. 1 requires a utility to promptly inform the Commission's Consumer Affairs Office (CAO) of any major service interruption occurring on the utility's system. "Major Service Interruption" is defined under Minn. R. 7826.0200, subp. 7 as an interruption of service at the feeder level or above and affecting 500 or more customers for one or more hours. Xcel Energy regularly sends the CAO notification of sustained outages occurring at the feeder level or above, which includes reporting outages that are not necessarily large enough or long enough to meet the definition of a major service interruption under Minn. R. 7826.0200, subp. 7.

We are committed to providing the CAO with timely and accurate information. Our Customer Advocate Group generally sends these notifications via e-mail directly to the CAO. In most cases, our Customer Advocates forward a copy of the internal email outage notifications they receive from our Control Center. During 2017, there were 154 outages on Xcel Energy's system that meet the definition of "major service interruption." We provide as **Attachment D** to this Annual Report, copies of the notifications for the qualifying outages.

Attachment D contains information regarding the Company's feeders and other system components, and associated customers served. This information is "security information" as defined by Minn. Stat. § 13.37, subd. 1(a). Xcel Energy believes the information could be manipulated to reveal the number of customers served by a particular feeder. The public disclosure or use of this information creates an unacceptable risk because those who want to disrupt the electrical grid for political or other reasons may learn which facilities to target to create the greatest disruption. For this reason, pursuant to Minn. Stat. § 13.37, subd. 2, we have excised this data from the public version of our filing.

In an effort to provide the timeliest information, whenever possible our Customer Advocate Group sends the CAO the first outage notification received from the Control Center for an outage event. First notifications often do not include full cause and/or follow-up action information since the restoration crew may not have yet completed its work related to the event. However, we believe it is more important to give the CAO notification as soon as possible rather than waiting for complete information before sending the CAO an alert.

As discussed in previous Annual reports, we note that during high volume outage times, it is possible the Control Center does not send an email for each and every outage event. Often during these high volume events, the Company's Customer

Advocate Group works with the Control Center to obtain more general status updates in lieu of individual emails. These updates, which are also forwarded to the CAO, usually include information on which communities were affected, total customers out of service, and any available information on expected restoration times. If available, information is also provided regarding crews brought in from other areas to assist restoration during times of escalated operations.

As with any process that involves human intervention, errors will occur, and notices may not be sent to the CAO. There are instances when the Control Center may not create a notice, or the Company's Customer Advocates do not forward a notice to the CAO. In 2017, we did not send an email notice to the CAO for 6 of 154 major service interruptions. Five of the six notices not sent were for events during a single heavy storm that occurred on June 11.

Minn. R. 7826.0700, subp. 2 requires a utility to file a written report on any major service interruption in which ten percent or more of its Minnesota customers were without service for 24 hours or more. During 2017, there were no such interruptions on Xcel Energy's system.

- H. *To the extent feasible, circuit interruption data, including:*
- *Identifying the worst performing circuit in each work center;*
  - *Stating the criteria used to identify the worst performing circuit;*
  - *Stating the circuit's SAIDI, SAIFI, and CAIDI;*
  - *Explaining 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.*

Xcel Energy has a program entitled Feeder Performance Improvement Plan (FPIP). Under this plan, we identify the poorest performing circuits, the outage causes, and any changes needed to improve reliability. Xcel Energy defines poor performing feeders as those with a SAIFI exceeding three times the average feeder SAIFI value, or a SAIDI exceeding four times the average SAIDI value.<sup>7</sup> The data used to calculate SAIDI and SAIFI for these feeders is based on distribution level outages, except for planned and public damage, and has not been normalized for storm events.

The FPIP schedule spans the September through August time period, rather than a calendar year. We designed this schedule to implement solutions prior to the storm

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<sup>7</sup> SAIFI- 1.84 outages for 2017 in Minnesota. SAIDI – 448.9 minutes for 2017 in Minnesota.

season and to achieve maximum benefit throughout the year. Thus, the data used to determine the poorest-performing circuits in this report spans the September 2016 to August 2017 period rather than the calendar year.

In September of each year, we calculate SAIFI and SAIDI for the most recent 12 months for each feeder. We analyze the outage cause data to determine whether operational changes are necessary. Using this data, during the fall and early winter months, we plan any necessary construction projects. We begin construction projects involving overhead equipment first, with a goal of completion prior to the spring storm season. We begin underground construction as soon as possible after frost dissipation.

In accordance with the Commission's April 7, 2006 Order in Docket No E002/M-05-551, the Commission increased the number of feeders that the Company includes in this report to 25 per work center, for a total of 100. In addition, the Order directed the Company to work with Commission Staff in developing a reporting format. **Attachment E** to this report provides the resulting feeder performance data by work center, in two sections. New with this year's report, we have added columns to indicate the name of the substation and city where the substation is located.

The feeder numbers and substation names in Attachment E have been marked as protected data, but pursuant to the Commission's discussion of our last Annual Report, the Company has added a column providing publicly the City in which the substation is located. The protected data is "security information" as defined by Minn. Stat. § 13.37, subd. 1(a). Xcel Energy believes the information could be manipulated to reveal the number of customers served by a particular feeder. The public disclosure or use of this information creates an unacceptable risk because those who want to disrupt the electrical grid for political or other reasons may learn which facilities to target to create the greatest disruption. For this reason, pursuant to Minn. Stat. § 13.37, subd. 2, we have excised this data from the public version of our filing.

The first section of each work center's report provides a list of feeders, sorted by SAIDI, using calendar year data and the format requested by Commission Staff. We note this format includes additional outages such as bulk power supply and planned outages that are not used internally to identify poor performers. Thus using the Company's criteria for identifying poorest-performing feeders will not result in 25 actual "poor performers" for each region, or 100 system-wide.

For this reason, some of the feeders listed in Attachment E are not actual "poor performers," but rather are included in the list only because the Company is required

to identify 25 feeders, and their performance values were greater than other feeders (but less than poor performer feeders in that particular work center). For top feeders in each region that were identified as poor performers and needing operational change(s) under the internal FPIP program, we have completed a reliability review and provide information on the reasons for the poor performance and any planned improvements in Attachment E.

We evaluate the worst performing feeders annually and prepare plans and projects to remedy the causes of outages; however, despite these efforts occasionally a feeder will reappear on the worst performer list. This can be caused by several reasons, including: storms, distance from first responders, or quickly growing vegetation. In addition, feeders can be on the list due to poor tap performance which may not have been investigated in previous years.

There are four feeders listed on Attachment E in the FPIP section, which were also identified in the 2016 Report as FPIP feeders. Below, we provide additional information regarding reasons for the poor performance and operational changes planned or completed.

*Metro East / Feeder C (Attachment E, Page 1)*

This is a long feeder that is located on a hilltop in a rural and rustic area surrounded by rough terrain and trees. In addition, the area is sparsely populated without a tie to another source available. A combination of storms, tree contact and splice failures in main line feeder and taps have contributed to the outage history on this feeder. A portion of the feeder where most of tree contact had occurred was upgraded in 2016 with bigger and stronger conductor along with relocating a portion of the line to the opposite side of the road. In 2018, a section of the mainline that has many splices in it is being replaced with new conductor. Also in 2018, the feeder will have a portion of it transferred onto a new feeder out of the Baytown substation. This will reduce exposure and customer count affected by outages. Finally, this feeder is scheduled for its 5-year tree trimming cycle in 2018. The location of this feeder creates challenges to improvement; however, we will continue to monitor it and determine if other actions can improve its reliability.

*Metro West / Feeder B (Attachment E, Page 2)*

This feeder is almost entirely underground with limited ability to switch to an alternate source during an outage. The causes for 2016 performance were related to a feeder lockout (a reclosing device locks out which requires a manual reset) during a summer storm along with unknown causes. In response, we identified seven tap loops for cable replacement in 2018. Additionally, in 2018 we are reconfiguring this feeder



and adding two switch centers, 3,000 feet of new cable, and fault indicators to help isolate and restore outages quicker.

*Northwest / Feeder E (Attachment E, Page 3)*

The reason for the feeder's 2016 poor performance was due to conductor fatigue with heavy snow in 2017 contributing to a majority of the customer outage minutes in that year. Due to the condition of the conductor, poles, and cross arms, this feeder was identified for a complete rebuild covering 9.5 miles in 2018; 7 miles in 2019; and 13 miles in 2020.

*Southeast / Feeder D (Attachment E, Page 4)*

The feeder had a line relocated away from the bottom of the bluffs where debris and trees fell from the bluffs and onto the line. Relocating the line will prevent further outages from happening on this portion of the feeder. In 2017, one outage accounted for over 80 percent of all CMO's due to public damage when a customer dropped a tree into our lines while they were cutting it down.

*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.*

Voltage deviations typically result with customers experiencing problems with electrical equipment. High voltage can result in bright light bulbs, and eventually shortens the life of the bulbs, or can result in electric motor damage. Low voltage can have equally-significant consequences.

A first responder initially handles customer voltage complaints. If a non-voltage cause cannot be found, we initiate a voltage investigation, and install a recording voltmeter. In the metro area, Xcel Energy has a dedicated technician that sets these recorders and performs the voltage investigations. In the non-metro areas, a first responder or a district representative conducts the voltage investigations.

Xcel Energy's allowable service voltage range is 120 volts plus/minus 5 percent, or a minimum of 114 volts to a maximum of 126 volts. As shown in the table below, Xcel Energy's allowable service voltage range falls within the American National Standards Institute (ANSI) voltage range B.

### Xcel Energy Allowable Service Voltage Range

|  | Minimum Voltage | Maximum Voltage |
|--|-----------------|-----------------|
| ANSI Voltage Range B (service voltage) | 110             | 127             |
| Xcel Energy Range (service voltage)    | 114             | 126             |

During 2017, the Company conducted 284 voltage investigations. These investigations resulted in a diagnosis of a specific voltage problem in 64 of these cases. These problems are typically the result of transformer overloads or some other equipment malfunction, such as capacitor banks or voltage regulators. In all other cases, either no problem was found or the root cause was attributed to something other than voltage deviations. In cases where the Company finds the voltage to be out of the acceptable range, we take appropriate actions, including but not limited to swapping transformers, upgrading transformers, or checking capacitor banks.

*J. 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*

|   | Metro East | Metro West | Northwest | Southeast | Other * |
|---|------------|------------|-----------|-----------|---------|
| <b>2017 Work Center Staffing Level Totals</b> | 121        | 195        | 34        | 49        | 56      |
| <b>2016 Work Center Staffing Level Totals</b> | 129        | 202        | 32        | 50        | 55      |

\* Xcel Energy field employees associated with the Fargo and Sioux Falls Service Centers respond to trouble and perform distribution line operation and maintenance in western Minnesota and the Dakotas.

In addition to the attrition numbers we experienced in 2016, we also had a significant number of retirements during 2017. While our current staffing numbers have not had an impact on our day-to-day operations or performance levels, we do have a number of open positions currently posted (10 ME, 2 MW and 2 SE), which are expected to close the gap and bring the staffing levels in line with our past average. At the time of this filing we have filled 6 staffing positions with another 6 currently going through the final interview/hiring process. We expect to fill the remaining open positions later in 2018.

Finally, we note that although we are reporting staffing levels by work center as required under the Rules, our field personnel continue to respond to trouble and perform duties in other work centers as the need arises.

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

We are committed to providing reliable service to our customers. We are available to provide any additional information the Commission may require on this issue.

### **SERVICE QUALITY PERFORMANCE 2017**

**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 periods of longer than 12 months, and an explanation as to why they have not been read.*

We provide the required meter reading information as **Attachment F** to this filing. Attachment F includes the reporting refinements discussed in our July 31, 2013 Reply Comments in Docket No. E002/M-13-255. Attachment F excludes multiple reads per month when reporting meter read totals so that the “Percent Read by Company” does not exceed 100 percent in any given month, and we have reported the number of meters installed by month rather than only a year-end total.

We have also removed “deleted meters” from the total number of meters installed per month. The “deleted meters” designation is given to meters that were incorrectly entered into the system and were never truly installed at a premise. This ensures our data is more representative of meters in the field.

As discussed in our July 25, 2014 Reply Comments in Docket No. E002/M-14-131, the meters read percentage may be artificially low in certain months when the percentage of meters read is calculated by dividing the number of meters read in a calendar month, excluding multiple reads on a given meter, by the number of total meters. In particular, in February, September and November there are fewer business days than the 21-day meter read cycle. The data in Attachment F includes all reads in

a calendar month instead of a billing-month/read cycle, so when multiple meter reads for a given meter were excluded, the percentage of meters read is much lower in February and November than most other months.

*D. Data on monthly meter reading staffing levels, by work center or geographical area.*

The following data for 2017 includes full-time equivalent numbers and does not count temporary staff positions. The “Other” category numbers includes Xcel Energy personnel located in the Fargo and Sioux Falls Service Centers who read meters in western Minnesota and the Dakotas.

|            | Jan-17 | Feb-17 | Mar-17 | Apr-17 | May-17 | Jun-17 | Jul-17 | Aug-17 | Sep-17 | Oct-17 | Nov-17 | Dec-17 |
|------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Metro East | 4      | 4      | 4      | 4      | 4      | 3      | 3      | 3      | 3      | 3      | 3      | 3      |
| Metro West | 3      | 3      | 3      | 3      | 3      | 3      | 2      | 2      | 2      | 2      | 2      | 2      |
| Northwest  | 2.5    | 2.5    | 2.5    | 2.5    | 2.5    | 2.5    | 2.5    | 2.5    | 2.5    | 2.5    | 2.5    | 2.5    |
| Southeast  | 3      | 3      | 3      | 3      | 3      | 3      | 3      | 3      | 3      | 3      | 3      | 3      |
| Other      | 1      | 1      | 1      | 1      | 1      | 1      | 1      | 1      | 1      | 1      | 1      | 1      |

Meter reading staffing levels during 2017 decreased by 2 staff positions when compared to 2016 (1 in Metro East, 1 in Metro West). This change is a result of continued improvements in network performance and increased efficiencies due to reworking meter reading routes across our service area.

*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 chapter 7820 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.*
- D. The number of disconnected customers restored to service by entering into a payment plan.*

We provide the required information as **Attachment G** to this Annual Report.

**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.*
- 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.*

We provide the required information for Part A above as **Attachment H** to this Annual Report. Attachment H includes data on service installations that require construction.

For Part B above, we note that 305,792 customers requested service at a location previously served by the Company in 2017. With respect to situations where we supply service to a location previously served by the Company, we handle these requests on the next business day. Responding to such a request generally involves setting a meter and connecting the service. Such cases are not reflected in the information provided in Attachment H.

**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.*

We provide the required information as **Attachment I** to this Annual Report.

Pursuant to the Commission's November 3, 2004 Order in Docket No. E002/M-04-511, we have included credit calls in our reported call center response time. Additionally, we also provide as a comparison all service level calls offered to agents, which in addition to Residential, BSC, Credit and PAR, it includes all IVR handled calls.

- Our "Service Level All Calls" that include Residential, BSC, Credit and PAR and IVR handled outage calls is 80.6 percent of calls answered in 20 seconds or less – Line 27; and

- Our “Service Level All Calls” that include Residential, BSC, Credit and PAR and all IVR handled calls is 90.1 percent of calls answered in 20 seconds or less – Line 26.

Minn. R. 7826.1200, subp. 1 requires that we answer 80 percent of calls made to the business office during regular business hours within 20 seconds. We note that our Call Centers are staffed 24 hours a day, 7 days a week, and our IVR is used in the same manner across this time period, therefore these were our “business hours.” Our performance includes call and service level information on a 24-hours-a-day, 7 days-a-week-basis. Line 31 on Attachment I provides our average speed of answer (ASA), and the rows below break out the ASA by call center.

In compliance with the Commission’s November 2, 2017 Order in Docket No. E002/M-17-553, we provide an update from the first few months of our change to our non-emergency call center hours. On January 1, 2018 we changed our hours of operation for non-emergency calls to Monday through Friday from 7:00 a.m. to 7:00 p.m. and Saturdays from 9:00 a.m. to 5:00 p.m. Call Center Representatives continue to be available to interact with customers calling regarding electric and natural gas outage and emergency calls 24/7. We have not encountered any technical or other issues.

Overall call volumes are very similar to one year ago, but we have seen a five percent increase in IVR utilization that we believe is reasonable to attribute to the change in our general business hours. Total Minnesota call volume during the January 1 through March 15, 2018 period was approximately 600,000. Callers presented the after-hours message averaged approximately 335 per weekday and 630 per weekend. Of these callers, 22 percent returned to the main menu; 63 percent hung up; 15 percent completed, and selected to end the call. Of the weekday callers that did not utilize the IVR, approximately 19 percent called the Company back the same business day; 27 percent called back the next business day. Approximately 29 percent of weekend callers called back the next business day. The remaining customers are choosing to self-serve through other channels, including utilization of our IVR system – thus the noted increase.

As of the date of this Report, we have received three complaints/comments about the change from our Minnesota customers. The first one stemmed from a call received in January. The customer had referred to her December billing statement, which indicated that our business hours were 24/7.<sup>8</sup> The second was a comment received

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<sup>8</sup> Customer bills were updated with the new service hours on statements issued starting January 1, 2018.

through our IVR Experience Survey. The customer felt that the wait time to hear the IVR recording that our offices were closed for general inquiries was too long in the prompt sequence. The third was a customer who had setup a password in order to use our IVR – and had trouble using the IVR after hours. We worked with the customer and removed the password she had set-up, so she could use the IVR more easily in the future.

***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.*

We provide the required information as **Attachment G** to this Annual Report.

In compliance with the Commission’s February 9, 2018 Order point 3H in Docket Nos. E002/M-16-281 and E002/M-17-249, we also provide a summary of applicants and participants in our Medical Affordability Program which the Commission approved on January 10, 2018 in Docket No. E002/M-17-629.

The Medical Affordability Program is a new bill payment assistance program exclusively for Minnesota electric customers with certified chronic or severe medical conditions and an income level up to 50 percent of the state median income guidelines (SMI) currently used to determine eligibility for the federally funded Low Income Home Energy Assistance Program (LIHEAP). If funds remain, we will additionally enroll customers up to 60 percent SMI. The program was implemented on January 15, 2018 and we expect program expansion will take some time.

Below we provide a summary of applications and enrollment through March 15.

|  |            |
|--|------------|
| New applications received since program implementation | 512        |
| Minus non-qualifying applications                      | (105)      |
| Minus incomplete / pending applications                | (150)      |
| Total active, newly enrolled participants              | 257        |
| Participants transferred from PowerOn                  | 643        |
| <b>Total Med Affordability participants</b>            | <b>900</b> |

A more detailed description of program status will be filed annually in December in Docket Nos. E002/M-04-1956 and E002/M-10-854.

**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.*

During 2017, we requested a total of 314 deposits as a condition of service for our residential customers that had filed for bankruptcy. We request these deposits upon notification from the bankruptcy court and/or the customer of their bankruptcy petition.

**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.*
  - (4) *Refusing to take the action the customer requested.*
- E. *The number of complaints forwarded to the utility by the commission's Consumer Affairs Office for further investigation and action.*

We provide the required information as **Attachment J** to this Annual Report, which includes complaints that are handled by either the call center or the Company's Customer Advocate Group.

Pages 1-4 of Attachment J contain information on customer complaints handled by our customer advocates. Pages 5-16 contain information on complaints handled upon initial inquiry within the Call Centers. We also note that an additional complaint type is now included in the Attachment J data fields. The "High Bill" category on



pages 5 through 16 it now includes complaint calls related to decoupling issues. More specific details regarding decoupling complaints can be found in our annual report filed on February 1<sup>st</sup> in Docket Nos. E002/GR-13-868 and E002/GR-15-826.

## **ADDITIONAL REPORTING REQUIREMENTS**

### **A. Meter Equipment Malfunctions Tariff Annual Report**

In compliance with the Commission's Order dated November 30, 2010 in Docket Nos. G002/CI-08-871 and E,G002/M-09-224, we provide a review and report on the following items relating to our Meter Equipment Malfunctions tariff:

- Volume of Investigate and Remediate Field orders;
- Volume of Investigate and Refer Field orders;
- Volume of Remediate Upon Referral Field orders;
- Average response time for each of the above categories by month and year;
- Minimum days, maximum days, and standard deviations for each category; and
- Volume of excluded field orders.

In summary, we performed within the field response parameters prescribed in our tariff, completing a total of 3,648 electric and 3,638 natural gas orders with an average response time of 3.33 and 3.67 days, respectively. We additionally completed 154 electric and 466 natural gas field orders for which we experienced access and/or environmental issues, both allowable Exclusions under the tariff. We provide our detailed results as **Attachment O**.

### **B. MAIFI**

In Compliance with ordering paragraph 32 of the Commission's FINDINGS OF FACT, CONCLUSIONS, AND ORDER issued September 3, 2013 in Docket No. E002/GR-12-961, and in ordering paragraph 3-C of the Commission's Order dated February 9, 2018, in Docket Nos. E002/M-16-281 and E002/M-17-249 we will continue to provide information on available MAIFI (Momentary Average Interruption Frequency Index) data as **Attachment N1** to this filing on a going forward basis.

### C. CEMI and CELI Metric Proposal

Consistent with the February 9, 2018 Commission's Order in Docket Nos. E002/M-16-281 and E002/M-17-249, we provide information on potential CEMI and CELI metrics. After consulting with the Department Commerce, we explored whether there is industry benchmark data for CEMI and CELI that could be used as a guide for metric design – and/or as a point of comparison on an ongoing basis.

The IEEE Distribution Reliability Working Group does not benchmark CEMI or CELI; Edison Electric Institute (EEI) benchmark information for CEMI is proprietary and thus we are unable to share it. We can however, look to EEI in terms of metric design. EEI uses CEMI (which is the count of customers who experience “x” number of outages or more in a year based on normalized data) based on several counts of outages. In **Attachment P**, we provide our CEMI performance for 2013 to 2017 as a stacked bar graph to illustrate CEMI for 4, 5 and 6+ outages in a year. We also provide CELI data for the same timeframe in Attachment P which shows counts for customers experiencing an outage lasting 12 hours or longer for 2013 to 2017 (based on normalized data.)

We have flexibility to adjust the numbers and lengths of outages in the CEMI and CELI metrics, respectively, if the Commission prefers a different view of the data.

### D. Estimated Restoration Times

Consistent with the Commission's February 9, 2018 Order in Docket Nos. E002/M-16-281 and E002/M-17-249 we provide information on the Company's efforts to measure Estimated Restoration Times (ERTs) and to communicate with our customers. The Company has agreed to provide summary ERT data on a going forward basis as part of these Annual reports and proposed the data would be summarized as to the accuracy of our ERT estimates for the calendar year.

#### *Measurement of ERTs*

The current draft metric measures actual restoration times which occurred within 90 minutes prior to the published ERT up to 0 minutes after the published ERT. On a monthly basis, the Company pulls year-to-date data from its Network Management System (NMS) that itemizes each outage along with associated outage data such as: (i) time of outage; (ii) number of customers impacted, interrupting device; (iii) level of outage; (iv) estimated restoration time (ERT) pre-determined by the Company; and (v) actual restoration time. The

information is used to analyze the accuracy of our estimated restoration times when compared to the actual restoration time.

We provide the following table which summarizes the annual percent accuracy of ERT estimates provided to electric customers in the NSPM Operating Company as well as the Minnesota Jurisdiction for the years 2014 thru 2017:

| <b>Estimated Restoration Time Accuracy</b> |                          |             |             |             |             |
|--|--------------------------|-------------|-------------|-------------|-------------|
| <b>Entity</b>                              | <b>Accuracy Criteria</b> | <b>2014</b> | <b>2015</b> | <b>2016</b> | <b>2017</b> |
| <b>NSPM</b>                                | Within -90 to +0         | 34.7%       | 36.7%       | 39.7%       | 38.9%       |
| <b>MN Only</b>                             | Within -90 to +0         | 35.6%       | 36.2%       | 39.2%       | 38.6%       |

Primarily driven by our efforts to fine-tune our model algorithm built into our Network Management System (NMS) we have improved our annual ERT accuracy by approximately 8.5 percent (net average increase of 3.1 percentage points) the past two years versus the 2014/2015 timeframe. While the overall accuracy percentages appear low, please keep in mind that the “window of accuracy” is for the actual restoration time to be within the range of 90 minutes prior to the ERT estimate right up to 0 minutes after that estimate. This means if an actual restoration time is only 1 minute after what was estimated, it constitutes a failure and is not counted as an accurate ERT.

As we have previously indicated, the ERT accuracy measurement is a work in progress and we have made some refinements for 2018. Our 2014 to 2017 performance includes the “initial” ERTs which is the standard 3 hour estimate used when an outage is reported until we have better information. For 2018, we have removed the initial ERTs from the calc. The metric will include ERTs generated by our model (which is based on the impacted device(s) and algorithms) and ERTs entered by field and control center personnel. The model usually provides an estimate within 15 minutes after notification of an outage. The 0 to 90 minute window of accuracy will still be used.

In addition to revising the measurement design, we also have a number of initiatives planned for 2018 to further improve our ERT Accuracy including clearly documented processes for establishing and changing restoration estimates and first responder training, which we further describe below.

#### *Communicating ERTs to our Customers*

We provide several proactive communication channels when an outage occurs such as: email, text, and push notification via a mobile app. We also provide notification

channels that require the customer to pull the information such as: our website, social media and outage maps.

When an outage is identified, an initial automated message is sent to the customer. This message confirms their outage if they reported it, or notifying them of an outage we believe is impacting them. An ERT is not communicated in the initial message. After 20 minutes of an identified outage, another automated message is sent providing an update. If an ERT is available, it would be provided at this time. Additional messages to the customer during the outage will be dependent on ERT changes or the outage being closed. The final message the customer receives will confirm their power has been restored. If the customer still has an outage, the final message also provides the customer with a way to report within text or a link to our online report an outage tool.

Pull channels (website, social media, and outage map) leverage the same data sources as our push channels. This ensures consistent information across channels and provides additional resources to our customers. Customers can also receive information via two-way text. A customer can text us ‘OUT’ to report an electric outage or ‘STAT’ and receive an on-demand text message as to the status of their outage.

Currently, the primary work being done to address outage communication improvements is around the ERT2.0 training which we are currently conducting. A new process was established based on customer feedback that the two most important pieces of information our customers want to have during an outage are “when will my lights be back on?” and “what was the cause of the outage?” The intention of the training is to improve our ERT accuracy through a new process throughout the outage that will enable us to communicate more accurate information to our customers during outages. The training is for field employees to educate them on a new process and how their work on their mobile data terminal triggers notifications to the customer. The field employees will also be updating ERTs and cause codes from the field that will trigger customer notifications and will provide more accurate and timely information.

## **E. Planned Outage Communications**

The Commission granted the Company a variance to use express customer communication preferences in communicating planned outages to customers in

Docket No. E002/M-17-553.<sup>9</sup> In that proceeding, we committed to provide a brief update in this report discussing our progress in implementing a new Planned Outage Communications system along with the following information:

- Number of customers who opted-in to preferences,
- Of those customers, how many prefer each type of communication
- The number of customers who change or cancel their preferences and stated reason, if known, and
- The CSR will continue to include statistics on customer complaints

At this time, 791,869 Xcel Energy customers have opted-in to receive outage notifications – 278,137 to receive emails; 337,929 to receive Text/SMS messages; and 175,803 to receive phone notification of the outage.<sup>10</sup> We currently do not track customers that change preferences, and we do not ask for a reason before allowing a customer to change their communication preferences. We can, however, provide the number of customers that have opted-out of preferences, as follows: Text/SMS 1,462; Email 620.

We have not yet implemented the changes to our planned outage communications. We are currently working on the technical aspects, and will then test the system prior to implementation.

## **F. Customer Satisfaction**

The Commission's February 9, 2018 Order in Docket Nos. E002/M-16-281 and E002/M-17-249 requires that we provide information regarding the Company's internal customer satisfaction goals, a comparison of its performance to those goals, and an explanation for the basis of the goals. Please see **Attachment R** for information on our:

- 2017 Customer Satisfaction Goals and Performance
- Background on Transaction Surveys
- Setting the 2017 Goals
- JD Power information including 2017 performance by categories

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<sup>9</sup> Approved in a November 2, 2017 Order.

<sup>10</sup> Customers can specify more than one communication channel preference. Therefore, these numbers may not be representative of unique customer counts. All numbers reflect totals for all Xcel Energy customers.

## **G. *Institute of Electrical and Electronics Engineers (IEEE) Benchmarking***

In the Commission's February 9, 2018 Order in Docket Nos. E002/M-16-281 and E002/M-17-249, the Company was directed to provide data on benchmarking with national IEEE Reliability Standards.

We participate in the reliability benchmarking survey sponsored by the IEEE Distribution Reliability Working Group. In **Attachment Q** we provide the 2016 benchmarking info for SAIDI and SAIFI, which is the most current and available benchmarking year, for each of Xcel Energy's operating companies.<sup>11</sup> We submit performance results to the survey at the operating company level.<sup>12</sup> We additionally provide Xcel Energy rollup values for convenience of comparison.

## **H. *Increased Granularity of Reliability Detail***

An outcome of the Commission's consideration of our 2015 and 2016 Annual Reports was a request for the Company to address ways in which our reliability information could be presented in a more granular manner to get a better sense of reliability in the context of the customer experience. Traditionally, we have presented this information at a "work center" level, which are large portions of our service area, because it is the level of detail contemplated by the Commission's Rules on Reliability Reporting Requirements (Minn. R. 7826.0500), Reliability Standards (Minn. R. 7826.0600), and Reporting Meter-Reading Performance (Minn. R. 7826.1400). We have explored several options for providing it in a more granular manner, and discuss the changes we have made with this Report below.

### **1. *Feeder Locations***

Beginning this year, the worst performing feeder information in Attachment E includes columns to note the *city* where the feeders' substation is located as a locational reference.

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<sup>11</sup> Reliability metric comparisons do not give an objective assessment of quality of operations of participating utilities and as such caution should be exercised when comparing metrics of different utilities. IEEE based benchmarking uses the same calculation method for all participants however data differences exist and data from different utilities may not be directly comparable including differences in data collection systems and outage cause

<sup>12</sup> The survey received 93 entries of which 32 were included in the large utilities group and covers 82 million customers within North America.

## 2. *Feeder SAIDI Map*

A further granularity step is feeder reliability plotted on a map. **Attachments S1 and S2** provide a view of our feeder SAIDI performance, which we have differentiated by color – indicating different ranges of reliability, as follows:

| <b>Color</b> | <b>SAIDI Range</b> |
|--------------|--------------------|
| Green        | = < 100 minutes    |
| Blue         | 100 to 149 minutes |
| Pink         | 150 to 199 minutes |
| Red          | = > 200 minutes    |

We note that we can adjust this scale in future reports, if desired.

## 3. *Performance by Customer Class*

There was some discussion about whether we could provide a view of reliability by customer class. Presently, we do not track customer class data by feeder. We did attempt to segregate feeders that were predominately residential compared to feeders that were predominately commercial. We did find that feeders primarily serving commercial customers in general had a SAIDI value that was significantly better than the feeders serving primarily residential customers. Although not studied, this is likely due to several items including: less vegetation in industrial and commercial areas, shorter feeders due to higher load density resulting in less exposure to the environment, higher percentage of customers with underground service. We don't expect this general performance to vary much from year to year. Beyond this general view we don't believe providing detailed data is appropriate since it was based on assumptions and judgement.

## **PROPOSED ELECTRIC RELIABILITY STANDARDS FOR 2018**

Below we provide our proposed 2018 reliability standards which were calculated using the same methodology approved for our 2017 reliability standards.

On pages 5-7 of this filing, we provide details regarding the approved method of calculation and storm-normalization process used for our 2017 reliability standards. In this Section, we provide a brief discussion of reliability indices and our method of calculation, and we set forth our proposed reliability standards for 2018.

Minn. R. 7826.0600, subp. 1 requires each utility to propose standards for the following reliability indices:

- System Average Interruption Duration Index,
- System Average Interruption Frequency Index, and
- Customer Average Interruption Duration Index.

SAIDI measures the average total number of minutes a customer was without power during a calendar year. This index is calculated as follows:

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

SAIFI measures the average frequency of sustained service interruptions per customer during a calendar year and is calculated as follows:

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

CAIDI measures the average outage time a customer could expect to be without power if they experienced a sustained outage and is calculated as follows:

$$\text{CAIDI} = \frac{\text{Total Customer Minutes of Sustained Outages}}{\text{Total number of Sustained Customer Interruptions}}$$

Our electric reliability standards approved for 2017 were based on the average of our 5-year reliability performance (2012-2016). Consistent with that methodology, we provide as **Attachment L** to this Annual Report, our historical reliability performance for the period 2013-2017 to support our proposed 2018 standards. These calculations use storm-normalized data for all levels of outages (*i.e.* transmission, substation, and distribution) and a customer count based on the number of customers' billing accounts and meters.

Minn. R. Chapter 7826 allows utilities to report reliability performance using “storm-normalized” data. Storm-normalized data is defined by Minn. R. 7826.0200, subp. 9 as “data that has been adjusted to neutralize the effects of outages due to major storms.” As noted above, we propose standards for 2018 that are consistent with those approved for 2017.



Minn. R. 7826.0200, subp. 13 defines work center as 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. Xcel Energy defines its work centers under the rule as our regional service areas. These regions are:

- Metro East
- Metro West
- Northwest
- Southeast

Customer outages on our system are categorized by region, and all of our delivery system work management is tied to these regional divisions.

#### **A. Proposed Reliability Standards for 2018**

As required by Minn. R. 7826.0600, subp. 1, we propose the following 2018 standards for SAIFI, SAIDI, and CAIDI.

Our proposed standards for SAIDI and SAIFI are the average of the five years of historical data (provided in Attachment L). The CAIDI standards are calculated from the proposed SAIDI and SAIFI standards using the mathematical relationship between the indices:  $CAIDI = SAIDI/SAIFI$ . The methodology used to calculate these standards is described in detail above, and is summarized below:

- Include outages at all levels (distribution, substation, and transmission).
- Include all causes.
- Include credit for partial restoration.
- Include customers located in Minnesota that are part of the ND/SD work centers.
- Based on the number of customers' billing accounts and meters.
- Based on storm-normalized data.

### Proposed 2018 Reliability Standards

| Region     | Metric | Proposed Standard |
|------------|--------|-------------------|
| Metro East | SAIDI  | 82.69             |
|            | SAIFI  | 0.83              |
|            | CAIDI  | 99.93             |
| Metro West | SAIDI  | 85.17             |
|            | SAIFI  | 0.83              |
|            | CAIDI  | 102.46            |
| Northwest  | SAIDI  | 89.82             |
|            | SAIFI  | 0.79              |
|            | CAIDI  | 113.45            |
| Southeast  | SAIDI  | 102.39            |
|            | SAIFI  | 0.78              |
|            | CAIDI  | 131.46            |

## V. EFFECT OF CHANGE UPON XCEL ENERGY REVENUE

Approval of our annual report and the reliability performance standards proposed in this Petition will not result in any changes to Xcel Energy's revenue.

### CONCLUSION

Xcel Energy is committed to providing our customers with quality, reliable service. We appreciate this opportunity to report our performance to the Commission, and respectfully request that the Commission accept our annual report on safety, reliability, and service quality. We also request that the Commission approve our proposed reliability standards for 2018 as detailed in this Petition.

Dated: March 30, 2018

Northern States Power Company

STATE OF MINNESOTA  
BEFORE THE  
MINNESOTA PUBLIC UTILITIES COMMISSION

|                   |              |
|-------------------|--------------|
| Nancy Lange       | Chair        |
| Dan Lipschultz    | Commissioner |
| Matthew Schuerger | Commissioner |
| Katie J. Sieben   | Commissioner |
| John Tuma         | Commissioner |

IN THE MATTER OF NORTHERN STATES  
POWER COMPANY'S ANNUAL REPORT ON  
SAFETY, RELIABILITY, AND SERVICE  
QUALITY FOR 2017; AND PETITION FOR  
APPROVAL OF ELECTRIC RELIABILITY  
STANDARDS FOR 2018

DOCKET NO. E002/M-18-\_\_\_

**ANNUAL REPORT AND  
PETITION**

**SUMMARY OF FILING**

Please take notice that on March 30, 2018, Northern States Power Company, doing business as Xcel Energy, filed with the Minnesota Public Utilities Commission its Annual Report on safety, reliability, and service quality as required under Minn. R. 7826.0400, 7826.0500, and 7826.1300. This filing also includes a Petition for approval of the Company's proposed electric reliability standards for 2018 as required under Minn. R. 7826.0600.

**ANNUAL REPORT ON SAFETY, RELIABILITY, AND SERVICE QUALITY  
FOR 2017 AND PETITION FOR APPROVAL OF  
ELECTRIC RELIABILITY STANDARDS FOR 2018**

**Attachment Table of Contents**

- A. Survey of Occupational Injuries & Illnesses
- B. Property Damage Claims
- C. Transmission Outages
- D. Feeder Outage Notifications
- E. Feeder Performance
- F. Meter Reading Performance
- G. Involuntary Disconnections and Emergency Medical Account Status
- H. Service Extension Request Response Times
- I. Call Center Response Times
- J. Customer Complaints
- K. *Discontinued – Smart Grid Annual Report*
- L. Historical Reliability Performance
- M. Distribution System Performance
- M1. Minnesota CEMI Map
- M2. Twin Cities Metro CEMI Map
- N. MAIFI Results
- N1. Additional MAIFI data
- O. Meter Equipment Malfunctions Tariff Annual Report
- P. CEMI and CELI
- Q. IEEE
- R. Customer Satisfaction
- S. S-1 SAIDI Feeder Map  
S-2 SAIDI Metro Map

**U.S. Department of Labor- Bureau of Labor Statistics  
 Survey of Occupational Injuries & Illnesses 2017  
 Xcel Energy - Minnesota**

Data from 2017 OSHA Form 300A

| Location                | Ave Empl Count | Ttl Hours Worked | Severity Counts |           |                 |       | Day Count       |           | Injury/Illness Classification Counts |                |             |           |         |       |
|-------------------------|----------------|------------------|-----------------|-----------|-----------------|-------|-----------------|-----------|--------------------------------------|----------------|-------------|-----------|---------|-------|
|                         |                |                  | Deaths          | Days Away | Restricted Duty | Other | Restricted Duty | Lost Time | Injuries                             | Skin Disorders | Respiratory | Poisoning | Hearing | Other |
| Black Dog Plant         | 42             | 79,362           | 0               | 0         | 0               | 2     | 0               | 0         | 2                                    | 0              | 0           | 0         | 0       | 0     |
| Centre Pointe           | 130            | 237,379          | 0               | 1         | 1               | 0     | 50              | 10        | 2                                    | 0              | 0           | 0         | 0       | 0     |
| Chestnut Service Center | 289            | 567,750          | 0               | 0         | 0               | 1     | 0               | 0         | 1                                    | 0              | 0           | 0         | 0       | 0     |
| General Office          | 708            | 1,285,462        | 0               | 1         | 0               | 1     | 14              | 21        | 2                                    | 0              | 0           | 0         | 0       | 0     |
| Montrose Service Center | 10             | 19,545           | 0               | 0         | 0               | 0     | 0               | 0         | 0                                    | 0              | 0           | 0         | 0       | 0     |
| A.S. King Plant         | 106            | 208,058          | 0               | 0         | 0               | 0     | 0               | 0         | 0                                    | 0              | 0           | 0         | 0       | 0     |
| Wyoming Service Center  | 27             | 52,193           | 0               | 0         | 1               | 0     | 26              | 0         | 1                                    | 0              | 0           | 0         | 0       | 0     |
| Summary                 | 1,312          | 2,449,749        | 0               | 2         | 2               | 4     | 90              | 31        | 8                                    | 0              | 0           | 0         | 0       | 0     |

| Event Number | Claim Date* | Event Date | Event Cause Code | Event Cause Description   | Paid Sum   | Bodily Injury |
|--------------|-------------|------------|------------------|---------------------------|------------|---------------|
| EV2015129553 | 01/25/17    | 09/25/15   | 1121             | Other not listed          | \$0.00     | \$0.00        |
| EV2015131236 | 11/17/17    | 11/19/15   | 1122             | Poles & Towers            | \$4,259.91 | \$0.00        |
| EV2016131195 | 11/08/17    | 05/01/16   | 1129             | Transformer Under Ground  | \$0.00     | \$0.00        |
| EV2016129531 | 01/23/17    | 06/06/16   | 1121             | Other not listed          | \$1,520.00 | \$0.00        |
| EV2016129922 | 04/10/17    | 06/30/16   | 1101             | Abnormal Voltage          | \$750.00   | \$0.00        |
| EV2016130670 | 08/10/17    | 07/23/16   | 1121             | Other not listed          | \$0.00     | \$0.00        |
| EV2016130050 | 05/02/17    | 09/17/16   | 1121             | Other not listed          | \$0.00     | \$0.00        |
| EV2016130207 | 05/30/17    | 10/16/16   | 1121             | Other not listed          | \$0.00     | \$0.00        |
| EV2016130093 | 05/09/17    | 10/26/16   | 1106             | Conductors - Overhead     | \$129.44   | \$0.00        |
| EV2016129451 | 01/05/17    | 11/02/16   | 1107             | Conductors - Underground  | \$1,276.00 | \$0.00        |
| EV2016129710 | 02/27/17    | 11/03/16   | 1121             | Other not listed          | \$188.36   | \$0.00        |
| EV2016129493 | 01/17/17    | 11/18/16   | 1130             | Tree Trimming             | \$891.37   | \$0.00        |
| EV2016129518 | 01/19/17    | 11/30/16   | 1122             | Poles & Towers            | \$376.40   | \$0.00        |
| EV2016129860 | 03/27/17    | 11/30/16   | 1129             | Transformer Under Ground  | \$479.00   | \$0.00        |
| EV2016129653 | 02/14/17    | 12/06/16   | 1101             | Abnormal Voltage          | \$0.00     | \$0.00        |
| EV2016130903 | 09/22/17    | 12/07/16   | 1136             | Outage                    | \$0.00     | \$0.00        |
| EV2016129453 | 01/06/17    | 12/10/16   | 1121             | Other not listed          | \$0.00     | \$0.00        |
| EV2016129575 | 01/30/17    | 12/13/16   | 1121             | Other not listed          | \$0.00     | \$0.00        |
| EV2017129857 | 03/27/17    | 02/14/17   | 1121             | Other not listed          | \$0.00     | \$0.00        |
| EV2017129859 | 03/27/17    | 02/16/17   | 1110             | Equipment Failure         | \$0.00     | \$0.00        |
| EV2017130596 | 07/27/17    | 03/06/17   | 1122             | Poles & Towers            | \$7,240.82 | \$0.00        |
| EV2017130007 | 04/25/17    | 03/07/17   | 1121             | Other not listed          | \$272.20   | \$0.00        |
| EV2017130063 | 05/03/17    | 03/21/17   | 1101             | Abnormal Voltage          | \$0.00     | \$0.00        |
| EV2017129933 | 04/12/17    | 03/24/17   | 1122             | Poles & Towers            | \$144.00   | \$0.00        |
| EV2017130058 | 05/02/17    | 03/27/17   | 1121             | Other not listed          | \$0.00     | \$0.00        |
| EV2017130003 | 04/25/17    | 03/31/17   | 1110             | Equipment Failure         | \$150.00   | \$0.00        |
| EV2017130026 | 04/27/17    | 04/12/17   | 1110             | Equipment Failure         | \$1,070.91 | \$0.00        |
| EV2017130439 | 07/05/17    | 04/14/17   | 1122             | Poles & Towers            | \$2,900.00 | \$0.00        |
| EV2017130397 | 06/28/17    | 04/15/17   | 1128             | Transformer Overhead      | \$0.00     | \$0.00        |
| EV2017130231 | 06/01/17    | 04/22/17   | 1128             | Transformer Overhead      | \$0.00     | \$0.00        |
| EV2017131011 | 10/10/17    | 04/25/17   | 1122             | Poles & Towers            | \$0.00     | \$0.00        |
| EV2017130168 | 05/22/17    | 04/27/17   | 1106             | Conductors - Overhead     | \$225.00   | \$0.00        |
| EV2017131094 | 10/23/17    | 04/27/17   | 1134             | Work Performed Electrical | \$0.00     | \$0.00        |
| EV2017130634 | 08/03/17    | 04/28/17   | 1128             | Transformer Overhead      | \$0.00     | \$0.00        |
| EV2017130257 | 06/06/17    | 05/21/17   | 1136             | Outage                    | \$95.00    | \$0.00        |
| EV2017130402 | 06/28/17    | 05/25/17   | 1121             | Other not listed          | \$0.00     | \$0.00        |
| EV2017130398 | 06/28/17    | 06/01/17   | 1121             | Other not listed          | \$180.00   | \$0.00        |
| EV2017130287 | 06/12/17    | 06/02/17   | 1101             | Abnormal Voltage          | \$100.00   | \$0.00        |
| EV2017130556 | 07/25/17    | 06/08/17   | 1136             | Outage                    | \$0.00     | \$0.00        |
| EV2017130585 | 07/26/17    | 06/09/17   | 1136             | Outage                    | \$0.00     | \$0.00        |
| EV2017130453 | 07/07/17    | 06/10/17   | 1128             | Transformer Overhead      | \$176.58   | \$0.00        |
| EV2017130424 | 07/03/17    | 06/11/17   | 1133             | Weather- Damage from      | \$99.00    | \$0.00        |
| EV2017130474 | 07/12/17    | 06/11/17   | 1133             | Weather- Damage from      | \$0.00     | \$0.00        |
| EV2017130548 | 07/24/17    | 06/11/17   | 1136             | Outage                    | \$0.00     | \$0.00        |
| EV2017130823 | 09/11/17    | 06/11/17   | 1136             | Outage                    | \$0.00     | \$0.00        |

| Event Number | Claim Date* | Event Date | Event Cause Code | Event Cause Description   | Paid Sum   | Bodily Injury |
|--------------|-------------|------------|------------------|---------------------------|------------|---------------|
| EV2017130586 | 07/26/17    | 06/12/17   | 1134             | Work Performed Electrical | \$0.00     | \$0.00        |
| EV2017130864 | 09/14/17    | 06/12/17   | 1131             | Vegetation                | \$0.00     | \$0.00        |
| EV2017131153 | 11/02/17    | 06/16/17   | 1122             | Poles & Towers            | \$116.50   | \$0.00        |
| EV2017130632 | 08/03/17    | 06/19/17   | 1136             | Outage                    | \$59.00    | \$0.00        |
| EV2017130544 | 07/24/17    | 06/23/17   | 1121             | Other not listed          | \$850.00   | \$0.00        |
| EV2017130558 | 07/25/17    | 06/28/17   | 1136             | Outage                    | \$532.00   | \$0.00        |
| EV2017130627 | 08/03/17    | 06/29/17   | 1121             | Other not listed          | \$1,500.00 | \$0.00        |
| EV2017130865 | 09/14/17    | 06/30/17   | 1128             | Transformer Overhead      | \$0.00     | \$0.00        |
| EV2017131072 | 10/18/17    | 06/30/17   | 1128             | Transformer Overhead      | \$0.00     | \$0.00        |
| EV2017130889 | 09/19/17    | 07/01/17   | 1128             | Transformer Overhead      | \$0.00     | \$0.00        |
| EV2017130959 | 09/28/17    | 07/06/17   | 1136             | Outage                    | \$0.00     | \$0.00        |
| EV2017130797 | 09/01/17    | 07/12/17   | 1136             | Outage                    | \$0.00     | \$0.00        |
| EV2017131068 | 10/17/17    | 07/12/17   | 1122             | Poles & Towers            | \$0.00     | \$0.00        |
| EV2017131150 | 11/01/17    | 07/12/17   | 1136             | Outage                    | \$0.00     | \$0.00        |
| EV2017130838 | 09/11/17    | 07/13/17   | 1136             | Outage                    | \$0.00     | \$0.00        |
| EV2017130753 | 08/24/17    | 07/14/17   | 1129             | Transformer Under Ground  | \$2,459.26 | \$0.00        |
| EV2017130668 | 08/09/17    | 07/15/17   | 1136             | Outage                    | \$0.00     | \$0.00        |
| EV2017131033 | 10/12/17    | 07/18/17   | 1136             | Outage                    | \$320.00   | \$0.00        |
| EV2017130671 | 08/10/17    | 07/19/17   | 1121             | Other not listed          | \$1,297.50 | \$0.00        |
| EV2017130563 | 07/25/17    | 07/21/17   | 1106             | Conductors - Overhead     | \$6,983.35 | \$0.00        |
| EV2017130620 | 08/03/17    | 07/24/17   | 1122             | Poles & Towers            | \$450.00   | \$0.00        |
| EV2017130665 | 08/09/17    | 07/26/17   | 1121             | Other not listed          | \$68.83    | \$0.00        |
| EV2017130706 | 08/16/17    | 07/27/17   | 1121             | Other not listed          | \$344.02   | \$0.00        |
| EV2017130952 | 09/28/17    | 07/28/17   | 1136             | Outage                    | \$0.00     | \$0.00        |
| EV2017130769 | 08/28/17    | 08/09/17   | 1136             | Outage                    | \$0.00     | \$0.00        |
| EV2017130919 | 09/25/17    | 08/15/17   | 1106             | Conductors - Overhead     | \$0.00     | \$0.00        |
| EV2017130846 | 09/12/17    | 08/17/17   | 1136             | Outage                    | \$0.00     | \$0.00        |
| EV2017130824 | 09/11/17    | 08/19/17   | 1136             | Outage                    | \$0.00     | \$0.00        |
| EV2017130827 | 09/11/17    | 08/19/17   | 1128             | Transformer Overhead      | \$0.00     | \$0.00        |
| EV2017130836 | 09/11/17    | 08/29/17   | 1136             | Outage                    | \$0.00     | \$0.00        |
| EV2017131076 | 10/18/17    | 08/29/17   | 1136             | Outage                    | \$0.00     | \$0.00        |
| EV2017131327 | 12/13/17    | 08/30/17   | 1110             | Equipment Failure         | \$0.00     | \$0.00        |
| EV2011130907 | 09/22/17    | 09/07/17   | 1134             | Work Performed Electrical | \$0.00     | \$0.00        |
| EV2017131081 | 10/19/17    | 09/11/17   | 1101             | Abnormal Voltage          | \$0.00     | \$0.00        |
| EV2017131283 | 11/29/17    | 09/13/17   | 1128             | Transformer Overhead      | \$0.00     | \$0.00        |
| EV2017131334 | 12/14/17    | 09/21/17   | 1134             | Work Performed Electrical | \$0.00     | \$0.00        |
| EV2017131029 | 10/12/17    | 09/22/17   | 1128             | Transformer Overhead      | \$45.00    | \$0.00        |
| EV2017131146 | 10/31/17    | 10/02/17   | 1136             | Outage                    | \$0.00     | \$0.00        |
| EV2017131201 | 11/09/17    | 10/16/17   | 1130             | Tree Trimming             | \$0.00     | \$0.00        |
| EV2017131238 | 11/20/17    | 11/02/17   | 1136             | Outage                    | \$0.00     | \$0.00        |
| EV2017131231 | 11/17/17    | 11/05/17   | 1136             | Outage                    | \$0.00     | \$0.00        |

\*Claim Date is when claimant filed a claim with Xcel Energy

**PUBLIC DOCUMENT -  
NOT PUBLIC DATA HAS BEEN EXCISED**

| Line                           | Begin Date | Begin Time | Duration Hrs | Duration Mins | Cause                              | Comments                                       | Remedial Action  |
|--------------------------------|------------|------------|--------------|---------------|------------------------------------|--|--|
| <b>[Protected Data Begins]</b> |            |            |              |               |                                    |  |  |
|                                | 1/3/2017   | 13:54      | 0            | 23            | Conductor Galloping                | Multiple events - galloping likely             | Sectionalized suspect segments and re-energized line. Installed fault indicators to help isolate fault locations |
|                                | 2/19/2017  | 2:49       | 2            | 16            | Public Damage                      | Car hit structure #210                         | Replace damaged structure  |
|                                | 2/22/2017  | 11:56      | 1            | 39            | Intentional Clear for Construction | Planned outage to accommodate a house move.    | None: Re-energized line when house cleared corridor.   |
|                                | 3/7/2017   | 13:33      | 1            | 0             | Unknown. Cause not determined.     | Possible breaker operational issue             | Bus work sectionalized and tested with breaker and restored  |
| 1                              |            |            | 11           |               |                                    |  |  |
| 1                              |            |            | 14           |               |                                    |  |  |
|                                | 3/8/2017   | 0:14       | 2            | 22            | Vegetation                         | Tree from outside corridor on line             | Line sectionalized, service restored, tree removed.  |
| <b>...Protected Data Ends]</b> | 3/30/2017  | 10:06      | 0            | 13            | Animal Contact OH Transformer      | Bird flew into the 13.8kV 'A' Phase Disconnect | Removed bird   |



**PUBLIC DOCUMENT -**  
**NOT PUBLIC DATA HAS BEEN EXCISED**

| Line                    | Begin Date | Begin Time | Duration Hrs | Duration Mins | Cause                                    | Comments  | Remedial Action  |
|-------------------------|------------|------------|--------------|---------------|--|---|--|
| [Protected Data Begins  | 4/18/2017  | 11:49      | 0            | 30            | Foreign Utility                          | Foreign utility reported damaged insulators on their line | Foreign utility made repairs. Line was restored.   |
|                         | 4/19/2017  | 11:20      | 0            | 40            | Conductor down                           | Conductor down between Blomquest and Melville             | Line section was isolated to restore load and repairs were made.                         |
|                         | 6/5/2017   | 1:01       | 2            | 21            | Intentional Clear for Construction       | Line maintenance.   | Maintenance completed and line restored  |
|                         |            |            | 2            | 35            |  |   |  |
|                         | 6/6/2017   | 17:21      | 0            | 11            | Intentional Clear for Trouble /Emergency | Burning regulator in Wabasha                              | Regulator isolated and repairs made.   |
|                         | 6/10/2017  | 8:09       | 1            | 19            | Public Damage Broken Pole                | Vehicle crashed into structure.                           | Line sectionalized, load restored, and structure replaced                                |
|                         | 6/11/2017  | 7:28       | 5            | 32            | Storm Damage                             | Structure down from storms                                | Line sectionalized and load restored where applicable. Structure replaced.               |
|                         |            |            | 54           | 33            |  |   |  |
|                         |            |            | 55           | 2             |  |   |  |
|                         | 6/11/2017  | 7:40       | 0            | 26            | Storms                                   | Unknown. Cause not determined.                            | Line sectionalized to restore load.  |
|                         | 6/11/2017  | 8:24       | 1            | 17            | Unknown. Cause not determined.           | Breaker misoperation in response to line trip             | Unknown  |
|                         | 6/11/2017  | 10:15      | 1            | 7             | Storms                                   | Lightning strike  | Line sectionalized and load restored. Line patrolled.                                    |
|                         | 6/13/2017  | 21:49      | 1            | 3             | Unknown. Cause not determined.           | Cause of trip: Storms in area                             | GRE/Coop cut Xcel lock to open switch; line sectionalized restoring load; line patrolled |
|                         | 6/29/2017  | 16:40      | 0            | 36            | Conductor down                           | Conductor down  | Line sectionalized restoring load; repairs made.   |
| ...Protected Data Ends} | 7/12/2017  | 2:39       | 2            | 34            | Pole Broken/Good Condition               | Storm damage to structures                                | Line sectionalized restoring load; repairs made.   |
|                         |            |            | 2            | 53            |  |   |  |

**PUBLIC DOCUMENT -  
NOT PUBLIC DATA HAS BEEN EXCISED**

| Line                           | Begin Date | Begin Time | Duration Hrs | Duration Mins | Cause                              | Comments   | Remedial Action   |
|--------------------------------|------------|------------|--------------|---------------|------------------------------------|--|---|
| <b>[Protected Data Begins]</b> | 8/23/2017  | 15:57      | 0            | 18            | Intentional Clear for Construction | Connector Failure Auto Splice  | Repairs made  |
|                                | 8/24/2017  | 12:59      | 0            | 29            | Conductor Failure                  | Wire down between Buffalo Lake and Yellowstone due to failed splice                | Line sectionalized restoring load; repairs made.                              |
|                                |            |            | 0            | 48            |                                    |  |   |
|                                |            |            | 1            | 4             |                                    |  |   |
|                                | 8/24/2017  | 16:34      | 0            | 18            | Conductor Failure                  | This outage is associated with the outage above but occurred due to sectionalizing | None-outage associated with fault isolation.                                  |
|                                | 8/25/2017  | 21:15      | 1            | 13            | Conductor Failure                  | Line down due to failed splice   | Line sectionalized restoring load; repairs made.                              |
|                                |            |            | 1            | 15            |                                    |  |   |
|                                | 9/10/2017  | 13:05      | 0            | 36            | Intentional clear for Construction | Planned outage to accommodate a house move.  | Line re-energized when house cleared corridor.                                |
|                                | 9/11/2017  | 14:35      | 0            | 22            | Animal Contact Other               | Turkey buzzard contacted conductor.  | Animal cleared and load restored.   |
|                                | 9/14/2017  | 16:10      | 0            | 22            | Public Damage                      | Tractor damaged structures 238-242   | Line sectionalized restoring load; repairs made.                              |
|                                |            |            | 1            | 9             |                                    |  |   |
|                                | 9/16/2017  | 15:44      | 0            | 22            | Conductor Failure                  | Line down @ str. 465 due to broken core.   | Repaired conductor  |
|                                | 10/3/2017  | 7:29       | 1            | 7             | Foreign Utility                    | Fault identified on foreign line   | Foreign utility made repairs. Line sectionalized restoring load was restored. |
| <b>Protected Data Ends]</b>    |            |            |              |               |                                    |  |   |

**PUBLIC DOCUMENT**  
**NOT PUBLIC DATA HAS BEEN EXCISED**

January

**2017 MN Feeder Level Outages**

1 Total qualifying events

0 events with no email

|   | Feeder                | Primary Event # | Begin Time     | Completion Time | Duration Min. | Customers Out | Region     | Email sent to CAO | Email 1 | Email 2 | Email 3 | Email 4 |
|---|-----------------------|-----------------|----------------|-----------------|---------------|---------------|------------|-------------------|---------|---------|---------|---------|
|   | [SECURITY DATA BEGINS |                 |                |                 |               |               |            |                   |         |         |         |         |
| 1 |                       | 1391991         | 01/20/17 01:41 | 01/20/17 03:04  | 83            | 3,082         | Metro East | x                 | x       | x       | x       |         |

SECURITY DATA ENDS]

**PUBLIC DOCUMENT**  
**NOT PUBLIC DATA HAS BEEN EXCISED**

February

**2017 MN Feeder Level Outages**

6 Total qualifying events

0 events with no email

|   | Feeder                 | Primary Event # | Begin Time     | Completion Time | Duration Min. | Customers Out | Region     | Email sent to CAO | Email 1 | Email 2 | Email 3 | Email 4 | Email 5 |
|---|------------------------|-----------------|----------------|-----------------|---------------|---------------|------------|-------------------|---------|---------|---------|---------|---------|
|   | [SECURITY DATA BEGINS] |                 |                |                 |               |               |            |                   |         |         |         |         |         |
| 1 |                        | 1395533         | 02/12/17 05:33 | 02/12/17 09:09  | 216           | 840           | Metro West | X                 | X       | X       | X       | X       | X       |
| 2 |                        | 1395802         | 02/14/17 07:17 | 02/14/17 08:18  | 61            | 2,524         | Metro East | X                 | X       | X       |         |         |         |
| 3 |                        | 1396416         | 02/17/17 09:38 | 02/17/17 10:51  | 73            | 505           | Metro East | X                 | X       | X       | X       |         |         |
| 4 |                        | 1397891         | 02/20/17 21:13 | 02/20/17 23:15  | 122           | 1,279         | Metro West | X                 | X       | X       | X       |         |         |
| 5 |                        | 1423987         | 02/21/17 10:13 | 02/21/17 12:38  | 145           | 2,808         | Metro West | X                 | X       | X       |         |         |         |
| 6 |                        | 1399275         | 02/28/17 13:15 | 02/28/17 15:07  | 111           | 1,208         | Northwest  | X                 | X       | X       | X       |         |         |

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March

**2017 MN Feeder Level Outages**

10 Total qualifying even

0 events with no email

|    | Feeder                 | Primary Event # | Begin Time     | Completion Time | Duration Min. | Customers Out | Region     | Email sent to CAO | Email 1 | Email 2 | Email 3 | Email 4 |
|----|------------------------|-----------------|----------------|-----------------|---------------|---------------|------------|-------------------|---------|---------|---------|---------|
| 1  |                        |                 |                |                 |               |               |            |                   |         |         |         |         |
| 2  | [SECURITY DATA BEGINS] |                 |                |                 |               |               |            |                   |         |         |         |         |
| 3  |                        | 1401242         | 03/07/17 13:33 | 03/07/17 14:33  | 60            | 970           | Metro East | X                 | X       | X       | X       |         |
| 4  |                        | 1401241         | 03/07/17 13:33 | 03/07/17 14:47  | 74            | 2076          | Metro East | X                 | X       | X       | X       |         |
| 5  |                        | 1401583         | 03/07/17 15:21 | 03/07/17 16:34  | 73            | 2657          | Metro East | X                 | X       | X       |         |         |
| 6  |                        | 1401998         | 03/07/17 18:32 | 03/07/17 20:08  | 96            | 2056          | Metro East | X                 | X       | X       |         |         |
| 7  |                        | 1406406         | 03/08/17 00:14 | 03/08/17 02:36  | 142           | 1003          | Southeast  | X                 | X       | X       |         |         |
| 8  |                        | 1406407         | 03/08/17 00:14 | 03/08/17 02:36  |               | 949           | Southeast  | X                 | X       | X       |         |         |
| 9  |                        | 1402653         | 03/08/17 05:02 | 03/08/17 07:07  | 125           | 1902          | Southeast  | X                 | X       | X       |         |         |
| 10 |                        | 1403173         | 03/08/17 08:08 | 03/08/17 09:26  | 78            | 699           | Metro West | X                 | X       | X       | X       |         |
| 11 |                        | 1403455         | 03/08/17 08:58 | 03/08/17 10:48  | 110           | 1037          | Metro West | X                 | X       | X       | X       |         |
| 12 |                        | 1405742         | 03/19/17 07:31 | 03/19/17 08:34  | 63            | 685           | Metro West | X                 | X       | X       | X       |         |

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April

**2017 MN Feeder Level Outages**

6 Total qualifying events

0 events with no email

|   | Feeder                 | Primary Event # | Begin Time     | Completion Time | Duration Min. | Customers Out | Region     | Email sent to CAO | Email 1 | Email 2 | Email 3 | Email 4 |
|---|------------------------|-----------------|----------------|-----------------|---------------|---------------|------------|-------------------|---------|---------|---------|---------|
|   | [SECURITY DATA BEGINS] |                 |                |                 |               |               |            |                   |         |         |         |         |
| 1 |                        | 1410007         | 04/06/17 02:07 | 04/06/17 04:28  | 141           | 612           | Metro East | X                 | X       | X       | X       |         |
| 2 |                        | 1410008         | 04/06/17 02:07 | 04/06/17 04:28  | 141           | 918           | Metro East | X                 | X       | X       | X       |         |
| 3 |                        | 1410009         | 04/06/17 02:07 | 04/06/17 04:28  | 141           | 2,705         | Metro East | X                 | X       | X       | X       |         |
| 4 |                        | 1409666         | 04/06/17 02:07 | 04/06/17 04:28  | 282           | 1,870         | Metro East | X                 | X       | X       | X       |         |
| 5 |                        | 1411315         | 04/13/17 10:32 | 04/13/17 11:33  | 61            | 860           | Southeast  | X                 | X       | X       |         |         |
| 6 |                        | 1411853         | 04/15/17 09:16 | 04/15/17 10:42  | 86            | 1,445         | Southeast  | X                 | X       | X       |         |         |

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May

**2016 MN Feeder Level Outages**

4 Total qualifying event

0 events with no email

|   | Feeder                | Primary Event # | Begin Time     | Completion Time | Duration Min. | Customers Out | Region     | Email sent to CAO | Email 1 | Email 2 | Email 3 | Email 4 |
|---|-----------------------|-----------------|----------------|-----------------|---------------|---------------|------------|-------------------|---------|---------|---------|---------|
|   | [SECURITY DATA BEGINS |                 |                |                 |               |               |            |                   |         |         |         |         |
| 1 |                       | 1420043         | 05/13/17 01:54 | 05/13/17 03:01  | 67            | 1,260         | Metro West | X                 | X       | X       |         |         |
| 2 |                       | 1422165         | 05/18/17 04:28 | 05/18/17 06:15  | 107           | 1,170         | Metro East | X                 | X       | X       |         |         |
| 3 |                       | 1424701         | 05/27/17 07:23 | 05/27/17 08:35  | 72            | 1,685         | Metro West | X                 | X       | X       |         |         |
| 4 |                       | 1424703         | 05/27/17 07:23 | 05/27/17 08:35  | 72            | 1,852         | Metro West | X                 | X       | X       |         |         |

SECURITY DATA ENDS]

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June

**2017 MN Feeder Level Outages**

48 Total qualifying events

6 events with no email

|    | Feeder                 | Primary Event # | Begin Time     | Completion Time | Duration Min. | Customers Out | Region     | Email sent to CAO | Email 1 | Email 2 | Email 3 | Email 4 | Email 5 |
|----|------------------------|-----------------|----------------|-----------------|---------------|---------------|------------|-------------------|---------|---------|---------|---------|---------|
|    | [SECURITY DATA BEGINS] |                 |                |                 |               |               |            |                   |         |         |         |         |         |
| 1  |                        | 1429969         | 06/10/17 10:51 | 06/10/17 12:22  | 91            | 602           | Metro West | X                 | X       | X       |         |         |         |
| 2  |                        | 1430696         | 06/10/17 16:49 | 06/10/17 18:22  | 93            | 5,495         | Metro East | X                 | X       | X       | X       | X       |         |
| 3  |                        | 1431567         | 06/11/17 08:23 | 06/11/17 16:25  | 482           | 1,202         | Metro West | X                 | X       | X       |         |         |         |
| 4  |                        | 1431521         | 06/11/17 08:24 | 06/11/17 11:03  | 159           | 1,163         | Metro West |                   |         |         |         |         |         |
| 5  |                        | 1431627         | 06/11/17 08:28 | 06/11/17 13:02  | 274           | 1,278         | Metro West | X                 | X       | X       |         |         |         |
| 6  |                        | 1431769         | 06/11/17 08:32 | 06/11/17 11:28  | 176           | 1,413         | Metro West | X                 | X       |         |         |         |         |
| 7  |                        | 1436536         | 06/11/17 08:34 | 06/11/17 18:14  | 580           | 2,083         | Metro West | X                 | X       | X       |         |         |         |
| 8  |                        | 1431907         | 06/11/17 08:35 | 06/11/17 19:37  |               | 684           | Metro West | X                 | X       | X       |         |         |         |
| 9  |                        | 1431960         | 06/11/17 08:37 | 06/11/17 14:37  | 360           | 2,536         | Metro West | X                 | X       | X       |         |         |         |
| 10 |                        | 1432192         | 06/11/17 08:39 | 06/11/17 10:51  | 132           | 556           | Metro West | X                 | X       | X       |         |         |         |
| 11 |                        | 1444647         | 06/11/17 08:42 | 06/11/17 13:03  | 261           | 2,149         | Metro West |                   |         |         |         |         |         |
| 12 |                        | 1432279         | 06/11/17 08:43 | 06/11/17 13:42  | 299           | 2,871         | Metro West | X                 | X       | X       |         |         |         |
| 13 |                        | 1432257         | 06/11/17 08:43 | 06/11/17 11:07  | 144           | 1,922         | Metro West | X                 | X       | X       |         |         |         |
| 14 |                        | 1432919         | 06/11/17 08:45 | 06/11/17 16:18  | 453           | 1,588         | Metro West |                   |         |         |         |         |         |
| 15 |                        | 1432748         | 06/11/17 08:46 | 06/11/17 11:03  | 137           | 1,710         | Metro West | X                 | X       | X       |         |         |         |
| 16 |                        | 1432457         | 06/11/17 08:47 | 06/11/17 14:26  | 339           | 2,641         | Metro West |                   |         |         |         |         |         |
| 17 |                        | 1432567         | 06/11/17 08:48 | 06/11/17 21:00  | 732           | 12,654        | Metro West |                   |         |         |         |         |         |
| 18 |                        | 1445966         | 06/11/17 10:15 | 06/11/17 11:22  | 67            | 635           | Southeast  | x                 | x       |         |         |         |         |
| 19 |                        | 1445960         | 06/11/17 10:15 | 06/11/17 11:22  | 67            | 738           | Southeast  | x                 | x       |         |         |         |         |
| 20 |                        | 1435168         | 06/11/17 17:46 | 06/11/17 19:29  | 103           | 794           | Metro West | x                 | x       | x       |         |         |         |
| 21 |                        | 1438098         | 06/12/17 13:49 | 06/12/17 15:32  | 103           | 1,801         | Southeast  | x                 | x       | x       |         |         |         |
| 22 |                        | 1438479         | 06/12/17 15:52 | 06/12/17 18:15  | 143           | 2,574         | Metro West | x                 | x       | x       |         |         |         |
| 23 |                        | 1438887         | 06/12/17 18:28 | 06/12/17 20:45  | 137           | 1,997         | Metro West | x                 | x       | x       | x       |         |         |
| 24 |                        | 1440694         | 06/14/17 00:05 | 06/14/17 04:04  | 239           | 1,224         | Metro West | x                 | x       | x       |         |         |         |
| 25 |                        | 1440692         | 06/14/17 00:06 | 06/14/17 05:38  | 332           | 1,430         | Metro West | x                 | x       | x       | x       |         |         |
| 26 |                        | 1440724         | 06/14/17 00:14 | 06/14/17 01:48  | 94            | 1,493         | Metro West | x                 | x       | x       |         |         |         |
| 27 |                        | 1440750         | 06/14/17 00:22 | 06/14/17 03:46  | 204           | 943           | Metro West | x                 | x       | x       | x       |         |         |
| 28 |                        | 1440751         | 06/14/17 00:22 | 06/14/17 03:46  | 204           | 1,411         | Metro West | x                 | x       | x       | x       |         |         |
| 29 |                        | 1440846         | 06/14/17 00:27 | 06/14/17 01:39  | 72            | 1,173         | Metro West | x                 | x       | x       | x       |         |         |
| 30 |                        | 1440826         | 06/14/17 00:27 | 06/14/17 02:03  | 96            | 2,059         | Metro West | x                 | x       | x       | x       |         |         |

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|                        |  |         |                |                |     |       |            |   |   |   |   |   |
|------------------------|--|---------|----------------|----------------|-----|-------|------------|---|---|---|---|---|
| [SECURITY DATA BEGINS] |  |         |                |                |     |       |            |   |   |   |   |   |
| 31                     |  | 1440689 | 06/14/17 00:30 | 06/14/17 02:10 | 100 | 1,555 | Metro West | x | x | x |   |   |
| 32                     |  | 1440963 | 06/14/17 00:36 | 06/14/17 08:08 | 452 | 916   | Metro East | x | x | x |   |   |
| 33                     |  | 1441033 | 06/14/17 00:38 | 06/14/17 07:25 | 407 | 5,561 | Metro East | x | x | x |   |   |
| 34                     |  | 1441093 | 06/14/17 00:42 | 06/14/17 07:11 | 389 | 1,695 | Metro East | x | x | x |   |   |
| 35                     |  | 1441174 | 06/14/17 00:43 | 06/14/17 05:46 | 303 | 1,166 | Metro East | x | x | x | x |   |
| 36                     |  | 1441160 | 06/14/17 00:44 | 06/14/17 02:33 | 109 | 4,201 | Metro East | x | x | x |   |   |
| 37                     |  | 1441198 | 06/14/17 00:45 | 06/14/17 07:46 | 421 | 1,695 | Metro East | x | x | x |   |   |
| 38                     |  | 1441115 | 06/14/17 00:46 | 06/14/17 02:48 | 122 | 772   | Metro West | x | x | x |   |   |
| 39                     |  | 1441258 | 06/14/17 00:47 | 06/14/17 04:19 | 212 | 3,226 | Metro East | x | x | x | x |   |
| 40                     |  | 1441559 | 06/14/17 00:59 | 06/14/17 06:55 | 356 | 2,700 | Metro East | x | x | x |   |   |
| 41                     |  | 1441788 | 06/14/17 01:56 | 06/14/17 03:55 | 119 | 5,995 | Metro West | x | x | x |   |   |
| 42                     |  | 1444557 | 06/16/17 02:05 | 06/16/17 04:20 | 135 | 614   | Metro East | x | x | x | x |   |
| 43                     |  | 1444926 | 06/16/17 17:09 | 06/16/17 19:36 | 147 | 766   | Southeast  |   |   |   |   |   |
| 44                     |  | 1445524 | 06/18/17 02:24 | 06/18/17 03:56 | 92  | 4,287 | Metro West | x | x | x | x |   |
| 45                     |  | 1446723 | 06/21/17 08:37 | 06/21/17 10:34 | 117 | 1,609 | Southeast  | x | x | x | x |   |
| 46                     |  | 1447410 | 06/22/17 14:38 | 06/22/17 15:47 | 69  | 1,965 | Metro West | x | x | x |   |   |
| 47                     |  | 1448469 | 06/24/17 15:47 | 06/24/17 20:28 | 281 | 1,007 | Southeast  | x | x | x |   |   |
| 48                     |  | 1449845 | 06/28/17 06:33 | 06/28/17 08:58 | 145 | 2,601 | Metro West | x | x | x | x | x |

SECURITY DATA ENDS]

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July

**2017 MN Feeder Level Outages**

23 Total qualifying even

0 event with no email

| Feeder                 | Primary Event # | Begin Time     | Completion Time | Duration Min. | Customers Out | Region     | Email sent to CAO | Email 1 | Email 2 | Email 3 | Email 4 | Email 5 | Email 6 |
|------------------------|-----------------|----------------|-----------------|---------------|---------------|------------|-------------------|---------|---------|---------|---------|---------|---------|
| [SECURITY DATA BEGINS] |                 |                |                 |               |               |            |                   |         |         |         |         |         |         |
| 1                      | 1452780         | 07/03/17 06:13 | 07/03/17 07:22  | 69            | 1,325         | Metro West | X                 | X       | X       | X       |         |         |         |
| 2                      | 1454207         | 07/05/17 16:27 | 07/05/17 17:45  | 78            | 597           | Metro East | X                 | X       | X       | X       |         |         |         |
| 3                      | 1454495         | 07/06/17 01:45 | 07/06/17 04:44  | 179           | 2,125         | Northwest  | X                 | X       | X       | X       |         |         |         |
| 4                      | 1454641         | 07/06/17 08:10 | 07/06/17 09:33  | 83            | 760           | Southeast  | X                 | X       | X       | X       | X       |         |         |
| 5                      | 1456027         | 07/09/17 06:30 | 07/09/17 08:30  | 120           | 998           | Metro West | X                 | X       | X       | X       | X       | X       | X       |
| 6                      | 1456151         | 07/09/17 12:38 | 07/09/17 13:41  | 63            | 1,968         | Metro West | X                 | X       | X       |         |         |         |         |
| 7                      | 1458066         | 07/12/17 02:33 | 07/12/17 04:17  | 104           | 1,112         | Metro East | X                 | X       | X       | X       |         |         |         |
| 8                      | 1458118         | 07/12/17 02:35 | 07/12/17 08:52  |               | 1,434         | Metro East | X                 | X       | X       |         |         |         |         |
| 9                      | 1458149         | 07/12/17 02:39 | 07/12/17 05:13  | 154           | 1,047         | Metro East | X                 | X       | X       |         |         |         |         |
| 10                     | 1458132         | 07/12/17 02:39 | 07/12/17 05:32  | 173           | 2,832         | Metro East | X                 | X       | X       |         |         |         |         |
| 11                     | 1458343         | 07/12/17 02:47 | 07/12/17 04:58  | 131           | 1,292         | Metro East | X                 | X       | X       | X       |         |         |         |
| 12                     | 1458546         | 07/12/17 02:52 | 07/12/17 08:24  | 332           | 1,546         | Metro East | X                 | X       | X       |         |         |         |         |
| 13                     | 1460503         | 07/13/17 02:50 | 07/13/17 04:19  | 89            | 1,434         | Metro East | X                 | X       | X       |         |         |         |         |
| 14                     | 1461255         | 07/15/17 01:35 | 07/15/17 03:17  | 102           | 1,958         | Metro West | X                 | X       | X       |         |         |         |         |
| 15                     | 1461252         | 07/15/17 01:35 | 07/15/17 02:58  | 83            | 977           | Metro West | X                 | X       | X       |         |         |         |         |
| 16                     | 1462255         | 07/17/17 17:24 | 07/17/17 18:58  | 94            | 2,045         | Metro East | X                 | X       | X       |         |         |         |         |
| 17                     | 1462985         | 07/18/17 17:33 | 07/18/17 19:30  | 117           | 1,890         | Metro West | X                 | X       | X       |         |         |         |         |
| 18                     | 1466255         | 07/25/17 13:54 | 07/25/17 15:15  | 81            | 2,566         | Metro West | X                 | X       | X       |         |         |         |         |
| 19                     | 1466371         | 07/25/17 18:03 | 07/25/17 19:26  | 83            | 1,077         | Metro East | X                 | X       | X       | X       |         |         |         |
| 20                     | 1466413         | 07/25/17 19:17 | 07/25/17 20:23  | 66            | 1,023         | Metro West | X                 | X       | X       | X       | X       |         |         |
| 21                     | 1466715         | 07/26/17 04:32 | 07/26/17 05:57  | 85            | 1,861         | Metro East | X                 | X       | X       | X       |         |         |         |
| 22                     | 1467820         | 07/27/17 11:45 | 07/27/17 12:55  | 70            | 1,409         | Southeast  | X                 | X       | X       | X       |         |         |         |
| 23                     | 1468751         | 07/30/17 09:45 | 07/30/17 11:14  | 89            | 1,677         | Metro West | X                 | X       | X       |         |         |         |         |

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August

**2017 MN Feeder Level Outages**

23 Total qualifying even

0 events with no email

|    | Feeder                 | Primary Event # | Begin Time      | Completion Time | Duration Min. | Customers Out | Region     | Email sent to CAO | Email 1 | Email 2 | Email 3 | Email 4 | Email 5 |
|----|------------------------|-----------------|-----------------|-----------------|---------------|---------------|------------|-------------------|---------|---------|---------|---------|---------|
|    | [SECURITY DATA BEGINS] |                 |                 |                 |               |               |            |                   |         |         |         |         |         |
| 1  |                        | 1469597         | 8/1/2017 14:41  | 8/1/2017 17:22  | 161           | 606           | Metro East | x                 | x       | x       | x       |         |         |
| 2  |                        | 1469616         | 8/1/2017 15:17  | 8/1/2017 18:21  | 184           | 606           | Metro East | x                 | x       | x       | x       |         |         |
| 3  |                        | 1470545         | 8/1/2017 15:37  | 8/1/2017 16:47  | 70            | 1,829         | Metro East | x                 | x       | x       | x       |         |         |
| 4  |                        | 1470285         | 8/3/2017 5:34   | 8/3/2017 6:40   | 66            | 4,647         | Metro East | x                 | x       | x       | x       |         |         |
| 5  |                        | 1470961         | 8/4/2017 10:42  | 8/4/2017 11:42  | 60            | 1,292         | Northwest  | x                 | x       | x       |         |         |         |
| 6  |                        | 1471047         | 8/4/2017 12:07  | 8/4/2017 13:12  | 65            | 680           | Southeast  | x                 | x       | x       | x       |         |         |
| 7  |                        | 1472521         | 8/9/2017 10:24  | 8/9/2017 11:58  | 94            | 2,053         | Metro West | x                 | x       | x       |         |         |         |
| 8  |                        | 1474999         | 8/9/2017 15:23  | 8/9/2017 16:37  |               | 527           | Metro East | x                 | x       | x       |         |         |         |
| 9  |                        | 1472826         | 8/9/2017 23:29  | 8/10/2017 2:21  | 172           | 687           | Metro West | x                 | x       | x       | x       |         |         |
| 10 |                        | 1472839         | 8/9/2017 23:54  | 8/10/2017 1:52  | 118           | 1,231         | Metro West | x                 | x       | x       | x       | x       | x       |
| 11 |                        | 1472848         | 8/10/2017 0:25  | 8/10/2017 3:44  | 199           | 944           | Southeast  | x                 | x       | x       | x       |         |         |
| 12 |                        | 1473682         | 8/11/2017 14:19 | 8/11/2017 15:20 | 61            | 1,435         | Metro West | x                 | x       | x       |         |         |         |
| 13 |                        | 1475443         | 8/16/2017 21:09 | 8/16/2017 22:24 | 75            | 2,064         | Metro West | x                 | x       | x       | x       |         |         |
| 14 |                        | 1475553         | 8/17/2017 0:22  | 8/17/2017 2:31  | 129           | 1,079         | Northwest  | x                 | x       |         |         |         |         |
| 15 |                        | 1475729         | 8/17/2017 10:20 | 8/17/2017 11:26 | 66            | 1,407         | Metro West | x                 | x       | x       | x       |         |         |
| 16 |                        | 1475835         | 8/17/2017 12:36 | 8/17/2017 15:00 | 144           | 2,047         | Metro East | x                 | x       | x       | x       |         |         |
| 17 |                        | 1476439         | 8/19/2017 1:58  | 8/19/2017 4:54  | 176           | 2,990         | Northwest  | x                 | x       | x       | x       | x       | x       |
| 18 |                        | 1476811         | 8/20/2017 13:43 | 8/20/2017 14:47 | 64            | 920           | Metro West | x                 | x       | x       | x       |         |         |
| 19 |                        | 1477188         | 8/21/2017 15:07 | 8/21/2017 16:09 | 62            | 1,366         | Metro East | x                 | x       | x       | x       |         |         |
| 20 |                        | 1477195         | 8/21/2017 15:11 | 8/21/2017 16:40 | 89            | 2,471         | Metro West | x                 | x       | x       | x       |         |         |
| 21 |                        | 1479308         | 8/25/2017 21:15 | 8/25/2017 22:30 | 75            | 677           | Northwest  | x                 | x       |         |         |         |         |
| 22 |                        | 1478907         | 8/26/2017 4:13  | 8/26/2017 5:30  | 77            | 1,108         | Metro West | x                 | x       | x       | x       |         |         |
| 23 |                        | 1479776         | 8/28/2017 12:50 | 8/28/2017 13:41 | 172           | 1,027         | Metro East | x                 | x       | x       |         |         |         |

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September

**2017 MN Feeder Level Outages**

8 Total qualifying events

0 event with no email

|   | Feeder                 | Primary Event # | Begin Time     | Completion Time | Duration Min. | Customers Out | Region     | Email sent to CAO | Email 1 | Email 2 | Email 3 | Email 4 |
|---|------------------------|-----------------|----------------|-----------------|---------------|---------------|------------|-------------------|---------|---------|---------|---------|
|   | [SECURITY DATA BEGINS] |                 |                |                 |               |               |            |                   |         |         |         |         |
| 1 |                        | 1480972         | 09/02/17 02:19 | 09/02/17 03:22  | 63            | 3,317         | Metro West | X                 | X       | X       |         |         |
| 2 |                        | 1481523         | 09/04/17 16:34 | 09/04/17 17:42  | 68            | 1,771         | Metro East | X                 | X       | X       |         |         |
| 3 |                        | 1481632         | 09/04/17 17:24 | 09/04/17 19:07  | 103           | 1,582         | Southeast  | X                 | X       | X       | X       | X       |
| 4 |                        | 1481670         | 09/04/17 17:58 | 09/04/17 20:10  | 132           | 1,281         | Northwest  | X                 | X       | X       |         |         |
| 5 |                        | 1481672         | 09/04/17 17:58 | 09/04/17 20:06  | 128           | 696           | Northwest  | X                 | X       |         |         |         |
| 6 |                        | 1483349         | 09/11/17 13:45 | 09/11/17 14:54  | 69            | 2,801         | Metro East | X                 | X       | X       |         |         |
| 7 |                        | 1486756         | 09/22/17 02:13 | 09/22/17 04:42  | 149           | 896           | Southeast  | X                 | X       | X       |         |         |
| 8 |                        | 1486803         | 09/22/17 07:58 | 09/22/17 09:16  |               | 1,906         | Northwest  | X                 | X       | X       | X       |         |

[SECURITY DATA ENDS]

**PUBLIC DOCUMENT**  
**NOT PUBLIC DATA HAS BEEN EXCISED**

October

**2017 MN Feeder Level Outages**

12 Total qualifying events

0 event with no email

|    | Feeder                 | Primary Event # | Begin Time       | Completion Time  | Duration Min. | Customers Out | Region     | Email sent to CAO | Email 1 | Email 2 | Email 3 | Email 4 |
|----|------------------------|-----------------|------------------|------------------|---------------|---------------|------------|-------------------|---------|---------|---------|---------|
|    | [SECURITY DATA BEGINS] |                 |                  |                  |               |               |            |                   |         |         |         |         |
| 1  |                        | 1490056         | 10/2/2017 19:23  | 10/2/2017 21:03  | 100           | 1,567         | Metro West | x                 | x       | x       |         |         |
| 2  |                        | 1490218         | 10/2/2017 22:04  | 10/3/2017 0:01   | 117           | 1,488         | Metro West | x                 | x       | x       | x       |         |
| 3  |                        | 1490426         | 10/3/2017 4:31   | 10/3/2017 6:47   | 136           | 1,898         | Metro West | x                 | x       | x       | x       | x       |
| 4  |                        | 1490578         | 10/3/2017 7:29   | 10/3/2017 8:36   | 67            | 671           | Metro West | x                 | x       | x       |         |         |
| 5  |                        | 1490581         | 10/3/2017 7:29   | 10/3/2017 8:36   | 67            | 1,220         | Metro West | x                 | x       | x       |         |         |
| 6  |                        | 1491799         | 10/6/2017 8:39   | 10/6/2017 9:44   | 65            | 1,120         | Metro East | x                 | x       | x       |         |         |
| 7  |                        | 1492107         | 10/6/2017 18:56  | 10/6/2017 20:44  | 108           | 2,367         | Metro West | x                 | x       | x       | x       |         |
| 8  |                        | 1492733         | 10/8/2017 15:32  | 10/8/2017 17:08  |               | 1,777         | Metro East | x                 | x       | x       | x       | x       |
| 9  |                        | 1493476         | 10/11/2017 6:56  | 10/11/2017 8:56  | 120           | 565           | Metro East | x                 | x       | x       | x       |         |
| 10 |                        | 1495927         | 10/19/2017 6:21  | 10/19/2017 7:26  | 65            | 1,569         | Metro West | x                 | x       | x       | x       | x       |
| 11 |                        | 1498775         | 10/27/2017 15:59 | 10/27/2017 18:23 | 144           | 2,930         | Metro East | x                 | x       | x       | x       |         |
| 12 |                        | 1500024         | 10/26/2017 22:57 | 10/27/2017 0:12  | 75            | 933           | Metro East | x                 | x       | x       |         |         |

SECURITY DATA ENDS]

**PUBLIC DOCUMENT**  
**NOT PUBLIC DATA HAS BEEN EXCISED**

**November**

**2017 MN Feeder Level Outages**

**5 Total qualifying events**

**0 event with no email**

|   | Feeder                 | Primary Event # | Begin Time       | Completion Time  | Duration Min. | Customers Out | Region     | Email sent to CAO | Email 1 | Email 2 | Email 3 | Email 4 |
|---|------------------------|-----------------|------------------|------------------|---------------|---------------|------------|-------------------|---------|---------|---------|---------|
|   | [SECURITY DATA BEGINS] |                 |                  |                  |               |               |            |                   |         |         |         |         |
| 1 |                        | 1500732         | 11/2/2017 13:41  | 11/2/2017 15:04  | 83            | 1,099         | Metro West | x                 | x       | x       | x       |         |
| 2 |                        | 1501169         | 11/3/2017 17:14  | 11/3/2017 18:25  | 71            | 2,715         | Metro West | x                 | x       | x       |         |         |
| 3 |                        | 1503171         | 11/13/2017 18:24 | 11/13/2017 19:27 | 63            | 505           | Metro East | x                 | x       | x       |         |         |
| 4 |                        | 1504723         | 11/21/2017 17:03 | 11/21/2017 18:47 | 104           | 2,351         | Metro West | x                 | x       | x       | x       |         |
| 5 |                        | 1505663         | 11/26/2017 15:45 | 11/26/2017 17:58 | 133           | 1,198         | Southeast  | x                 | x       | x       |         |         |

**SECURITY DATA ENDS]**

**PUBLIC DOCUMENT**  
**NOT PUBLIC DATA HAS BEEN EXCISED**

December

**2017 MN Feeder Level Outages**

8 Total qualifying events

0 event with no email

|                       | Feeder | Primary Event # | Begin Time       | Completion Time  | Duration Min. | Customers Out | Region     | Email sent to CAO | Email 1 | Email 2 | Email 3 | Email 4 |
|-----------------------|--------|-----------------|------------------|------------------|---------------|---------------|------------|-------------------|---------|---------|---------|---------|
| [SECURITY DATA BEGINS |        |                 |                  |                  |               |               |            |                   |         |         |         |         |
| 1                     |        | 1506992         | 12/2/2017 10:26  | 12/2/2017 12:17  | 111           | 783           | Metro East | x                 | x       | x       |         |         |
| 2                     |        | 1507573         | 12/4/2017 20:56  | 12/5/2017 2:43   | 347           | 1,015         | Metro West | x                 | x       | x       |         |         |
| 3                     |        | 1507586         | 12/4/2017 21:22  | 12/4/2017 23:29  | 127           | 1,029         | Southeast  | x                 | x       | x       | x       |         |
| 4                     |        | 1507587         | 12/4/2017 21:30  | 12/5/2017 4:46   | 436           | 1,434         | Metro West | x                 | x       | x       | x       |         |
| 5                     |        | 1508460         | 12/7/2017 6:47   | 12/7/2017 9:23   | 156           | 2,382         | Metro West | x                 | x       | x       | x       |         |
| 6                     |        | 1508822         | 12/9/2017 0:34   | 12/9/2017 1:58   | 84            | 1,236         | Metro West | x                 | x       | x       | x       |         |
| 7                     |        | 1509021         | 12/10/2017 17:31 | 12/10/2017 19:09 | 98            | 2,271         | Metro East | x                 | x       | x       |         |         |
| 8                     |        | 1511704         | 12/25/2017 8:32  | 12/25/2017 11:45 |               | 768           | Northwest  | x                 | x       | x       | x       |         |

SECURITY DATA ENDS]

**Attachment D – Major Service Interruption Notification**

The emails associated with this attachment have been e-filed separately due to the attachment's voluminous nature.



**Metro East**

All Causes,  
Distribution Substation,  
Transmission Substation,  
and Transmission Line levels  
All levels, No "Planned" Cause  
Includes Bulk Power Supply  
All levels, "Planned" Cause only  
Includes Bulk Power Supply

All levels, All Causes included

| Feeder ID              | Substation | City Where Substation is Located | SAIFI | SAIDI  | CAIDI  | Total   |                    |                   | Bulk Power Supply |                    |                   | Unplanned |                    |                   | Planned |                    |                   |
|------------------------|------------|----------------------------------|-------|--------|--------|---------|--------------------|-------------------|-------------------|--------------------|-------------------|-----------|--------------------|-------------------|---------|--------------------|-------------------|
|                        |            |                                  |       |        |        | Outages | Customers Affected | Customer Mins Out | Outages           | Customers Affected | Customer Mins Out | Outages   | Customers Affected | Customer Mins Out | Outages | Customers Affected | Customer Mins Out |
| [Security Data Begins] |            |                                  |       |        |        |         |                    |                   |                   |                    |                   |           |                    |                   |         |                    |                   |
| 1                      |            | Saint Paul                       | 3.35  | 378.38 | 113.08 | 66      | 11,798             | 1,334,154         | 0                 | 0                  | 0                 | 54        | 11,757             | 1,331,115         | 12      | 41                 | 3,039             |
| 2                      |            | Lauderdale                       | 1.57  | 310.98 | 197.90 | 3       | 11                 | 2,177             | 1                 | 7                  | 343               | 3         | 11                 | 2,177             | 0       | 0                  | 0                 |
| 3                      |            | Oak Park Heights                 | 2.61  | 306.38 | 117.32 | 87      | 7,077              | 830,281           | 2                 | 5,409              | 511,197           | 80        | 6,807              | 826,034           | 7       | 270                | 4,247             |
| 4                      |            | Saint Paul                       | 2.75  | 288.54 | 105.05 | 9       | 1,659              | 174,279           | 0                 | 0                  | 0                 | 9         | 1,659              | 174,279           | 0       | 0                  | 0                 |
| 5                      |            | Cottage Grove                    | 0.71  | 263.06 | 368.60 | 22      | 1,159              | 427,211           | 0                 | 0                  | 0                 | 16        | 1,116              | 420,028           | 6       | 43                 | 7,183             |
| 6                      |            | Hugo                             | 2.04  | 243.96 | 119.46 | 167     | 12,214             | 1,459,112         | 0                 | 0                  | 0                 | 151       | 11,559             | 1,424,722         | 16      | 655                | 34,390            |
| 7                      |            | Oak Park Heights                 | 2.41  | 237.33 | 98.30  | 20      | 2,202              | 216,447           | 2                 | 1,836              | 173,502           | 17        | 2,113              | 212,511           | 3       | 89                 | 3,936             |
| 8                      |            | Oak Park Heights                 | 2.22  | 227.42 | 102.58 | 47      | 4,261              | 437,094           | 2                 | 3,745              | 353,670           | 40        | 4,140              | 432,118           | 7       | 121                | 4,976             |
| 9                      |            | Oakdale                          | 2.27  | 224.99 | 99.31  | 33      | 6,638              | 659,217           | 0                 | 0                  | 0                 | 28        | 6,615              | 657,289           | 5       | 23                 | 1,928             |
| 10                     |            | Oak Park Heights                 | 2.27  | 224.15 | 98.54  | 6       | 1,383              | 136,285           | 2                 | 1,221              | 115,524           | 6         | 1,383              | 136,285           | 0       | 0                  | 0                 |
| 11                     |            | Arden Hills                      | 1.32  | 221.28 | 168.15 | 7       | 454                | 76,342            | 0                 | 0                  | 0                 | 4         | 430                | 73,918            | 3       | 24                 | 2,424             |
| 12                     |            | Lent Twp                         | 1.45  | 220.01 | 151.90 | 72      | 4,496              | 682,921           | 0                 | 0                  | 0                 | 67        | 4,482              | 681,151           | 5       | 14                 | 1,770             |
| 13                     |            | Oakdale                          | 2.32  | 216.46 | 93.29  | 33      | 5,831              | 543,953           | 0                 | 0                  | 0                 | 28        | 5,781              | 541,400           | 5       | 50                 | 2,553             |
| 14                     |            | Arden Hills                      | 1.13  | 211.40 | 186.60 | 37      | 3,946              | 736,306           | 0                 | 0                  | 0                 | 30        | 3,904              | 731,686           | 7       | 42                 | 4,620             |
| 15                     |            | Rosemount                        | 1.44  | 211.21 | 146.48 | 9       | 248                | 36,328            | 0                 | 0                  | 0                 | 8         | 235                | 34,443            | 1       | 13                 | 1,885             |
| 16                     |            | Saint Paul                       | 3.18  | 206.47 | 64.95  | 25      | 8,895              | 577,691           | 1                 | 2,796              | 61,512            | 23        | 8,890              | 577,337           | 2       | 5                  | 354               |
| 17                     |            | Newport                          | 0.71  | 200.78 | 281.10 | 2       | 5                  | 1,405             | 0                 | 0                  | 0                 | 2         | 5                  | 1,405             | 0       | 0                  | 0                 |
| 18                     |            | Afton                            | 2.66  | 198.77 | 74.83  | 68      | 12,971             | 970,613           | 0                 | 0                  | 0                 | 68        | 12,971             | 970,613           | 0       | 0                  | 0                 |
| 19                     |            | Saint Paul                       | 1.70  | 190.26 | 111.75 | 17      | 3,470              | 387,757           | 0                 | 0                  | 0                 | 16        | 3,437              | 383,302           | 1       | 33                 | 4,455             |
| 20                     |            | Oak Park Heights                 | 2.00  | 189.00 | 94.50  | 2       | 2                  | 189               | 2                 | 2                  | 189               | 2         | 2                  | 189               | 0       | 0                  | 0                 |
| 21                     |            | Oak Park Heights                 | 2.00  | 189.00 | 94.50  | 2       | 2                  | 189               | 2                 | 2                  | 189               | 2         | 2                  | 189               | 0       | 0                  | 0                 |
| 22                     |            | Eagan                            | 0.68  | 188.31 | 277.87 | 1       | 225                | 62,520            | 0                 | 0                  | 0                 | 1         | 225                | 62,520            | 0       | 0                  | 0                 |
| 23                     |            | Maplewood                        | 2.34  | 185.69 | 79.21  | 28      | 3,261              | 258,300           | 0                 | 0                  | 0                 | 27        | 3,254              | 257,460           | 1       | 7                  | 840               |
| 24                     |            | Arden Hills                      | 3.03  | 183.79 | 60.67  | 9       | 1,539              | 93,366            | 0                 | 0                  | 0                 | 9         | 1,539              | 93,366            | 0       | 0                  | 0                 |
| 25                     |            | Saint Paul                       | 2.03  | 177.55 | 87.62  | 5       | 616                | 53,976            | 0                 | 0                  | 0                 | 5         | 616                | 53,976            | 0       | 0                  | 0                 |

(1) Based on Jan 1-Dec 31, 2017, year-end storm normalized data (IEEE Op Co Level)

"Total" includes all causes, all levels

"Bulk Power Supply" includes Distribution Substation, Transmission Substation, and Transmission Line levels, all cause codes

"Unplanned" includes all levels and no outages with a primary cause code of "Intentional/Planned", Includes Bulk Power Supply outages

"Planned" includes all levels and only outages with a primary cause code of "Intentional/Planned", Includes Bulk Power Supply outages

**Metro East Poor Performing Feeders (FPIP Program) (2)**

Based on performance Sept 2016 to Aug 2017, Storms Included

| Feeder ID           | Substation | City Where Substation is Located | SAIFI | SAIDI  | CAIDI  | Reasons for Poor Performance                           | Operational Changes Made, Considering or Planned  |
|---------------------|------------|----------------------------------|-------|--------|--------|--|---|
| A                   |            | Saint Paul                       | 3.35  | 378.38 | 113.08 | Multiple underground cable or splice failures          | Cable and splices repaired or replaced            |
| B                   |            | Lauderdale                       | 1.57  | 310.98 | 197.90 | Underground cable failures                             | Cable repaired or replaced                        |
| C                   |            | Oak Park Heights                 | 2.61  | 306.38 | 117.32 | Multiple automatic splice failures in main line feeder | Replaced segments with multiple automatic splices |
| D                   |            | Hugo                             | 2.04  | 243.96 | 119.46 | Multiple automatic splice failures in main line feeder | Replaced segments with multiple automatic splices |
| E                   |            | Arden Hills                      | 3.03  | 183.79 | 60.67  | Multiple automatic splice failures in main line feeder | Replaced segments with multiple automatic splices |
| Security Data Ends] |            |                                  |       |        |        |  |   |

(2) Distribution outages only, storms are included

**Metro West**

All Causes,

Distribution Substation,

Transmission Substation,

and Transmission Line levels

All levels, No "Planned" Cause

Includes Bulk Power Supply

All levels, "Planned" Cause only

Includes Bulk Power Supply

All levels, All Causes included

| Feeder ID                     | Substation | City Where Substation is Located | SAIFI | SAIDI  | CAIDI  | Total   |                    |                   | Bulk Power Supply |                    |                   | Unplanned |                    |                   | Planned |                    |                   |
|-------------------------------|------------|----------------------------------|-------|--------|--------|---------|--------------------|-------------------|-------------------|--------------------|-------------------|-----------|--------------------|-------------------|---------|--------------------|-------------------|
|                               |            |                                  |       |        |        | Outages | Customers Affected | Customer Mins Out | Outages           | Customers Affected | Customer Mins Out | Outages   | Customers Affected | Customer Mins Out | Outages | Customers Affected | Customer Mins Out |
| <i>[Security Data Begins]</i> |            |                                  |       |        |        |         |                    |                   |                   |                    |                   |           |                    |                   |         |                    |                   |
| 1                             |            | St Louis Park                    | 2.90  | 730.93 | 251.79 | 19      | 7,481              | 1,883,610         | 0                 | 0                  | 0                 | 17        | 7,434              | 1,881,130         | 2       | 47                 | 2,480             |
| 2                             |            | Bloomington                      | 2.39  | 648.00 | 271.63 | 35      | 4,356              | 1,183,241         | 0                 | 0                  | 0                 | 31        | 4,330              | 1,180,277         | 4       | 26                 | 2,964             |
| 3                             |            | Waconia                          | 4.67  | 578.80 | 123.85 | 39      | 5,781              | 715,982           | 0                 | 0                  | 0                 | 19        | 5,231              | 596,064           | 20      | 550                | 119,918           |
| 4                             |            | Waconia                          | 2.37  | 554.87 | 234.23 | 36      | 3,397              | 795,678           | 0                 | 0                  | 0                 | 25        | 3,347              | 786,467           | 11      | 50                 | 9,211             |
| 5                             |            | Minneapolis                      | 2.03  | 554.18 | 273.67 | 3       | 81                 | 22,167            | 0                 | 0                  | 0                 | 3         | 81                 | 22,167            | 0       | 0                  | 0                 |
| 6                             |            | St Louis Park                    | 2.34  | 530.05 | 226.76 | 23      | 5,589              | 1,267,353         | 0                 | 0                  | 0                 | 17        | 5,431              | 1,247,138         | 6       | 158                | 20,215            |
| 7                             |            | Norwood                          | 1.62  | 428.09 | 264.24 | 46      | 1,646              | 434,938           | 0                 | 0                  | 0                 | 41        | 1,626              | 433,378           | 5       | 20                 | 1,560             |
| 8                             |            | Bloomington                      | 3.35  | 384.39 | 114.65 | 15      | 2,367              | 271,378           | 0                 | 0                  | 0                 | 15        | 2,367              | 271,378           | 0       | 0                  | 0                 |
| 9                             |            | Golden Valley                    | 4.49  | 349.60 | 77.79  | 31      | 9,213              | 716,685           | 0                 | 0                  | 0                 | 24        | 8,574              | 674,872           | 7       | 639                | 41,813            |
| 10                            |            | Helen Twp                        | 1.40  | 307.93 | 219.95 | 3       | 21                 | 4,619             | 0                 | 0                  | 0                 | 3         | 21                 | 4,619             | 0       | 0                  | 0                 |
| 11                            |            | Minneapolis                      | 1.00  | 276.00 | 276.00 | 1       | 1                  | 276               | 0                 | 0                  | 0                 | 0         | 0                  | 0                 | 1       | 1                  | 276               |
| 12                            |            | Golden Valley                    | 2.43  | 275.48 | 113.29 | 17      | 1,369              | 155,097           | 0                 | 0                  | 0                 | 17        | 1,369              | 155,097           | 0       | 0                  | 0                 |
| 13                            |            | Burnsville                       | 3.19  | 273.12 | 85.58  | 21      | 3,498              | 299,342           | 0                 | 0                  | 0                 | 17        | 3,486              | 298,418           | 4       | 12                 | 924               |
| 14                            |            | Wayzata                          | 2.16  | 271.33 | 125.78 | 33      | 1,797              | 226,018           | 0                 | 0                  | 0                 | 14        | 1,737              | 220,624           | 19      | 60                 | 5,394             |
| 15                            |            | Metropolitan Airport             | 1.31  | 269.13 | 204.77 | 5       | 46                 | 9,419             | 0                 | 0                  | 0                 | 3         | 36                 | 7,776             | 2       | 10                 | 1,643             |
| 16                            |            | Orono                            | 2.71  | 255.58 | 94.23  | 38      | 3,838              | 361,647           | 0                 | 0                  | 0                 | 26        | 3,500              | 338,232           | 12      | 338                | 23,415            |
| 17                            |            | Mound                            | 2.29  | 254.97 | 111.26 | 64      | 5,974              | 664,695           | 0                 | 0                  | 0                 | 58        | 5,933              | 660,875           | 6       | 41                 | 3,820             |
| 18                            |            | Minneapolis                      | 2.76  | 253.63 | 91.78  | 10      | 3,471              | 318,562           | 0                 | 0                  | 0                 | 10        | 3,471              | 318,562           | 0       | 0                  | 0                 |
| 19                            |            | St Louis Park                    | 1.71  | 243.09 | 142.56 | 11      | 4,761              | 678,720           | 0                 | 0                  | 0                 | 10        | 4,726              | 673,330           | 1       | 35                 | 5,390             |
| 20                            |            | Waconia Twp                      | 2.04  | 231.24 | 113.10 | 53      | 5,733              | 648,386           | 0                 | 0                  | 0                 | 36        | 5,682              | 640,261           | 17      | 51                 | 8,125             |
| 21                            |            | Eden Prairie                     | 1.51  | 219.15 | 144.76 | 7       | 492                | 71,224            | 0                 | 0                  | 0                 | 7         | 492                | 71,224            | 0       | 0                  | 0                 |
| 22                            |            | St Louis Park                    | 4.21  | 210.41 | 50.03  | 17      | 6,591              | 329,716           | 0                 | 0                  | 0                 | 16        | 6,581              | 329,566           | 1       | 10                 | 150               |
| 23                            |            | Deephaven                        | 2.51  | 209.37 | 83.27  | 53      | 3,900              | 324,739           | 0                 | 0                  | 0                 | 39        | 3,842              | 320,982           | 14      | 58                 | 3,757             |
| 24                            |            | Coon Rapids                      | 2.76  | 206.51 | 74.82  | 60      | 2,931              | 219,312           | 0                 | 0                  | 0                 | 27        | 2,765              | 200,336           | 33      | 166                | 18,976            |
| 25                            |            | Saint Anthony                    | 1.48  | 199.24 | 134.32 | 37      | 5,985              | 803,928           | 0                 | 0                  | 0                 | 36        | 5,977              | 802,832           | 1       | 8                  | 1,096             |

(1) Based on Jan 1-Dec 31, 2017, year-end storm normalized data (IEEE Op Co Level)

"Total" includes all causes, all levels

"Bulk Power Supply" includes Distribution Substation, Transmission Substation, and Transmission Line levels, all cause codes

"Unplanned" includes all levels and no outages with a primary cause code of "Intentional/Planned", Includes Bulk Power Supply outages

"Planned" includes all levels and only outages with a primary cause code of "Intentional/Planned", Includes Bulk Power Supply outages

**Metro West Poor Performing Feeders (2)**

Based on performance Sept 2016 to Aug 2017, Storms Included

| Feeder ID | Substation | City Where Substation is Located | SAIFI | SAIDI  | CAIDI  | Reasons for Poor Performance   | Operational Changes Made, Considering or Planned                   |
|-----------|------------|----------------------------------|-------|--------|--------|--|--|
| A         |            | St Louis Park                    | 2.90  | 730.93 | 251.79 | Two events caused 97% of outage minutes; cable failures                | Cable replaced or repaired   |
| B         |            | Bloomington                      | 2.39  | 648.00 | 271.63 | Cable failures with limited ability to switch around outage            | Install two load centers, 3000' of cable, and two fault indicators |
| C         |            | Waconia                          | 4.67  | 578.80 | 123.85 | Lightning storm caused majority of outage minutes                      | No further action  |
| D         |            | Waconia                          | 2.37  | 554.87 | 234.23 | One event from a lightning storm caused the majority of outage minutes | No further action  |
| E         |            | Mound                            | 2.29  | 254.97 | 111.26 | Feeder is deep right away and in the woods, long patrol time           | Relocate feeder out of woods and field                             |

*Security Data Ends]*

(2) Distribution outages only, storms are included

**Northwest**

All Causes,  
Distribution Substation,  
Transmission Substation,  
and Transmission Line levels  
All levels, No "Planned" Cause  
Includes Bulk Power Supply  
All levels, "Planned" Cause only  
Includes Bulk Power Supply

| Feeder ID                     | Substation | City Where Substation is Located | SAIFI | SAIDI  | CAIDI  | Total   |                    |                   | Bulk Power Supply |                    |                   | Unplanned |                    |                   | Planned |                    |                   |
|-------------------------------|------------|----------------------------------|-------|--------|--------|---------|--------------------|-------------------|-------------------|--------------------|-------------------|-----------|--------------------|-------------------|---------|--------------------|-------------------|
|                               |            |                                  |       |        |        | Outages | Customers Affected | Customer Mins Out | Outages           | Customers Affected | Customer Mins Out | Outages   | Customers Affected | Customer Mins Out | Outages | Customers Affected | Customer Mins Out |
| <i>[Security Data Begins]</i> |            |                                  |       |        |        |         |                    |                   |                   |                    |                   |           |                    |                   |         |                    |                   |
| 1                             |            | Sacred Heart                     | 4.12  | 588.43 | 142.93 | 13      | 1,408              | 201,243           | 1                 | 342                | 7,524             | 10        | 1,387              | 200,406           | 3       | 21                 | 837               |
| 2                             |            | Belgrade                         | 3.23  | 406.67 | 125.91 | 17      | 1,476              | 185,847           | 1                 | 461                | 16,744            | 16        | 1,015              | 169,103           | 1       | 461                | 16,744            |
| 3                             |            | Richmond                         | 2.46  | 381.57 | 154.96 | 18      | 1,896              | 293,807           | 1                 | 545                | 43,055            | 18        | 1,896              | 293,807           | 0       | 0                  | 0                 |
| 4                             |            | Atwater                          | 2.00  | 341.84 | 170.92 | 5       | 76                 | 12,990            | 0                 | 0                  | 0                 | 5         | 76                 | 12,990            | 0       | 0                  | 0                 |
| 5                             |            | Clara City                       | 3.41  | 321.72 | 94.23  | 34      | 2,950              | 277,967           | 1                 | 865                | 134,075           | 33        | 2,085              | 143,892           | 1       | 865                | 134,075           |
| 6                             |            | Cold Spring                      | 2.39  | 317.82 | 133.24 | 12      | 3,077              | 409,987           | 1                 | 1,279              | 101,041           | 11        | 3,076              | 409,893           | 1       | 1                  | 94                |
| 7                             |            | Birch Cooley Twp                 | 1.13  | 285.41 | 252.76 | 6       | 306                | 77,346            | 0                 | 0                  | 0                 | 6         | 306                | 77,346            | 0       | 0                  | 0                 |
| 8                             |            | Lake Lillian Twp                 | 3.63  | 227.92 | 62.72  | 16      | 2,573              | 161,369           | 3                 | 2,112              | 69,692            | 16        | 2,573              | 161,369           | 0       | 0                  | 0                 |
| 9                             |            | Monticello Twp                   | 1.14  | 211.60 | 186.36 | 39      | 3,470              | 646,661           | 0                 | 0                  | 0                 | 39        | 3,470              | 646,661           | 0       | 0                  | 0                 |
| 10                            |            | Rogers                           | 1.75  | 206.41 | 118.22 | 18      | 3,712              | 438,837           | 0                 | 0                  | 0                 | 16        | 2,278              | 401,509           | 2       | 1,434              | 37,328            |
| 11                            |            | Cold Spring                      | 1.98  | 204.89 | 103.55 | 2       | 1,389              | 143,835           | 1                 | 693                | 54,747            | 2         | 1,389              | 143,835           | 0       | 0                  | 0                 |
| 12                            |            | Morgan Twp                       | 1.27  | 200.77 | 158.11 | 27      | 1,365              | 215,823           | 0                 | 0                  | 0                 | 26        | 1,360              | 215,718           | 1       | 5                  | 105               |
| 13                            |            | Montevideo                       | 1.22  | 190.89 | 156.64 | 29      | 602                | 94,298            | 0                 | 0                  | 0                 | 27        | 598                | 93,952            | 2       | 4                  | 346               |
| 14                            |            | Leenthrop Twp                    | 1.63  | 187.08 | 114.42 | 10      | 430                | 49,201            | 1                 | 262                | 36,942            | 9         | 168                | 12,259            | 1       | 262                | 36,942            |
| 15                            |            | Avon                             | 1.41  | 183.32 | 130.48 | 36      | 2,019              | 263,433           | 0                 | 0                  | 0                 | 35        | 2,017              | 262,809           | 1       | 2                  | 624               |
| 16                            |            | Brownnton                        | 2.15  | 181.30 | 84.29  | 7       | 114                | 9,609             | 2                 | 104                | 7,124             | 7         | 114                | 9,609             | 0       | 0                  | 0                 |
| 17                            |            | Buffalo Lake                     | 2.87  | 169.31 | 59.01  | 6       | 1,076              | 63,492            | 2                 | 714                | 48,909            | 6         | 1,076              | 63,492            | 0       | 0                  | 0                 |
| 18                            |            | Paynesville Twp                  | 0.56  | 168.00 | 298.53 | 46      | 1,399              | 417,641           | 0                 | 0                  | 0                 | 45        | 1,393              | 416,711           | 1       | 6                  | 930               |
| 19                            |            | Glenwood                         | 1.34  | 161.59 | 120.90 | 17      | 1,136              | 137,348           | 0                 | 0                  | 0                 | 17        | 1,136              | 137,348           | 0       | 0                  | 0                 |
| 20                            |            | Clara City                       | 1.11  | 156.08 | 140.93 | 11      | 855                | 120,494           | 1                 | 781                | 110,121           | 9         | 73                 | 10,309            | 2       | 782                | 110,185           |
| 21                            |            | Lucas Twp                        | 1.09  | 155.72 | 142.92 | 7       | 900                | 128,626           | 0                 | 0                  | 0                 | 7         | 900                | 128,626           | 0       | 0                  | 0                 |
| 22                            |            | Stewart                          | 2.16  | 153.66 | 71.03  | 13      | 742                | 52,704            | 2                 | 665                | 45,548            | 12        | 741                | 52,623            | 1       | 1                  | 81                |
| 23                            |            | Hector                           | 3.05  | 149.26 | 48.88  | 10      | 2,055              | 100,454           | 3                 | 2,031              | 95,457            | 10        | 2,055              | 100,454           | 0       | 0                  | 0                 |
| 24                            |            | Atwater                          | 0.69  | 144.97 | 210.61 | 7       | 413                | 86,984            | 0                 | 0                  | 0                 | 5         | 228                | 22,749            | 2       | 185                | 64,235            |
| 25                            |            | Rogers                           | 1.42  | 140.81 | 99.10  | 21      | 1,779              | 176,293           | 0                 | 0                  | 0                 | 20        | 1,530              | 135,208           | 1       | 249                | 41,085            |

(1) Based on Jan 1-Dec 31, 2017, year-end storm normalized data (IEEE Op Co Level)  
 "Total" includes all causes, all levels  
 "Bulk Power Supply" includes Distribution Substation, Transmission Substation, and Transmission Line levels, all cause codes  
 "Unplanned" includes all levels and no outages with a primary cause code of "Intentional/Planned", Includes Bulk Power Supply outages  
 "Planned" includes all levels and only outages with a primary cause code of "Intentional/Planned", Includes Bulk Power Supply outages

**Northwest Poor Performing Feeders (2)**

Based on performance Sept 2016 to Aug 2017, Storms Included

| Feeder ID | Substation | City Where Substation is Located | SAIFI | SAIDI  | CAIDI  | Reasons for Poor Performance                        | Operational Changes Made, Considering or Planned |
|-----------|------------|----------------------------------|-------|--------|--------|---|--|
| A         |            | Sacred Heart                     | 4.12  | 588.43 | 142.93 | 95% of outage minutes were from two storms          | No further action planned                        |
| B         |            | Belgrade                         | 3.23  | 406.67 | 125.91 | Multiple overhead transformer outages               | Upgraded transformers                            |
| C         |            | Richmond                         | 2.46  | 381.57 | 154.96 | Failed underground cable                            | Cable replaced or repaired                       |
| D         |            | Clara City                       | 3.41  | 321.72 | 94.23  | Heavy snow during caused majority of outage minutes | Feeder being rebuilt in 2018                     |
| E         |            | Lucas Twp                        | 1.09  | 155.72 | 142.92 | Heavy snow during caused majority of outage minutes | Feeder being rebuilt in 2018                     |

*Security Data Ends]*

(2) Distribution outages only, storms are included

**Southeast**

All Causes,

Distribution Substation,

Transmission Substation,  
and Transmission Line levels

All levels, No "Planned" Cause  
Includes Bulk Power Supply

All levels, "Planned" Cause only  
Includes Bulk Power Supply

All levels, All Causes included

| Feeder ID                     | Substation | City Where Substation is Located | SAIFI | SAIDI  | CAIDI  | Total   |                    |                   | Bulk Power Supply |                    |                   | Unplanned |                    |                   | Planned |                    |                   |
|-------------------------------|------------|----------------------------------|-------|--------|--------|---------|--------------------|-------------------|-------------------|--------------------|-------------------|-----------|--------------------|-------------------|---------|--------------------|-------------------|
|                               |            |                                  |       |        |        | Outages | Customers Affected | Customer Mins Out | Outages           | Customers Affected | Customer Mins Out | Outages   | Customers Affected | Customer Mins Out | Outages | Customers Affected | Customer Mins Out |
| <b>[Security Data Begins]</b> |            |                                  |       |        |        |         |                    |                   |                   |                    |                   |           |                    |                   |         |                    |                   |
| 1                             |            | New Auburn                       | 3.13  | 584.82 | 187.04 | 6       | 691                | 129,245           | 1                 | 221                | 30,056            | 6         | 691                | 129,245           | 0       | 0                  | 0                 |
| 2                             |            | Waseca                           | 4.07  | 567.66 | 139.37 | 6       | 167                | 23,274            | 0                 | 0                  | 0                 | 6         | 167                | 23,274            | 0       | 0                  | 0                 |
| 3                             |            | Hartland Twp                     | 1.12  | 452.52 | 402.72 | 16      | 527                | 212,233           | 0                 | 0                  | 0                 | 15        | 525                | 211,983           | 1       | 2                  | 250               |
| 4                             |            | Mantorville Twp                  | 1.92  | 445.17 | 231.75 | 8       | 267                | 61,878            | 1                 | 139                | 11,259            | 8         | 267                | 61,878            | 0       | 0                  | 0                 |
| 5                             |            | Pine Island                      | 2.07  | 441.13 | 212.79 | 24      | 2,100              | 446,869           | 1                 | 1,003              | 142,426           | 22        | 2,097              | 446,737           | 2       | 3                  | 132               |
| 6                             |            | Leeds Twp                        | 3.89  | 410.04 | 105.33 | 19      | 763                | 80,368            | 0                 | 0                  | 0                 | 15        | 535                | 71,610            | 4       | 228                | 8,758             |
| 7                             |            | Waseca                           | 1.94  | 377.00 | 193.92 | 113     | 4,454              | 863,698           | 0                 | 0                  | 0                 | 112       | 4,453              | 863,423           | 1       | 1                  | 275               |
| 8                             |            | Mount Vernon Twp                 | 1.49  | 350.02 | 234.15 | 47      | 1,456              | 340,924           | 0                 | 0                  | 0                 | 43        | 1,431              | 339,639           | 4       | 25                 | 1,285             |
| 9                             |            | Pipestone                        | 1.99  | 326.78 | 163.85 | 27      | 2,136              | 349,983           | 0                 | 0                  | 0                 | 22        | 1,612              | 301,200           | 5       | 524                | 48,783            |
| 10                            |            | Jordan                           | 2.41  | 310.92 | 128.86 | 35      | 2,186              | 281,698           | 0                 | 0                  | 0                 | 25        | 2,162              | 280,354           | 10      | 24                 | 1,344             |
| 11                            |            | La Crescent                      | 1.64  | 294.45 | 179.42 | 46      | 3,133              | 562,108           | 0                 | 0                  | 0                 | 31        | 3,006              | 545,063           | 15      | 127                | 17,045            |
| 12                            |            | Florence Twp                     | 0.67  | 275.99 | 409.87 | 27      | 470                | 192,638           | 0                 | 0                  | 0                 | 24        | 457                | 191,586           | 3       | 13                 | 1,052             |
| 13                            |            | Wabasha                          | 3.59  | 273.24 | 76.11  | 24      | 3,073              | 233,892           | 3                 | 2,583              | 100,585           | 21        | 2,112              | 204,921           | 3       | 961                | 28,971            |
| 14                            |            | Waterville                       | 1.83  | 262.66 | 143.89 | 61      | 2,948              | 424,188           | 1                 | 1,609              | 188,253           | 53        | 2,814              | 415,050           | 8       | 134                | 9,138             |
| 15                            |            | Morristown                       | 1.39  | 262.36 | 188.77 | 44      | 1,665              | 314,309           | 1                 | 1,198              | 159,334           | 43        | 1,636              | 312,772           | 1       | 29                 | 1,537             |
| 16                            |            | Mankato                          | 2.14  | 246.46 | 115.10 | 25      | 3,698              | 425,637           | 0                 | 0                  | 0                 | 25        | 3,698              | 425,637           | 0       | 0                  | 0                 |
| 17                            |            | Waterville                       | 1.88  | 234.41 | 124.41 | 46      | 1,741              | 216,596           | 0                 | 0                  | 0                 | 31        | 782                | 198,881           | 15      | 959                | 17,715            |
| 18                            |            | Leeds Twp                        | 3.19  | 219.28 | 68.78  | 10      | 542                | 37,278            | 0                 | 0                  | 0                 | 6         | 247                | 26,198            | 4       | 295                | 11,080            |
| 19                            |            | Winona                           | 0.91  | 207.80 | 227.75 | 23      | 948                | 215,903           | 0                 | 0                  | 0                 | 20        | 939                | 215,473           | 3       | 9                  | 430               |
| 20                            |            | Mantorville Twp                  | 0.95  | 205.61 | 217.35 | 35      | 1,226              | 266,468           | 0                 | 0                  | 0                 | 35        | 1,226              | 266,468           | 0       | 0                  | 0                 |
| 21                            |            | New Market Twp                   | 1.06  | 202.33 | 190.26 | 6       | 1,006              | 191,400           | 0                 | 0                  | 0                 | 6         | 1,006              | 191,400           | 0       | 0                  | 0                 |
| 22                            |            | Pine Island                      | 1.21  | 188.96 | 156.64 | 12      | 1,146              | 179,513           | 1                 | 949                | 134,758           | 11        | 1,029              | 160,442           | 1       | 117                | 19,071            |
| 23                            |            | Faribault                        | 1.25  | 175.34 | 140.02 | 12      | 2,259              | 316,312           | 0                 | 0                  | 0                 | 10        | 2,224              | 315,339           | 2       | 35                 | 973               |
| 24                            |            | Tracy                            | 1.02  | 173.31 | 170.00 | 1       | 262                | 44,540            | 1                 | 262                | 44,540            | 1         | 262                | 44,540            | 0       | 0                  | 0                 |
| 25                            |            | Randolph Twp                     | 1.70  | 172.60 | 101.35 | 40      | 1,841              | 186,582           | 0                 | 0                  | 0                 | 31        | 1,820              | 183,943           | 9       | 21                 | 2,638             |

(1) Based on Jan 1-Dec 31, 2017, year-end storm normalized data (IEEE Op Co Level)

"Total" includes all causes, all levels

"Bulk Power Supply" includes Distribution Substation, Transmission Substation, and Transmission Line levels, all cause codes

"Unplanned" includes all levels and no outages with a primary cause code of "Intentional/Planned", Includes Bulk Power Supply outages

"Planned" includes all levels and only outages with a primary cause code of "Intentional/Planned", Includes Bulk Power Supply outages

**Southeast Poor Performing Feeders (2)**

Based on performance Sept 2016 to Aug 2017, Storms Included

| Feeder ID                  | Substation | City Where Substation is Located | SAIFI | SAIDI  | CAIDI  | Reasons for Poor Performance                               | Operational Changes Made, Considering or Planned                               |
|----------------------------|------------|----------------------------------|-------|--------|--------|--|--|
| A                          |            | New Auburn                       | 3.13  | 584.82 | 187.04 | Cable failure, fusing mis-coordination and failed recloser | Replaced cable, replaced failed recloser, adjust fusing to coordiante properly |
| B                          |            | Mount Vernon Twp                 | 1.49  | 350.02 | 234.15 | brittle #6 copper wire in wooded areas.                    | Replaced #6 copper wire with conductor   |
| C                          |            | Waseca                           | 4.07  | 567.66 | 139.37 | Switch burned up   | Replaced burned switch and added additional switch                             |
| D                          |            | Florence Twp                     | 0.67  | 275.99 | 409.87 | Line at bottom of bluff, trees fall into line              | Line relocated from bottom of bluff away from tree line.                       |
| E                          |            | Hartland Twp                     | 1.12  | 452.52 | 402.72 | Almost all of outage mintues were from a Tornado           | No further action planned  |
| <b>Security Data Ends]</b> |            |                                  |       |        |        |  |  |

(2) Distribution outages only, storms are included

A. The number and percentage of customer meters read by utility personnel (Company).

|                  | Residential | Commercial | Industrial | Other | A<br>Total | B<br>Number of Meters I | A÷B<br>Percent Read by<br>Utility<br>(Company) |   |
|------------------|-------------|------------|------------|-------|------------|-------------------------|--|---|
| <b>JANUARY</b>   | 1,575,136   | 158,161    | 11,454     | 4,240 | 1,748,991  | 1,750,361               | 99.92%   |   |
| <b>FEBRUARY</b>  | 1,416,905   | 140,694    | 10,242     | 3,784 | 1,571,625  | 1,750,967               | 89.76%   | * |
| <b>MARCH</b>     | 1,576,293   | 158,192    | 11,422     | 4,231 | 1,750,138  | 1,751,611               | 99.92%   |   |
| <b>APRIL</b>     | 1,576,554   | 158,145    | 11,426     | 4,224 | 1,750,349  | 1,752,345               | 99.89%   |   |
| <b>MAY</b>       | 1,578,264   | 158,207    | 11,361     | 4,211 | 1,752,043  | 1,753,947               | 99.89%   |   |
| <b>JUNE</b>      | 1,578,853   | 156,295    | 11,149     | 4,153 | 1,750,450  | 1,755,030               | 99.74%   |   |
| <b>JULY</b>      | 1,579,862   | 158,408    | 11,408     | 4,219 | 1,753,897  | 1,756,542               | 99.85%   |   |
| <b>AUGUST</b>    | 1,582,108   | 158,738    | 11,342     | 4,202 | 1,756,390  | 1,757,984               | 99.91%   |   |
| <b>SEPTEMBER</b> | 1,430,415   | 147,513    | 10,945     | 3,867 | 1,592,740  | 1,759,169               | 90.54%   | * |
| <b>OCTOBER</b>   | 1,584,359   | 159,130    | 11,412     | 4,201 | 1,759,102  | 1,760,653               | 99.91%   |   |
| <b>NOVEMBER</b>  | 1,491,707   | 148,830    | 10,441     | 3,835 | 1,654,813  | 1,762,267               | 93.90%   | * |
| <b>DECEMBER</b>  | 1,386,397   | 140,318    | 10,421     | 3,732 | 1,540,868  | 1,763,468               | 87.38%   | * |

\*The number of working days in a month, the number of weekends in a month, and the number of holidays in a month will impact the percentage of meters read by the utility, particularly in February, September, November, and December when excluding multiple meter reads on a single meter from the data.

B. The number and percentage of customer meters read by customers.

| Account Class: Residential Message | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Total | Percent |
|------------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-------|---------|
| NO READING RETURNED                | 50  | 26  | 22  | 11  | 14  | 14  | 19  | 62  | 61  | 54  | 80  | 103 | 516   | 26.63%  |
| NO ANSWER                          | 51  | 55  | 57  | 46  | 37  | 28  | 24  | 8   | 15  | 18  | 35  | 20  | 394   | 20.33%  |
| DOOR LOCKED                        | 29  | 37  | 31  | 23  | 19  | 18  | 13  | 24  | 14  | 20  | 14  | 5   | 247   | 12.75%  |
| OC Meter Maint                     | 21  | 8   | 5   | 1   | 2   | 4   | 7   | 7   | 15  | 14  | 19  | 30  | 133   | 6.86%   |
| METER OFF                          | 15  | 13  | 15  | 13  | 8   | 7   | 6   | 7   | 7   | 9   | 7   | 2   | 109   | 5.62%   |
| NEED KEY OR CODE                   | 24  | 8   | 11  | 10  | 7   | 8   | 11  | 0   | 2   | 6   | 7   | 9   | 103   | 5.31%   |
| DEAD REGISTER                      | 7   | 10  | 7   | 3   | 4   | 7   | 5   | 3   | 2   | 8   | 4   | 12  | 72    | 3.72%   |
| BAD KEY OR CODE                    | 12  | 10  | 7   | 6   | 1   | 6   | 4   | 2   | 2   | 7   | 4   | 6   | 67    | 3.46%   |
| SERVICE CUT AT POLE                | 1   | 2   | 2   | 4   | 5   | 6   | 7   | 8   | 4   | 7   | 5   | 6   | 57    | 2.94%   |
| VACANT                             | 7   | 7   | 9   | 8   | 8   | 4   | 4   | 1   | 0   | 1   | 0   | 1   | 50    | 2.58%   |
| DOG                                | 1   | 4   | 6   | 2   | 2   | 3   | 2   | 2   | 1   | 3   | 6   | 3   | 35    | 1.81%   |
| METER REMOVED                      | 4   | 7   | 5   | 3   | 2   | 1   | 3   | 0   | 0   | 3   | 1   | 2   | 31    | 1.60%   |
| GATE PROBLEM                       | 1   | 3   | 2   | 0   | 3   | 2   | 0   | 0   | 3   | 3   | 4   | 8   | 29    | 1.50%   |
| UNSAFE CONDITION                   | 3   | 3   | 2   | 2   | 2   | 1   | 0   | 0   | 0   | 0   | 0   | 1   | 14    | 0.72%   |
| NO ACCESS BACK YARD                | 1   | 2   | 2   | 2   | 0   | 0   | 1   | 1   | 0   | 1   | 1   | 0   | 11    | 0.57%   |
| CUST REQUESTS SKIP                 | 2   | 5   | 1   | 2   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 10    | 0.52%   |
| CUSTOMER READING                   | 0   | 1   | 0   | 2   | 0   | 0   | 1   | 1   | 1   | 1   | 1   | 1   | 9     | 0.46%   |
| METER BLOCKED                      | 1   | 1   | 3   | 2   | 0   | 0   | 1   | 0   | 0   | 0   | 1   | 0   | 9     | 0.46%   |
| BAD ROAD                           | 2   | 2   | 0   | 1   | 1   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 6     | 0.31%   |
| KEY NOT AVAILABLE                  | 1   | 1   | 0   | 1   | 0   | 0   | 1   | 0   | 0   | 0   | 1   | 0   | 5     | 0.26%   |
| REFUSED ADMITTANCE                 | 0   | 1   | 0   | 0   | 0   | 2   | 0   | 0   | 0   | 2   | 0   | 0   | 5     | 0.26%   |
| CANNOT LOCATE                      | 0   | 0   | 1   | 0   | 0   | 0   | 1   | 0   | 0   | 0   | 2   | 0   | 4     | 0.21%   |
| GARAGE LOCKED                      | 0   | 0   | 1   | 1   | 0   | 1   | 0   | 0   | 0   | 0   | 0   | 1   | 4     | 0.21%   |
| CLOSED LOOP                        | 0   | 1   | 0   | 0   | 0   | 0   | 0   | 0   | 1   | 0   | 0   | 1   | 3     | 0.15%   |
| SEASONAL                           | 0   | 1   | 0   | 1   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 1   | 3     | 0.15%   |
| SPS DEAD REGISTER                  | 2   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 1   | 0   | 0   | 3     | 0.15%   |
| Bad Ert                            | 0   | 0   | 0   | 0   | 1   | 0   | 0   | 1   | 0   | 0   | 0   | 0   | 2     | 0.10%   |
| DOG NEXT DOOR                      | 0   | 0   | 0   | 0   | 0   | 1   | 0   | 0   | 0   | 0   | 1   | 0   | 2     | 0.10%   |
| INCLEMENT WEATHER                  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 2   | 0   | 0   | 0   | 2     | 0.10%   |
| WRONG ROUTE                        | 2   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 2     | 0.10%   |
| HANDHELD ESTIMATE                  | 1   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 1     | 0.05%   |
| TOTAL                              | 238 | 208 | 189 | 144 | 116 | 113 | 110 | 127 | 130 | 158 | 193 | 212 | 1938  | 100%    |

The number and percentage of residential customer meters that have not been read by utility personnel for periods of six to 12 months and an explanation as to why they have not been read.

C-1.

**Account Class: Commercial**

| Message              | Jan       | Feb       | Mar        | Apr       | May       | Jun       | Jul       | Aug        | Sep        | Oct        | Nov        | Dec        | Total       | Percent     |
|----------------------|-----------|-----------|------------|-----------|-----------|-----------|-----------|------------|------------|------------|------------|------------|-------------|-------------|
| NO READING RETURNED  | 19        | 15        | 15         | 11        | 10        | 7         | 12        | 64         | 73         | 71         | 66         | 73         | 436         | 39%         |
| METER OFF            | 13        | 20        | 21         | 17        | 24        | 21        | 17        | 15         | 16         | 19         | 24         | 15         | 222         | 19.86%      |
| VACANT               | 29        | 4         | 29         | 4         | 4         | 5         | 7         | 4          | 4          | 2          | 3          | 1          | 96          | 8.59%       |
| DEAD REGISTER        | 4         | 1         | 5          | 9         | 5         | 8         | 10        | 8          | 9          | 7          | 4          | 7          | 77          | 6.89%       |
| NO ANSWER            | 4         | 8         | 8          | 8         | 5         | 4         | 5         | 3          | 3          | 5          | 6          | 5          | 64          | 5.72%       |
| METER REMOVED        | 6         | 9         | 6          | 4         | 3         | 1         | 0         | 0          | 0          | 5          | 3          | 4          | 41          | 3.67%       |
| DOOR LOCKED          | 3         | 5         | 7          | 3         | 2         | 4         | 0         | 2          | 1          | 1          | 4          | 8          | 40          | 3.58%       |
| SERVICE CUT AT POLE  | 0         | 2         | 1          | 4         | 5         | 2         | 2         | 1          | 1          | 3          | 5          | 3          | 29          | 2.59%       |
| CANNOT LOCATE        | 1         | 0         | 4          | 2         | 2         | 1         | 0         | 2          | 1          | 2          | 1          | 2          | 18          | 1.61%       |
| SEASONAL             | 1         | 1         | 2          | 1         | 1         | 0         | 0         | 0          | 0          | 3          | 4          | 3          | 16          | 1.43%       |
| NEED KEY OR CODE     | 3         | 3         | 2          | 2         | 1         | 0         | 1         | 0          | 1          | 0          | 0          | 2          | 15          | 1.34%       |
| BUSINESS CLOSED      | 1         | 2         | 1          | 0         | 3         | 0         | 0         | 0          | 1          | 0          | 5          | 0          | 13          | 1.16%       |
| OC Meter Maint       | 3         | 0         | 0          | 1         | 1         | 0         | 0         | 1          | 0          | 0          | 3          | 4          | 13          | 1.16%       |
| REFUSED ADMITTANCE   | 5         | 0         | 0          | 0         | 0         | 1         | 0         | 0          | 0          | 0          | 0          | 0          | 6           | 0.54%       |
| GATE PROBLEM         | 0         | 0         | 2          | 0         | 1         | 0         | 0         | 0          | 0          | 1          | 0          | 1          | 5           | 0.45%       |
| UNSAFE CONDITION     | 0         | 1         | 0          | 0         | 0         | 0         | 0         | 0          | 1          | 0          | 0          | 3          | 5           | 0.45%       |
| BAD KEY OR CODE      | 1         | 0         | 1          | 1         | 0         | 0         | 0         | 0          | 0          | 1          | 0          | 0          | 4           | 0.36%       |
| BAD ROAD             | 0         | 0         | 0          | 0         | 0         | 1         | 1         | 0          | 0          | 1          | 0          | 0          | 3           | 0.27%       |
| Bad Ert              | 0         | 0         | 1          | 1         | 0         | 0         | 0         | 0          | 0          | 0          | 0          | 0          | 2           | 0.18%       |
| DOG                  | 0         | 0         | 0          | 0         | 0         | 0         | 0         | 0          | 0          | 1          | 1          | 0          | 2           | 0.18%       |
| KEY NOT AVAILABLE    | 1         | 0         | 1          | 0         | 0         | 0         | 0         | 0          | 0          | 0          | 0          | 0          | 2           | 0.18%       |
| METER BLOCKED        | 0         | 0         | 1          | 0         | 0         | 0         | 0         | 1          | 0          | 0          | 0          | 0          | 2           | 0.18%       |
| SNOW/MUD             | 2         | 0         | 0          | 0         | 0         | 0         | 0         | 0          | 0          | 0          | 0          | 0          | 2           | 0.18%       |
| ABS MCC Calc Reading | 0         | 1         | 0          | 0         | 0         | 0         | 0         | 0          | 0          | 0          | 0          | 0          | 1           | 0.09%       |
| CUST REQUESTS SKIP   | 0         | 0         | 0          | 0         | 0         | 0         | 0         | 0          | 0          | 1          | 0          | 0          | 1           | 0.09%       |
| HANDHELD ESTIMATE    | 0         | 1         | 0          | 0         | 0         | 0         | 0         | 0          | 0          | 0          | 0          | 0          | 1           | 0.09%       |
| SPS DEAD REGISTER    | 0         | 0         | 0          | 0         | 1         | 0         | 0         | 0          | 0          | 0          | 0          | 0          | 1           | 0.09%       |
| WRONG ROUTE          | 0         | 1         | 0          | 0         | 0         | 0         | 0         | 0          | 0          | 0          | 0          | 0          | 1           | 0.09%       |
| <b>TOTAL</b>         | <b>96</b> | <b>74</b> | <b>107</b> | <b>68</b> | <b>68</b> | <b>55</b> | <b>55</b> | <b>101</b> | <b>111</b> | <b>123</b> | <b>129</b> | <b>131</b> | <b>1118</b> | <b>100%</b> |

C-1. The number and percentage of commercial customer meters that have not been read by utility personnel for periods of six to 12 months and an explanation as to why they have not been read.

**Account Class: Commercial**

| Message              | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Total | Percent |
|----------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-------|---------|
| NO READING RETURNED  | 19  | 15  | 15  | 11  | 10  | 7   | 12  | 64  | 73  | 71  | 66  | 73  | 436   | 39%     |
| METER OFF            | 13  | 20  | 21  | 17  | 24  | 21  | 17  | 15  | 16  | 19  | 24  | 15  | 222   | 19.86%  |
| VACANT               | 29  | 4   | 29  | 4   | 4   | 5   | 7   | 4   | 4   | 2   | 3   | 1   | 96    | 8.59%   |
| DEAD REGISTER        | 4   | 1   | 5   | 9   | 5   | 8   | 10  | 8   | 9   | 7   | 4   | 7   | 77    | 6.89%   |
| NO ANSWER            | 4   | 8   | 8   | 8   | 5   | 4   | 5   | 3   | 3   | 5   | 6   | 5   | 64    | 5.72%   |
| METER REMOVED        | 6   | 9   | 6   | 4   | 3   | 1   | 0   | 0   | 0   | 5   | 3   | 4   | 41    | 3.67%   |
| DOOR LOCKED          | 3   | 5   | 7   | 3   | 2   | 4   | 0   | 2   | 1   | 1   | 4   | 8   | 40    | 3.58%   |
| SERVICE CUT AT POLE  | 0   | 2   | 1   | 4   | 5   | 2   | 2   | 1   | 1   | 3   | 5   | 3   | 29    | 2.59%   |
| CANNOT LOCATE        | 1   | 0   | 4   | 2   | 2   | 1   | 0   | 2   | 1   | 2   | 1   | 2   | 18    | 1.61%   |
| SEASONAL             | 1   | 1   | 2   | 1   | 1   | 0   | 0   | 0   | 0   | 3   | 4   | 3   | 16    | 1.43%   |
| NEED KEY OR CODE     | 3   | 3   | 2   | 2   | 1   | 0   | 1   | 0   | 1   | 0   | 0   | 2   | 15    | 1.34%   |
| BUSINESS CLOSED      | 1   | 2   | 1   | 0   | 3   | 0   | 0   | 0   | 1   | 0   | 5   | 0   | 13    | 1.16%   |
| OC Meter Maint       | 3   | 0   | 0   | 1   | 1   | 0   | 0   | 1   | 0   | 0   | 3   | 4   | 13    | 1.16%   |
| REFUSED ADMITTANCE   | 5   | 0   | 0   | 0   | 0   | 1   | 0   | 0   | 0   | 0   | 0   | 0   | 6     | 0.54%   |
| GATE PROBLEM         | 0   | 0   | 2   | 0   | 1   | 0   | 0   | 0   | 0   | 1   | 0   | 1   | 5     | 0.45%   |
| UNSAFE CONDITION     | 0   | 1   | 0   | 0   | 0   | 0   | 0   | 0   | 1   | 0   | 0   | 3   | 5     | 0.45%   |
| BAD KEY OR CODE      | 1   | 0   | 1   | 1   | 0   | 0   | 0   | 0   | 0   | 1   | 0   | 0   | 4     | 0.36%   |
| BAD ROAD             | 0   | 0   | 0   | 0   | 0   | 1   | 1   | 0   | 0   | 1   | 0   | 0   | 3     | 0.27%   |
| Bad Ert              | 0   | 0   | 1   | 1   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 2     | 0.18%   |
| DOG                  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 1   | 1   | 0   | 2     | 0.18%   |
| KEY NOT AVAILABLE    | 1   | 0   | 1   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 2     | 0.18%   |
| METER BLOCKED        | 0   | 0   | 1   | 0   | 0   | 0   | 0   | 1   | 0   | 0   | 0   | 0   | 2     | 0.18%   |
| SNOW/MUD             | 2   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 2     | 0.18%   |
| ABS MCC Calc Reading | 0   | 1   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 1     | 0.09%   |
| CUST REQUESTS SKIP   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 1   | 0   | 0   | 1     | 0.09%   |
| HANDHELD ESTIMATE    | 0   | 1   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 1     | 0.09%   |
| SPS DEAD REGISTER    | 0   | 0   | 0   | 0   | 1   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 1     | 0.09%   |
| WRONG ROUTE          | 0   | 1   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 1     | 0.09%   |
| TOTAL                | 96  | 74  | 107 | 68  | 68  | 55  | 55  | 101 | 111 | 123 | 129 | 131 | 1118  | 100%    |



C-1. The number and percentage of industrial customer meters that have not been read by utility personnel for periods of six to 12 months and an explanation as to why they have not been read.

**Account Class: Industrial**

| <b>Message</b>      | <b>Jan</b> | <b>Feb</b> | <b>Mar</b> | <b>Apr</b> | <b>May</b> | <b>Jun</b> | <b>Jul</b> | <b>Aug</b> | <b>Sep</b> | <b>Oct</b> | <b>Nov</b> | <b>Dec</b> | <b>Total</b> | <b>Percent</b> |
|---------------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|--------------|----------------|
| NO READING RETURNED | 17         | 15         | 18         | 22         | 21         | 22         | 20         | 26         | 28         | 25         | 27         | 23         | 264          | 86.27%         |
| METER REMOVED       | 1          | 1          | 1          | 1          | 1          | 1          | 0          | 1          | 1          | 1          | 3          | 0          | 12           | 3.92%          |
| METER OFF           | 1          | 1          | 1          | 1          | 3          | 2          | 1          | 0          | 0          | 1          | 0          | 0          | 11           | 3.59%          |
| OC Meter Maint      | 0          | 1          | 1          | 1          | 1          | 1          | 0          | 0          | 0          | 0          | 0          | 0          | 5            | 1.63%          |
| SERVICE CUT AT POLE | 0          | 0          | 0          | 0          | 0          | 0          | 0          | 1          | 1          | 2          | 0          | 1          | 5            | 1.63%          |
| SEASONAL            | 0          | 0          | 1          | 1          | 0          | 0          | 1          | 0          | 0          | 0          | 0          | 0          | 3            | 0.98%          |
| GATE PROBLEM        | 0          | 0          | 0          | 0          | 1          | 1          | 0          | 0          | 0          | 0          | 0          | 0          | 2            | 0.65%          |
| DOOR LOCKED         | 0          | 0          | 0          | 0          | 0          | 0          | 0          | 0          | 0          | 0          | 0          | 1          | 1            | 0.33%          |
| NO ANSWER           | 0          | 0          | 0          | 0          | 0          | 0          | 0          | 0          | 0          | 0          | 1          | 0          | 1            | 0.33%          |
| UNSAFE CONDITION    | 0          | 0          | 0          | 0          | 0          | 0          | 0          | 0          | 0          | 0          | 1          | 0          | 1            | 0.33%          |
| VACANT              | 0          | 0          | 1          | 0          | 0          | 0          | 0          | 0          | 0          | 0          | 0          | 0          | 1            | 0.33%          |
| <b>TOTAL</b>        | <b>19</b>  | <b>18</b>  | <b>23</b>  | <b>26</b>  | <b>27</b>  | <b>27</b>  | <b>22</b>  | <b>28</b>  | <b>30</b>  | <b>29</b>  | <b>32</b>  | <b>25</b>  | <b>306</b>   | <b>100%</b>    |

C-1. The number and percentage of other customer meters that have not been read by utility personnel for periods of six to 12 months and an explanation as to why they have not been read.

**Account Class: Other**

| <b>Message</b>      | <b>Jan</b> | <b>Feb</b> | <b>Mar</b> | <b>Apr</b> | <b>May</b> | <b>Jun</b> | <b>Jul</b> | <b>Aug</b> | <b>Sep</b> | <b>Oct</b> | <b>Nov</b> | <b>Dec</b> | <b>Total</b> | <b>Percent</b> |
|---------------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|--------------|----------------|
| NO READING RETURNED | 5          | 5          | 4          | 4          | 2          | 3          | 3          | 4          | 3          | 3          | 4          | 4          | 44           | 88%            |
| CUSTOMER READING    | 0          | 0          | 1          | 1          | 2          | 1          | 1          | 0          | 0          | 0          | 0          | 0          | 6            | 12%            |
| TOTAL               | 5          | 5          | 5          | 5          | 4          | 4          | 4          | 4          | 3          | 3          | 4          | 4          | 50           | 100%           |

C-2. The number and percentage of residential customer meters that have not been read by utility personnel for periods of longer than 12 months and an explanation as to why they have not been read.

**Account Class: Residential**

| Message             | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Total | Percent |
|---------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-------|---------|
| NO READING RETURNED | 11  | 10  | 5   | 3   | 4   | 4   | 7   | 25  | 23  | 14  | 16  | 19  | 141   | 26.55%  |
| NO ANSWER           | 14  | 10  | 16  | 13  | 10  | 11  | 10  | 4   | 6   | 8   | 8   | 6   | 116   | 21.85%  |
| DOOR LOCKED         | 3   | 8   | 3   | 7   | 5   | 11  | 5   | 11  | 5   | 2   | 3   | 1   | 64    | 12.05%  |
| OC Meter Maint      | 5   | 2   | 2   | 0   | 1   | 1   | 2   | 2   | 4   | 4   | 3   | 9   | 35    | 6.59%   |
| SERVICE CUT AT POLE | 0   | 0   | 0   | 3   | 3   | 3   | 5   | 6   | 2   | 6   | 2   | 1   | 31    | 5.84%   |
| METER OFF           | 2   | 3   | 3   | 2   | 2   | 3   | 3   | 3   | 3   | 4   | 2   | 0   | 30    | 5.65%   |
| VACANT              | 0   | 2   | 5   | 5   | 6   | 4   | 4   | 0   | 0   | 0   | 0   | 0   | 26    | 4.90%   |
| NEED KEY OR CODE    | 3   | 1   | 2   | 4   | 4   | 1   | 3   | 0   | 1   | 1   | 1   | 0   | 21    | 3.95%   |
| BAD KEY OR CODE     | 2   | 1   | 1   | 0   | 0   | 1   | 1   | 1   | 1   | 4   | 2   | 1   | 15    | 2.82%   |
| DOG                 | 0   | 1   | 1   | 2   | 1   | 2   | 1   | 2   | 1   | 1   | 2   | 1   | 15    | 2.82%   |
| UNSAFE CONDITION    | 2   | 2   | 2   | 2   | 2   | 1   | 0   | 0   | 0   | 0   | 0   | 0   | 11    | 2.07%   |
| DEAD REGISTER       | 1   | 1   | 2   | 0   | 0   | 1   | 0   | 0   | 0   | 0   | 0   | 0   | 5     | 0.94%   |
| GATE PROBLEM        | 0   | 0   | 0   | 0   | 3   | 0   | 0   | 0   | 0   | 0   | 0   | 1   | 4     | 0.75%   |
| BAD ROAD            | 2   | 1   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 3     | 0.56%   |
| METER REMOVED       | 0   | 0   | 0   | 0   | 0   | 1   | 0   | 0   | 0   | 1   | 0   | 1   | 3     | 0.56%   |
| CANNOT LOCATE       | 0   | 0   | 1   | 0   | 0   | 0   | 1   | 0   | 0   | 0   | 0   | 0   | 2     | 0.38%   |
| NO ACCESS BACK YARD | 0   | 1   | 0   | 1   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 2     | 0.38%   |
| REFUSED ADMITTANCE  | 0   | 0   | 0   | 0   | 0   | 2   | 0   | 0   | 0   | 0   | 0   | 0   | 2     | 0.38%   |
| CUST REQUESTS SKIP  | 1   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 1     | 0.19%   |
| CUSTOMER READING    | 0   | 0   | 0   | 1   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 1     | 0.19%   |
| DOG NEXT DOOR       | 0   | 0   | 0   | 0   | 0   | 1   | 0   | 0   | 0   | 0   | 0   | 0   | 1     | 0.19%   |
| INCLEMENT WEATHER   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 1   | 0   | 0   | 0   | 1     | 0.19%   |
| KEY NOT AVAILABLE   | 0   | 1   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 1     | 0.19%   |
| TOTAL               | 46  | 44  | 43  | 43  | 41  | 47  | 42  | 54  | 47  | 45  | 39  | 40  | 531   | 100%    |

C-2. The number and percentage of commercial customer meters that have not been read by utility personnel for periods of longer than 12 months and an explanation as to why they have not been read.

**Account Class: Commercial**

| Message             | Jan       | Feb       | Mar       | Apr       | May       | Jun       | Jul       | Aug       | Sep       | Oct       | Nov       | Dec       | Total      | Percent     |
|---------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|------------|-------------|
| NO READING RETURNED | 6         | 5         | 5         | 5         | 3         | 2         | 8         | 16        | 9         | 10        | 8         | 8         | 85         | 32.69%      |
| METER OFF           | 4         | 3         | 6         | 4         | 4         | 6         | 8         | 5         | 7         | 4         | 6         | 5         | 62         | 23.85%      |
| VACANT              | 0         | 1         | 17        | 3         | 3         | 3         | 2         | 2         | 1         | 1         | 2         | 1         | 36         | 13.85%      |
| DEAD REGISTER       | 1         | 0         | 0         | 2         | 0         | 4         | 2         | 3         | 3         | 3         | 1         | 3         | 22         | 8.46%       |
| NO ANSWER           | 2         | 2         | 4         | 2         | 3         | 2         | 1         | 0         | 1         | 2         | 1         | 2         | 22         | 8.46%       |
| DOOR LOCKED         | 1         | 1         | 1         | 0         | 0         | 1         | 0         | 1         | 1         | 1         | 2         | 1         | 10         | 3.85%       |
| BUSINESS CLOSED     | 0         | 1         | 0         | 0         | 1         | 0         | 0         | 0         | 0         | 0         | 3         | 0         | 5          | 1.92%       |
| CANNOT LOCATE       | 0         | 0         | 0         | 0         | 0         | 0         | 0         | 0         | 1         | 1         | 0         | 1         | 3          | 1.15%       |
| NEED KEY OR CODE    | 0         | 1         | 0         | 0         | 0         | 0         | 0         | 0         | 1         | 0         | 0         | 1         | 3          | 1.15%       |
| SERVICE CUT AT POLE | 0         | 1         | 0         | 0         | 2         | 0         | 0         | 0         | 0         | 0         | 0         | 0         | 3          | 1.15%       |
| METER REMOVED       | 0         | 0         | 0         | 0         | 0         | 0         | 0         | 0         | 0         | 1         | 1         | 0         | 2          | 0.77%       |
| REFUSED ADMITTANCE  | 1         | 0         | 0         | 0         | 0         | 1         | 0         | 0         | 0         | 0         | 0         | 0         | 2          | 0.77%       |
| SEASONAL            | 1         | 0         | 0         | 0         | 0         | 0         | 0         | 0         | 0         | 0         | 0         | 1         | 2          | 0.77%       |
| BAD KEY OR CODE     | 0         | 0         | 0         | 0         | 0         | 0         | 0         | 0         | 0         | 1         | 0         | 0         | 1          | 0.38%       |
| KEY NOT AVAILABLE   | 0         | 0         | 1         | 0         | 0         | 0         | 0         | 0         | 0         | 0         | 0         | 0         | 1          | 0.38%       |
| OC Meter Maint      | 1         | 0         | 0         | 0         | 0         | 0         | 0         | 0         | 0         | 0         | 0         | 0         | 1          | 0.38%       |
| <b>TOTAL</b>        | <b>17</b> | <b>15</b> | <b>34</b> | <b>16</b> | <b>16</b> | <b>19</b> | <b>21</b> | <b>27</b> | <b>24</b> | <b>24</b> | <b>24</b> | <b>23</b> | <b>260</b> | <b>100%</b> |

C-2. The number and percentage of industrial customer meters that have not been read by utility personnel for periods of longer than 12 months and an explanation as to why they have not been read.

**Account Class: Industrial**

| Message             | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Total | Percent |
|---------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-------|---------|
| NO READING RETURNED | 3   | 2   | 4   | 4   | 4   | 4   | 13  | 14  | 14  | 15  | 18  | 17  | 112   | 82.96%  |
| METER REMOVED       | 1   | 1   | 1   | 1   | 1   | 1   | 0   | 1   | 1   | 1   | 1   | 0   | 10    | 7.41%   |
| METER OFF           | 1   | 1   | 1   | 1   | 1   | 1   | 0   | 0   | 0   | 1   | 0   | 0   | 7     | 5.19%   |
| SERVICE CUT AT POLE | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 1   | 1   | 2   | 0   | 1   | 5     | 3.70%   |
| UNSAFE CONDITION    | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 1   | 0   | 1     | 0.74%   |
| TOTAL               | 5   | 4   | 6   | 6   | 6   | 6   | 13  | 16  | 16  | 19  | 20  | 18  | 135   | 100%    |

C-2. The number and percentage of other customer meters that have not been read by utility personnel for periods of longer than 12 months and an explanation as to why they have not been read.

**Account Class: Other**

| Message                                       | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Total | Percent |
|---|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-------|---------|
| NO READING<br>RETURNED<br>CUSTOMER<br>READING | 5   | 5   | 4   | 4   | 2   | 3   | 3   | 4   | 3   | 3   | 3   | 3   | 42    | 87.50%  |
| TOTAL   | 0   | 0   | 1   | 1   | 2   | 1   | 1   | 0   | 0   | 0   | 0   | 0   | 6     | 12.50%  |
| TOTAL   | 5   | 5   | 5   | 5   | 4   | 4   | 4   | 4   | 3   | 3   | 3   | 3   | 48    | 100%    |

D. Total number of meters installed by month.\*\*

|           | Residential | Commercial | Industrial | Other | Total   |
|-----------|-------------|------------|------------|-------|---------|
| JANUARY   | 1575800     | 158496     | 11500      | 4565  | 1750361 |
| FEBRUARY  | 1576364     | 158548     | 11493      | 4562  | 1750967 |
| MARCH     | 1577035     | 158525     | 11492      | 4559  | 1751611 |
| APRIL     | 1577762     | 158544     | 11489      | 4550  | 1752345 |
| MAY       | 1579315     | 158597     | 11487      | 4548  | 1753947 |
| JUNE      | 1580323     | 158679     | 11481      | 4547  | 1755030 |
| JULY      | 1581672     | 158849     | 11476      | 4545  | 1756542 |
| AUGUST    | 1582871     | 159102     | 11477      | 4534  | 1757984 |
| SEPTEMBER | 1583927     | 159235     | 11478      | 4529  | 1759169 |
| OCTOBER   | 1585190     | 159468     | 11469      | 4526  | 1760653 |
| NOVEMBER  | 1586485     | 159793     | 11463      | 4526  | 1762267 |
| DECEMBER  | 1587387     | 160087     | 11469      | 4525  | 1763468 |

\*\* We have removed deleted meters from the total number of meters installed per month. The deleted meters designation is given to meters that were incorrectly entered into the system and were never truly installed at a premise. This ensures our data is more representative of meters in the field.

R=Residential

C=Commercial

|   | Jan-17 |       | Feb-17 |       | Mar-17 |       | Apr-17 |       | May-17 |       | Jun-17 |       | Jul-17 |       | Aug-17 |       | Sep-17 |       | Oct-17 |       | Nov-17 |       | Dec-17 |       | Total 2017 |        |  |  |
|---|--------|-------|--------|-------|--------|-------|--------|-------|--------|-------|--------|-------|--------|-------|--------|-------|--------|-------|--------|-------|--------|-------|--------|-------|------------|--------|--|--|
|   | R      | C     | R      | C     | R      | C     | R      | C     | R      | C     | R      | C     | R      | C     | R      | C     | R      | C     | R      | C     | R      | C     | R      | C     | R          | C      |  |  |
| <b>Number of customers who received disconnect notices</b> <sup>1, 2</sup>      | 73,262 | 6,890 | 82,161 | 7,121 | 89,471 | 6,256 | 71,527 | 6,333 | 51,456 | 6,111 | 50,835 | 6,559 | 46,468 | 6,140 | 65,148 | 6,455 | 64,574 | 6,990 | 56,663 | 5,656 | 47,075 | 6,312 | 48,769 | 7,915 | 747,409    | 78,738 |  |  |
| <b>Number of customers who sought cold weather rule protection</b> <sup>1</sup> |        |       |        |       |        |       |        |       |        |       |        |       |        |       |        |       |        |       |        |       |        |       |        |       |            |        |  |  |
| <b>Sought</b>   | 16,020 | 0     | 14,335 | 0     | 18,524 | 0     | 33,565 | 0     | 0      | 0     | 0      | 0     | 0      | 0     | 0      | 0     | 0      | 0     | 24,004 | 0     | 19,077 | 0     | 15,418 | 0     | 140,943    | 0      |  |  |
| <b>Granted</b>  | 16,020 | 0     | 14,335 | 0     | 18,524 | 0     | 33,565 | 0     | 0      | 0     | 0      | 0     | 0      | 0     | 0      | 0     | 0      | 0     | 24,004 | 0     | 19,077 | 0     | 15,418 | 0     | 140,943    | 0      |  |  |
| <b>Number of customers locked for nonpayment</b>                                | 873    | 50    | 980    | 59    | 1,048  | 67    | 1,720  | 69    | 3,095  | 60    | 1,986  | 57    | 1,924  | 60    | 2,453  | 58    | 2,237  | 42    | 1,055  | 41    | 1,208  | 39    | 633    | 24    | 19,212     | 626    |  |  |
| <b>Number of total customers restored to service within 24 hours</b>            | 410    | 10    | 455    | 41    | 583    | 13    | 538    | 10    | 559    | 3     | 549    | 3     | 615    | 4     | 738    | 6     | 815    | 4     | 397    | 6     | 569    | 9     | 336    | 5     | 6,564      | 114    |  |  |
| <b>Number of customers restored to service with pay arrangements</b>            | 60     | 0     | 50     | 1     | 42     | 0     | 136    | 1     | 148    | 0     | 104    | 0     | 165    | 1     | 181    | 0     | 178    | 0     | 81     | 0     | 74     | 0     | 32     | 0     | 1,251      | 3      |  |  |
| <b>Number of customers requesting emergency medical account status</b>          |        |       |        |       |        |       |        |       |        |       |        |       |        |       |        |       |        |       |        |       |        |       |        |       |            |        |  |  |
| <b>Requested</b>  | 152    |       | 170    |       | 195    |       | 289    |       | 333    |       | 304    |       | 287    |       | 301    |       | 317    |       | 226    |       | 141    |       | 435    |       | 3,150      |        |  |  |
| <b>Denied</b> <sup>3</sup>  | 25     |       | 35     |       | 44     |       | 69     |       | 78     |       | 92     |       | 77     |       | 94     |       | 87     |       | 60     |       | 26     |       | 75     |       | 762        |        |  |  |

Number of bankruptcies: 314

1. The data for customers receiving disconnect notices and seeking cold weather rule protection represents a combination of gas and electric customers. Approximately 94% of Xcel Energy's Minnesota customers are electric or combined gas and electric customers. For those customers receiving gas and electric service, the disconnect is due to the total amount of regulated charges overdue. Thus the ability to track disconnects due to electric non-payment would be difficult since Xcel Energy's customer service system does not have the functionality to sort the data in this manner.

2. Under Minn. R. 7820.2400 the utility is required to send duplicate notices to multiple addresses for each disconnected customer: the service address, mailing address, and any third party authorized on the account. This requirement increases the number of notices sent out each year. Therefore, numbers reflected do include duplicates and does not separately count unique customer circumstances.

3. Reasons for denial of emergency medical account status:

Customer did not return form.

Doctor refused to certify as Medical/Life Support.

| <b>Residential</b>                                |        |        |        |        |        |        |        |        |        |        |        |        |            |
|---|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|------------|
|   | Jan-17 | Feb-17 | Mar-17 | Apr-17 | May-17 | Jun-17 | Jul-17 | Aug-17 | Sep-17 | Oct-17 | Nov-17 | Dec-17 | Total 2017 |
| # Service Installations                           | 343    | 332    | 344    | 336    | 431    | 343    | 374    | 386    | 186    | 247    | 361    | 396    | 4079       |
| Avg days to complete from customer and site ready | 1.7    | 1.4    | 2.0    | 2.1    | 3.2    | 1.6    | 3.9    | 3.4    | 4.4    | 4.2    | 2.9    | 0.8    | 2.61       |
| <b>Commercial</b>                                 |        |        |        |        |        |        |        |        |        |        |        |        |            |
|   | Jan-17 | Feb-17 | Mar-17 | Apr-17 | May-17 | Jun-17 | Jul-17 | Aug-17 | Sep-17 | Oct-17 | Nov-17 | Dec-17 | Total 2017 |
| # Service Installations                           | 24     | 11     | 14     | 24     | 17     | 31     | 26     | 27     | 13     | 19     | 36     | 26     | 268        |
| Avg days to complete from customer and site ready | 12.2   | 12.0   | 4.0    | 5.1    | 3.6    | 2.9    | 2.1    | 1.6    | 4.1    | 5.6    | 12.5   | 13.7   | 6.6        |



|    | January   | February | March   | April   | May     | June    | July    | August  | September | October | November | December | 2017    |           |
|----|---|----------|---------|---------|---------|---------|---------|---------|-----------|---------|----------|----------|---------|-----------|
| 1  | All <b>Residential</b> Calls offered to Agents  | 81,680   | 74,500  | 87,211  | 87,077  | 100,011 | 123,225 | 108,269 | 109,441   | 97,107  | 97,800   | 80,104   | 74,582  | 1,121,007 |
| 2  | All <b>BSC</b> Calls Offered to Agents  | 4,936    | 5,042   | 5,626   | 4,524   | 4,693   | 4,671   | 4,258   | 4,795     | 4,609   | 5,168    | 4,676    | 4,242   | 57,240    |
| 3  | All <b>Credit</b> Calls Offered to Agents   | 13,703   | 15,321  | 19,486  | 29,631  | 23,986  | 19,081  | 17,952  | 22,913    | 24,347  | 18,024   | 13,772   | 10,652  | 228,868   |
| 4  | All <b>PAR</b> Calls Offered to Agents  | 2,744    | 2,515   | 3,497   | 5,501   | 5,977   | 5,399   | 5,112   | 5,967     | 6,001   | 4,716    | 3,318    | 2,761   | 53,508    |
| 5  | All Calls Offered to Agents   | 103,063  | 97,378  | 115,820 | 126,733 | 134,667 | 152,376 | 135,591 | 143,116   | 132,064 | 125,708  | 101,870  | 92,237  | 1,460,623 |
| 6  | All Calls Excluding Credit and PAR  | 86,616   | 79,542  | 92,837  | 91,601  | 104,704 | 127,896 | 112,527 | 114,236   | 101,716 | 102,968  | 84,780   | 78,824  | 1,178,247 |
| 7  | All <b>Residential</b> Calls Answered by Agents within 20 seconds   | 66,438   | 58,240  | 66,715  | 65,388  | 78,317  | 91,322  | 67,597  | 84,181    | 70,751  | 72,626   | 62,379   | 55,787  | 839,741   |
| 8  | All <b>BSC</b> Calls Answered by Agents within 20 seconds   | 3,375    | 3,885   | 4,536   | 3,713   | 4,225   | 4,014   | 3,663   | 4,206     | 4,059   | 4,374    | 4,131    | 3,494   | 47,675    |
| 9  | All <b>Credit</b> Calls Answered by Agents within 20 seconds  | 11,579   | 13,403  | 16,798  | 17,978  | 17,404  | 17,265  | 15,032  | 19,888    | 20,642  | 16,212   | 12,545   | 9,375   | 188,121   |
| 10 | All <b>PAR</b> Calls Answered by Agents within 20 seconds   | 2,371    | 2,161   | 3,003   | 4,528   | 4,851   | 4,319   | 4,172   | 4,747     | 4,228   | 3,481    | 2,777    | 2,273   | 42,911    |
| 11 | All Calls Answered by Agents within 20 seconds  | 83,763   | 77,689  | 91,052  | 91,607  | 104,797 | 116,920 | 90,464  | 113,022   | 99,680  | 96,693   | 81,832   | 70,929  | 1,118,448 |
| 12 | All Calls Answered by Agents within 20 seconds Excluding Credit and PAR                                     | 69,813   | 62,125  | 71,251  | 69,101  | 82,542  | 95,336  | 71,260  | 88,387    | 74,810  | 77,000   | 66,510   | 59,281  | 887,416   |
| 13 | Non-Billing and Non-Outage Calls Completed in IVR   | 17,338   | 21,188  | 23,000  | 19,356  | 17,555  | 4,937   | 19,175  | 21,428    | 19,786  | 16,175   | 21,378   | 15,916  | 217,232   |
| 14 | Billing Calls Handled by IVR  | 116,968  | 113,574 | 130,848 | 123,530 | 125,137 | 122,445 | 124,568 | 130,335   | 126,854 | 121,927  | 112,363  | 109,970 | 1,458,519 |
| 15 | Outage Calls Handled by IVR   | 9,227    | 11,701  | 20,109  | 14,252  | 19,659  | 89,814  | 40,661  | 26,314    | 20,688  | 23,675   | 13,807   | 13,138  | 303,045   |
| 16 | Outage Calls Offered to Agents  | 7,876    | 7,885   | 11,295  | 10,320  | 13,747  | 32,635  | 21,301  | 16,641    | 14,018  | 15,398   | 10,679   | 10,429  | 172,224   |
| 17 | Total Outage Calls  | 17,103   | 19,586  | 31,404  | 24,572  | 33,406  | 122,449 | 61,962  | 42,955    | 34,706  | 39,073   | 24,486   | 23,567  | 475,269   |
| 18 | All Calls Offered to Agents + Outage Calls Handled by IVR   | 112,290  | 109,079 | 135,929 | 140,985 | 154,326 | 242,190 | 176,252 | 169,430   | 152,752 | 149,383  | 115,677  | 105,375 | 1,763,668 |
| 19 | All Calls Answered by Agents within 20 seconds + Outage Calls Handled by IVR                                | 92,990   | 89,390  | 111,161 | 105,859 | 124,456 | 206,734 | 131,125 | 139,336   | 120,368 | 120,368  | 95,639   | 84,067  | 1,421,493 |
| 20 | Res and BSC Calls Offered to Agents + Outage Calls Handled by IVR   | 95,843   | 91,243  | 112,946 | 105,853 | 124,363 | 217,710 | 153,188 | 140,550   | 122,404 | 126,643  | 98,587   | 91,962  | 1,481,292 |
| 21 | Res and BSC Calls Answered by Agents within 20 seconds + Outage Calls Handled by IVR                        | 79,040   | 73,826  | 91,360  | 83,353  | 102,201 | 185,150 | 111,921 | 114,701   | 95,498  | 100,675  | 80,317   | 72,419  | 1,190,461 |
| 22 | All Calls Offered to Agents + Outage Calls Handled by IVR + Billing Calls Handled by IVR                    | 229,258  | 222,653 | 266,777 | 264,515 | 279,463 | 364,635 | 300,820 | 299,765   | 279,606 | 271,310  | 228,040  | 215,345 | 3,222,187 |
| 23 | All Calls Answered by Agents within 20 seconds + Outage Calls Handled by IVR + Billing Calls Handled by IVR | 209,958  | 202,964 | 242,009 | 229,389 | 249,593 | 329,179 | 255,693 | 269,671   | 247,222 | 242,295  | 208,002  | 194,037 | 2,880,012 |

|    |   | January | February | March   | April   | May     | June    | July    | August  | September | October | November | December | 2016      |
|----|---|---------|----------|---------|---------|---------|---------|---------|---------|-----------|---------|----------|----------|-----------|
| 24 | Res and BSC Calls Offered to Agents + Outage Calls Handled by IVR + Billing Calls Handled by IVR                    | 212,811 | 204,817  | 243,794 | 229,383 | 249,500 | 340,155 | 277,756 | 270,885 | 249,258   | 248,570 | 210,950  | 201,932  | 2,939,811 |
| 25 | Res and BSC Calls Answered by Agents within 20 seconds + Outage Calls Handled by IVR + Billing Calls Handled by IVR | 196,008 | 187,400  | 222,208 | 206,883 | 227,338 | 307,595 | 236,489 | 245,036 | 222,352   | 222,602 | 192,680  | 182,389  | 2,648,980 |
| 26 | Service Level All Calls (Residential, BSC, Credit and PAR and all calls handled by IVR)                             | 92.2%   | 91.9%    | 91.5%   | 87.6%   | 89.9%   | 90.4%   | 85.9%   | 90.6%   | 89.2%     | 89.9%   | 92.0%    | 90.8%    | 90.1%     |
| 27 | Service Level All Calls (Residential, BSC, Credit and PAR) and IVR Handled Outage Calls                             | 82.8%   | 81.9%    | 81.8%   | 75.1%   | 80.6%   | 85.4%   | 74.4%   | 82.2%   | 78.8%     | 80.6%   | 82.7%    | 79.8%    | 80.6%     |
| 28 | Service Level Res and BSC Calls, excluding Credit and calls (including outage and billing calls handled by IVR)     | 92.1%   | 91.5%    | 91.1%   | 90.2%   | 91.1%   | 90.4%   | 85.1%   | 90.5%   | 89.2%     | 89.6%   | 91.3%    | 90.3%    | 90.1%     |
| 29 | Service Level Res and BSC Calls, excluding credit calls (not including billing calls handled by IVR)                | 82.5%   | 80.9%    | 80.9%   | 78.7%   | 82.2%   | 85.0%   | 73.1%   | 81.6%   | 78.0%     | 79.5%   | 81.5%    | 78.7%    | 80.4%     |
| 30 | Service Level (agent only)  | 81.3%   | 79.8%    | 78.6%   | 72.3%   | 77.8%   | 76.7%   | 66.7%   | 79.0%   | 75.5%     | 76.9%   | 80.3%    | 76.9%    | 76.6%     |
| 31 | Average Speed of Answer - ASA (Agent only Residential, BSC, Credit and PAR)   | 13      | 14       | 15      | 34      | 16      | 27      | 28      | 15      | 21        | 18      | 13       | 18       | 21        |
|    | ASA Residential   | 12      | 15       | 17      | 20      | 16      | 32      | 33      | 16      | 25        | 21      | 14       | 20       | 21        |
|    | ASA BSC   | 38      | 24       | 17      | 17      | 8       | 13      | 12      | 11      | 9         | 13      | 9        | 17       | 16        |
|    | ASA Credit  | 10      | 8        | 9       | 92      | 20      | 7       | 10      | 8       | 10        | 7       | 6        | 8        | 20        |
|    | ASA PAR   | 10      | 11       | 11      | 16      | 16      | 19      | 18      | 20      | 31        | 28      | 15       | 17       | 19        |

Notes:

|    |  |
|----|--|
| 13 | IVR handled calls are answered immediately with an average speed to answer calls calculated using 0 seconds and includes non-billing and non-outage IVR calls that did not route to an agent. These calls may have been offered messaging that can answer many upfront questions, including but not limited to billing credits, scam information, call before you dig information, the hold time length, or will direct the caller to other resources. |
| 26 | The service level formula is: (All Calls Answered by Agents within 20 seconds + All IVR Handled calls) / (All Calls Offered to Agents + All IVR Handled Calls)   |
| 27 | The service level formula is: (All Calls Answered by Agents within 20 seconds + Outage Calls Handled by IVR) / (All Calls Offered to Agents + Outage Calls Handled by IVR)   |
|    | Agent call volumes includes calls offered and handled at the Residential call centers (Amarillo, Centre Pointe and Sky Park), at the Business call center at Sky Park and Denver, at the Credit call centers at Amarillo, Centre Pointe and Sky Park.  |
|    | Data on calls to agents is gathered from the phone switch (Avaya) based on skills.   |
|    | Data on IVR calls is gathered from the IVR reporting tool (Voice Portal).  |

**Minnesota Public Utilities Commission  
 Consumer Affairs Office  
 121-7th Place East  
 St. Paul, MN 55101-2147**

**7826.2000 REPORTING CUSTOMER COMPLAINTS**  
 For the period of January 01, 2017 to December 31, 2017

**Name of Utility:** Northern States Power Company  
**Address:** 3115 Centre Pointe Drive, Roseville, MN 55113  
**Prepared by:** Philip Johnson, Customer Advocate Analyst. Customer Care 715-737-3033

**A. The Number of Complaints Received**

| Customer Type            | Source              | Month     |           |           |           |           |           |           |           |           |           |           |           | 2017       |   |
|--------------------------|---------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|------------|---|
|                          |                     | Jan-17    | Feb-17    | Mar-17    | Apr-17    | May-17    | Jun-17    | Jul-17    | Aug-17    | Sep-17    | Oct-17    | Nov-17    | Dec-17    |            |   |
| Commercial               | Commission          | 0         | 0         | 1         | 1         | 1         | 0         | 0         | 1         | 1         | 0         | 0         | 0         | 0          | 5 |
|                          | Internal            | 0         | 3         | 2         | 0         | 2         | 1         | 1         | 0         | 0         | 1         | 1         | 1         | 12         |   |
|                          | OAG                 | 0         | 1         | 0         | 1         | 0         | 1         | 0         | 0         | 0         | 0         | 0         | 0         | 3          |   |
|                          | Officer             | 0         | 0         | 0         | 0         | 0         | 0         | 0         | 0         | 0         | 0         | 0         | 0         | 1          |   |
| <b>Commercial Total</b>  |                     | <b>0</b>  | <b>4</b>  | <b>3</b>  | <b>2</b>  | <b>3</b>  | <b>2</b>  | <b>1</b>  | <b>1</b>  | <b>1</b>  | <b>1</b>  | <b>1</b>  | <b>2</b>  | <b>21</b>  |   |
| Industrial               | Internal            | 0         | 0         | 0         | 0         | 0         | 0         | 0         | 0         | 1         | 0         | 0         | 0         | 1          |   |
| <b>Industrial Total</b>  |                     | <b>0</b>  | <b>0</b>  | <b>0</b>  | <b>0</b>  | <b>0</b>  | <b>0</b>  | <b>0</b>  | <b>0</b>  | <b>1</b>  | <b>0</b>  | <b>0</b>  | <b>0</b>  | <b>1</b>   |   |
| Residential              | BBB                 | 1         | 3         | 1         | 2         | 7         | 4         | 1         | 1         | 3         | 1         | 2         | 0         | 26         |   |
|                          | Commission          | 4         | 3         | 4         | 8         | 4         | 16        | 9         | 9         | 17        | 15        | 7         | 6         | 102        |   |
|                          | Commission/Internal | 0         | 0         | 0         | 0         | 0         | 0         | 1         | 0         | 0         | 0         | 2         | 1         | 4          |   |
|                          | Informational       | 0         | 0         | 0         | 0         | 2         | 0         | 0         | 1         | 0         | 0         | 0         | 1         | 4          |   |
|                          | Internal            | 1         | 11        | 17        | 18        | 14        | 21        | 12        | 20        | 15        | 14        | 7         | 3         | 153        |   |
|                          | OAG                 | 10        | 7         | 4         | 20        | 25        | 30        | 27        | 23        | 27        | 17        | 2         | 10        | 202        |   |
|                          | OAG/Officer         | 0         | 1         | 0         | 3         | 0         | 0         | 0         | 0         | 2         | 0         | 0         | 0         | 6          |   |
|                          | Officer             | 2         | 2         | 0         | 2         | 2         | 2         | 3         | 1         | 4         | 3         | 1         | 4         | 26         |   |
|                          | Referral            | 1         | 0         | 0         | 0         | 5         | 4         | 2         | 3         | 4         | 4         | 0         | 0         | 23         |   |
|                          | Commission/BBB      | 0         | 0         | 0         | 0         | 0         | 0         | 0         | 0         | 0         | 1         | 0         | 1         | 2          |   |
|                          | OAG/Informational   | 0         | 0         | 0         | 0         | 0         | 1         | 0         | 0         | 0         | 0         | 0         | 0         | 1          |   |
| OAG/BBB                  | 0                   | 0         | 0         | 0         | 0         | 1         | 0         | 0         | 0         | 0         | 0         | 0         | 1         |            |   |
| <b>Residential Total</b> |                     | <b>19</b> | <b>27</b> | <b>26</b> | <b>53</b> | <b>59</b> | <b>79</b> | <b>55</b> | <b>58</b> | <b>72</b> | <b>55</b> | <b>21</b> | <b>26</b> | <b>550</b> |   |
| <b>Grand Total</b>       |                     | <b>19</b> | <b>31</b> | <b>29</b> | <b>55</b> | <b>62</b> | <b>81</b> | <b>56</b> | <b>59</b> | <b>74</b> | <b>56</b> | <b>22</b> | <b>28</b> | <b>572</b> |   |

**Minnesota Public Utilities Commission  
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**7826.2000 REPORTING CUSTOMER COMPLAINTS**  
 For the period of January 01, 2017 to December 31, 2017

**Name of Utility:** Northern States Power Company  
**Address:** 3115 Centre Pointe Drive, Roseville, MN 55113  
**Prepared by:** Philip Johnson, Customer Advocate Analyst. Customer Care 715-737-3033

| B. The Number and Percentage of Complaints Alleging: |                              |           |           |           |           |           |           |           |           |           |           |           |           |            |
|--|------------------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|------------|
|  |                              | Month     |           |           |           |           |           |           |           |           |           |           |           |            |
| Customer Type  | MPUC                         | Jan-17    | Feb-17    | Mar-17    | Apr-17    | May-17    | Jun-17    | Jul-17    | Aug-17    | Sep-17    | Oct-17    | Nov-17    | Dec-17    | 2017       |
| Commercial   | Billing Error                | 0         | 1         | 0         | 0         | 1         | 0         | 1         | 0         | 0         | 1         | 0         | 0         | 4          |
|  | High Bill**                  | 0         | 1         | 0         | 0         | 0         | 0         | 0         | 0         | 0         | 0         | 0         | 0         | 1          |
|  | Inadequate Service           | 0         | 2         | 3         | 2         | 1         | 2         | 0         | 0         | 1         | 0         | 1         | 2         | 14         |
|  | Service Extension Interval   | 0         | 0         | 0         | 0         | 1         | 0         | 0         | 1         | 0         | 0         | 0         | 0         | 2          |
| <b>Commercial Total</b>                              |                              | <b>0</b>  | <b>4</b>  | <b>3</b>  | <b>2</b>  | <b>3</b>  | <b>2</b>  | <b>1</b>  | <b>1</b>  | <b>1</b>  | <b>1</b>  | <b>1</b>  | <b>2</b>  | <b>21</b>  |
| Industrial   | Billing Error                | 0         | 0         | 0         | 0         | 0         | 0         | 0         | 0         | 1         | 0         | 0         | 0         | 1          |
| <b>Industrial Total</b>                              |                              | <b>0</b>  | <b>0</b>  | <b>0</b>  | <b>0</b>  | <b>0</b>  | <b>0</b>  | <b>0</b>  | <b>0</b>  | <b>1</b>  | <b>0</b>  | <b>0</b>  | <b>0</b>  | <b>1</b>   |
| Residential  | Billing Error                | 2         | 2         | 2         | 4         | 7         | 6         | 4         | 4         | 9         | 9         | 1         | 5         | 55         |
|  | High Bill**                  | 1         | 3         | 1         | 1         | 2         | 0         | 1         | 1         | 3         | 1         | 3         | 0         | 17         |
|  | Inaccurate Metering          | 1         | 3         | 5         | 5         | 0         | 2         | 1         | 2         | 3         | 2         | 2         | 3         | 29         |
|  | Inadequate Service           | 11        | 15        | 14        | 33        | 33        | 43        | 28        | 28        | 31        | 28        | 11        | 17        | 292        |
|  | Wrongful Disconnect          | 3         | 3         | 3         | 9         | 14        | 24        | 19        | 23        | 26        | 13        | 2         | 1         | 140        |
|  | Service Extension Interval   | 1         | 0         | 0         | 1         | 2         | 0         | 0         | 0         | 0         | 0         | 2         | 0         | 6          |
|  | Service Restoration Interval | 0         | 1         | 1         | 0         | 1         | 4         | 2         | 0         | 0         | 2         | 0         | 0         | 11         |
| <b>Residential Total</b>                             |                              | <b>19</b> | <b>27</b> | <b>26</b> | <b>53</b> | <b>59</b> | <b>79</b> | <b>55</b> | <b>58</b> | <b>72</b> | <b>55</b> | <b>21</b> | <b>26</b> | <b>550</b> |
| <b>Government Total</b>                              |                              | <b>0</b>  | <b>0</b>  | <b>0</b>  | <b>0</b>  | <b>0</b>  | <b>0</b>  | <b>0</b>  | <b>0</b>  | <b>0</b>  | <b>0</b>  | <b>0</b>  | <b>0</b>  | <b>0</b>   |
| <b>Totals</b>  | Billing Error                | 2         | 3         | 2         | 4         | 8         | 6         | 5         | 4         | 10        | 10        | 1         | 5         | 60         |
|  | High Bill**                  | 1         | 4         | 1         | 1         | 2         | 0         | 1         | 1         | 3         | 1         | 3         | 0         | 18         |
|  | Inaccurate Metering          | 1         | 3         | 5         | 5         | 0         | 2         | 1         | 2         | 3         | 2         | 2         | 3         | 29         |
|  | Inadequate Service           | 11        | 17        | 17        | 35        | 34        | 45        | 28        | 28        | 32        | 28        | 12        | 19        | 306        |
|  | Wrongful Disconnect          | 3         | 3         | 3         | 9         | 14        | 24        | 19        | 23        | 26        | 13        | 2         | 1         | 140        |
|  | Service Extension Interval   | 1         | 0         | 0         | 1         | 3         | 0         | 0         | 1         | 0         | 0         | 2         | 0         | 8          |
|  | Service Restoration Interval | 0         | 1         | 1         | 0         | 1         | 4         | 2         | 0         | 0         | 2         | 0         | 0         | 11         |
| <b>Grand Total</b>                                   |                              | <b>19</b> | <b>31</b> | <b>29</b> | <b>55</b> | <b>62</b> | <b>81</b> | <b>56</b> | <b>59</b> | <b>74</b> | <b>56</b> | <b>22</b> | <b>28</b> | <b>572</b> |

| Percentage    |                              |        |        |        |        |        |        |        |        |        |        |        |        |        |
|---------------|------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Customer Type | Complaint Type               | Jan-17 | Feb-17 | Mar-17 | Apr-17 | May-17 | Jun-17 | Jul-17 | Aug-17 | Sep-17 | Oct-17 | Nov-17 | Dec-17 | 2017   |
| Commercial    | Billing Error                | 0.0%   | 25.0%  | 0.0%   | 0.0%   | 33.3%  | 0.0%   | 100.0% | 0.0%   | 0.0%   | 100.0% | 0.0%   | 0.0%   | 19.0%  |
|               | High Bill**                  | 0.0%   | 25.0%  | 0.0%   | 0.0%   | 0.0%   | 0.0%   | 0.0%   | 0.0%   | 0.0%   | 0.0%   | 0.0%   | 0.0%   | 4.8%   |
|               | Inadequate Service           | 0.0%   | 50.0%  | 100.0% | 100.0% | 33.3%  | 100.0% | 0.0%   | 0.0%   | 100.0% | 0.0%   | 100.0% | 100.0% | 66.7%  |
|               | Service Extension Interval   | 0.0%   | 0.0%   | 0.0%   | 0.0%   | 33.3%  | 0.0%   | 0.0%   | 100.0% | 0.0%   | 0.0%   | 0.0%   | 0.0%   | 9.5%   |
| Industrial    | Billing Error                | 0.0%   | 0.0%   | 0.0%   | 0.0%   | 0.0%   | 0.0%   | 0.0%   | 0.0%   | 100.0% | 0.0%   | 0.0%   | 0.0%   | 100.0% |
| Residential   | Billing Error                | 10.5%  | 7.4%   | 7.7%   | 7.5%   | 11.9%  | 7.6%   | 7.3%   | 6.9%   | 12.5%  | 16.4%  | 4.8%   | 19.2%  | 10.0%  |
|               | High Bill**                  | 5.3%   | 11.1%  | 3.8%   | 1.9%   | 3.4%   | 0.0%   | 1.8%   | 1.7%   | 4.2%   | 1.8%   | 14.3%  | 0.0%   | 3.1%   |
|               | Inaccurate Metering          | 5.3%   | 11.1%  | 19.2%  | 9.4%   | 0.0%   | 2.5%   | 1.8%   | 3.4%   | 4.2%   | 3.6%   | 9.5%   | 11.5%  | 5.3%   |
|               | Inadequate Service           | 57.9%  | 55.6%  | 53.8%  | 62.3%  | 55.9%  | 54.4%  | 50.9%  | 48.3%  | 43.1%  | 50.9%  | 52.4%  | 65.4%  | 53.1%  |
|               | Wrongful Disconnect          | 15.8%  | 11.1%  | 11.5%  | 17.0%  | 23.7%  | 30.4%  | 34.5%  | 39.7%  | 36.1%  | 23.6%  | 9.5%   | 3.8%   | 25.5%  |
|               | Service Extension Interval   | 5.3%   | 0.0%   | 0.0%   | 1.9%   | 3.4%   | 0.0%   | 0.0%   | 0.0%   | 0.0%   | 0.0%   | 9.5%   | 0.0%   | 1.1%   |
|               | Service Restoration Interval | 0.0%   | 3.7%   | 3.8%   | 0.0%   | 1.7%   | 5.1%   | 3.6%   | 0.0%   | 0.0%   | 3.6%   | 0.0%   | 0.0%   | 2.0%   |
| <b>Total</b>  | Billing Error                | 10.5%  | 9.7%   | 6.9%   | 7.3%   | 12.9%  | 7.4%   | 8.9%   | 6.8%   | 13.5%  | 17.9%  | 4.5%   | 17.9%  | 10.5%  |
|               | High Bill**                  | 5.3%   | 12.9%  | 3.4%   | 1.8%   | 3.2%   | 0.0%   | 1.8%   | 1.7%   | 4.1%   | 1.8%   | 13.6%  | 0.0%   | 3.1%   |
|               | Inaccurate Metering          | 5.3%   | 9.7%   | 17.2%  | 9.1%   | 0.0%   | 2.5%   | 1.8%   | 3.4%   | 4.1%   | 3.6%   | 9.1%   | 10.7%  | 5.1%   |
|               | Inadequate Service           | 57.9%  | 54.8%  | 58.6%  | 63.6%  | 54.8%  | 55.6%  | 50.0%  | 47.5%  | 43.2%  | 50.0%  | 54.5%  | 67.9%  | 53.5%  |
|               | Wrongful Disconnect          | 15.8%  | 9.7%   | 10.3%  | 16.4%  | 22.6%  | 29.6%  | 33.9%  | 39.0%  | 35.1%  | 23.2%  | 9.1%   | 3.6%   | 24.5%  |
|               | Service Extension Interval   | 5.3%   | 0.0%   | 0.0%   | 1.8%   | 4.8%   | 0.0%   | 0.0%   | 1.7%   | 0.0%   | 0.0%   | 9.1%   | 0.0%   | 1.4%   |
|               | Service Restoration Interval | 0.0%   | 3.2%   | 3.4%   | 0.0%   | 1.6%   | 4.9%   | 3.6%   | 0.0%   | 0.0%   | 3.6%   | 0.0%   | 0.0%   | 1.9%   |

**Minnesota Public Utilities Commission  
 Consumer Affairs Office  
 121-7th Place East  
 St. Paul, MN 55101-2147**

**7826.2000 REPORTING CUSTOMER COMPLAINTS**  
 For the period of January 01, 2017 to December 31, 2017.

**Name of Utility:** Northern States Power Company  
**Address:** 3115 Centre Pointe Drive, Roseville, MN 55113  
**Prepared by:** Philip Johnson, Customer Advocate Analyst, Customer Care 715-737-3033

**C. The Number and Percentage of Complaints Resolved upon:**

| Customer Type            | DTR Status           | Month  |        |        |        |        |        |        |        |        |        |        |        | 2017   |
|--------------------------|----------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
|                          |                      | Jan-17 | Feb-17 | Mar-17 | Apr-17 | May-17 | Jun-17 | Jul-17 | Aug-17 | Sep-17 | Oct-17 | Nov-17 | Dec-17 |        |
| Commercial               | Immediate            | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 1      | 0      | 1      |
|                          | 10 Days or Less      | 0      | 4      | 2      | 2      | 3      | 2      | 1      | 1      | 1      | 1      | 0      | 2      | 19     |
|                          | Greater Than 10 Days | 0      | 0      | 1      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 1      |
| <b>Commercial Total</b>  |                      | 0      | 4      | 3      | 2      | 3      | 2      | 1      | 1      | 1      | 1      | 1      | 2      | 21     |
| Industrial               | 10 Days or Less      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 1      | 0      | 0      | 0      | 1      |
| <b>Industrial Total</b>  |                      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 1      | 0      | 0      | 0      | 1      |
| Residential              | Immediate            | 1      | 2      | 4      | 9      | 10     | 22     | 12     | 11     | 17     | 6      | 4      | 4      | 102    |
|                          | 10 Days or Less      | 18     | 25     | 21     | 44     | 49     | 57     | 42     | 46     | 55     | 49     | 17     | 22     | 445    |
|                          | Greater Than 10 Days | 0      | 0      | 1      | 0      | 0      | 0      | 1      | 1      | 0      | 0      | 0      | 0      | 3      |
| <b>Residential Total</b> |                      | 19     | 27     | 26     | 53     | 59     | 79     | 55     | 58     | 72     | 55     | 21     | 26     | 550    |
| Government               | 10 Days or Less      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      |
| <b>Government Total</b>  |                      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      |
| <b>Grand Total</b>       | Immediate            | 1      | 2      | 4      | 9      | 10     | 22     | 12     | 11     | 17     | 6      | 5      | 4      | 103    |
|                          | 10 Days or Less      | 18     | 29     | 23     | 46     | 52     | 59     | 43     | 47     | 57     | 50     | 17     | 24     | 465    |
|                          | Greater Than 10 Days | 0      | 0      | 2      | 0      | 0      | 0      | 1      | 1      | 0      | 0      | 0      | 0      | 4      |
| <b>Grand Total</b>       |                      | 19     | 31     | 29     | 55     | 62     | 81     | 56     | 59     | 74     | 56     | 22     | 28     | 572    |
| Commercial               | Immediate            | 0.0%   | 0.0%   | 0.0%   | 0.0%   | 0.0%   | 0.0%   | 0.0%   | 0.0%   | 0.0%   | 0.0%   | 100.0% | 0.0%   | 4.8%   |
|                          | 10 Days or Less      | 0.0%   | 100.0% | 66.7%  | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 0.0%   | 100.0% | 90.5%  |
|                          | Greater Than 10 Days | 0.0%   | 0.0%   | 33.3%  | 0.0%   | 0.0%   | 0.0%   | 0.0%   | 0.0%   | 0.0%   | 0.0%   | 0.0%   | 0.0%   | 4.8%   |
| Industrial               | 10 Days or Less      | 0.0%   | 0.0%   | 0.0%   | 0.0%   | 0.0%   | 0.0%   | 0.0%   | 0.0%   | 100.0% | 0.0%   | 0.0%   | 0.0%   | 100.0% |
| Residential              | Immediate            | 5.3%   | 7.4%   | 15.4%  | 17.0%  | 16.9%  | 27.8%  | 21.8%  | 19.0%  | 23.6%  | 10.9%  | 19.0%  | 15.4%  | 18.5%  |
|                          | 10 Days or Less      | 94.7%  | 92.6%  | 80.8%  | 83.0%  | 83.1%  | 72.2%  | 76.4%  | 79.3%  | 76.4%  | 89.1%  | 81.0%  | 84.6%  | 80.9%  |
|                          | Greater Than 10 Days | 0.0%   | 0.0%   | 3.8%   | 0.0%   | 0.0%   | 0.0%   | 1.8%   | 1.7%   | 0.0%   | 0.0%   | 0.0%   | 0.0%   | 0.5%   |
| Government               | 10 Days or Less      | 0.0%   | 0.0%   | 0.0%   | 0.0%   | 0.0%   | 0.0%   | 0.0%   | 0.0%   | 0.0%   | 0.0%   | 0.0%   | 0.0%   | 0.0%   |
| <b>Grand Total</b>       | Immediate            | 5.3%   | 6.5%   | 13.8%  | 16.4%  | 16.1%  | 27.2%  | 21.4%  | 18.6%  | 23.0%  | 10.7%  | 22.7%  | 14.3%  | 18.0%  |
|                          | 10 Days or Less      | 94.7%  | 93.5%  | 79.3%  | 83.6%  | 83.9%  | 72.8%  | 76.8%  | 79.7%  | 77.0%  | 89.3%  | 81.0%  | 85.7%  | 81.3%  |
|                          | Greater Than 10 Days | 0.0%   | 0.0%   | 6.9%   | 0.0%   | 0.0%   | 0.0%   | 1.8%   | 1.7%   | 0.0%   | 0.0%   | 0.0%   | 0.0%   | 0.7%   |

**D. The Number and Percentage of Complaints Resolved by taking the following actions:**

| Customer Type            | MN Action                               | Month  |        |        |        |        |        |        |        |        |        |        |        | 2017   |
|--------------------------|---|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
|                          |   | Jan-17 | Feb-17 | Mar-17 | Apr-17 | May-17 | Jun-17 | Jul-17 | Aug-17 | Sep-17 | Oct-17 | Nov-17 | Dec-17 |        |
| Commercial               | Action not in Control of Utility        | 0      | 0      | 0      | 0      | 0      | 1      | 0      | 0      | 0      | 0      | 0      | 0      | 1      |
|                          | Refuse Action Cust Requested            | 0      | 0      | 1      | 1      | 1      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 3      |
|                          | Take Action Cust and Utility Agree Upon | 0      | 3      | 1      | 1      | 1      | 0      | 0      | 1      | 0      | 0      | 1      | 1      | 9      |
|                          | Take Action Cust Request                | 0      | 1      | 1      | 0      | 1      | 1      | 1      | 0      | 1      | 1      | 0      | 1      | 8      |
| <b>Commercial Total</b>  |   | 0      | 4      | 3      | 2      | 3      | 2      | 1      | 1      | 1      | 1      | 1      | 2      | 21     |
| Industrial               | Take Action Cust and Utility Agree Upon | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 1      | 0      | 0      | 0      | 1      |
| <b>Industrial Total</b>  |   | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 1      | 0      | 0      | 0      | 1      |
| Residential              | Action not in Control of Utility        | 0      | 3      | 3      | 3      | 6      | 7      | 4      | 4      | 10     | 6      | 5      | 5      | 56     |
|                          | Refuse Action Cust Requested            | 2      | 3      | 9      | 14     | 6      | 9      | 4      | 9      | 15     | 5      | 3      | 6      | 95     |
|                          | Take Action Cust and Utility Agree Upon | 7      | 7      | 5      | 23     | 28     | 45     | 36     | 32     | 36     | 27     | 8      | 8      | 262    |
|                          | Take Action Cust Request                | 10     | 14     | 9      | 13     | 19     | 18     | 11     | 13     | 11     | 17     | 5      | 7      | 147    |
| <b>Residential Total</b> |   | 19     | 27     | 26     | 53     | 59     | 79     | 55     | 58     | 72     | 55     | 21     | 26     | 550    |
| Government               | Take Action Cust and Utility Agree Upon | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      |
| <b>Government Total</b>  |   | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      |
| <b>Grand Total</b>       | Action not in Control of Utility        | 0      | 3      | 3      | 3      | 6      | 8      | 4      | 4      | 10     | 6      | 5      | 5      | 57     |
|                          | Refuse Action Cust Requested            | 2      | 3      | 10     | 15     | 7      | 9      | 4      | 9      | 15     | 5      | 3      | 6      | 88     |
|                          | Take Action Cust and Utility Agree Upon | 7      | 10     | 6      | 24     | 29     | 45     | 36     | 33     | 37     | 27     | 9      | 9      | 272    |
|                          | Take Action Cust Request                | 10     | 15     | 10     | 13     | 20     | 19     | 12     | 13     | 12     | 18     | 5      | 8      | 155    |
| <b>Grand Total</b>       |   | 19     | 31     | 29     | 55     | 62     | 81     | 56     | 59     | 74     | 56     | 22     | 28     | 572    |
| Commercial               | Action not in Control of Utility        | 0.0%   | 0.0%   | 0.0%   | 0.0%   | 0.0%   | 50.0%  | 0.0%   | 0.0%   | 0.0%   | 0.0%   | 0.0%   | 0.0%   | 4.8%   |
|                          | Refuse Action Cust Requested            | 0.0%   | 0.0%   | 33.3%  | 50.0%  | 33.3%  | 0.0%   | 0.0%   | 0.0%   | 0.0%   | 0.0%   | 0.0%   | 0.0%   | 14.3%  |
|                          | Take Action Cust and Utility Agree Upon | 0.0%   | 75.0%  | 33.3%  | 50.0%  | 33.3%  | 0.0%   | 0.0%   | 100.0% | 0.0%   | 0.0%   | 100.0% | 50.0%  | 42.9%  |
|                          | Take Action Cust Request                | 0.0%   | 25.0%  | 33.3%  | 0.0%   | 33.3%  | 50.0%  | 100.0% | 0.0%   | 100.0% | 100.0% | 0.0%   | 50.0%  | 38.1%  |
| Industrial               | Take Action Cust and Utility Agree Upon | 0.0%   | 0.0%   | 0.0%   | 0.0%   | 0.0%   | 0.0%   | 0.0%   | 0.0%   | 100.0% | 0.0%   | 0.0%   | 0.0%   | 100.0% |
| Residential              | Action not in Control of Utility        | 0.0%   | 11.1%  | 11.5%  | 5.7%   | 10.2%  | 8.9%   | 7.3%   | 6.9%   | 13.9%  | 10.9%  | 23.8%  | 19.2%  | 10.2%  |
|                          | Refuse Action Cust Requested            | 10.5%  | 11.1%  | 34.6%  | 26.4%  | 10.2%  | 11.4%  | 7.3%   | 15.5%  | 20.8%  | 9.1%   | 14.3%  | 23.1%  | 15.5%  |
|                          | Take Action Cust and Utility Agree Upon | 36.8%  | 25.9%  | 19.2%  | 43.4%  | 47.5%  | 57.0%  | 65.5%  | 55.2%  | 50.0%  | 49.1%  | 38.1%  | 30.8%  | 47.6%  |
|                          | Take Action Cust Request                | 52.6%  | 51.9%  | 34.6%  | 24.5%  | 32.2%  | 22.8%  | 20.0%  | 22.4%  | 15.3%  | 30.9%  | 23.8%  | 26.9%  | 26.7%  |
| Government               | Take Action Cust and Utility Agree Upon | 0.0%   | 0.0%   | 0.0%   | 0.0%   | 0.0%   | 0.0%   | 0.0%   | 0.0%   | 0.0%   | 0.0%   | 0.0%   | 0.0%   | 0.0%   |
| <b>Total</b>             | Action not in Control of Utility        | 0.0%   | 9.7%   | 10.3%  | 5.5%   | 9.7%   | 9.9%   | 7.1%   | 6.8%   | 13.5%  | 10.7%  | 22.7%  | 17.9%  | 10.0%  |
|                          | Refuse Action Cust Requested            | 10.5%  | 9.7%   | 34.5%  | 27.3%  | 11.3%  | 11.1%  | 7.1%   | 15.3%  | 20.3%  | 8.9%   | 13.6%  | 21.4%  | 15.4%  |
|                          | Take Action Cust and Utility Agree Upon | 36.8%  | 32.3%  | 20.7%  | 43.6%  | 46.8%  | 55.6%  | 64.3%  | 55.9%  | 50.0%  | 48.2%  | 40.9%  | 32.1%  | 47.6%  |
|                          | Take Action Cust Request                | 52.6%  | 48.4%  | 34.5%  | 23.6%  | 32.3%  | 23.5%  | 21.4%  | 22.0%  | 16.2%  | 32.1%  | 22.7%  | 28.6%  | 27.3%  |

**Minnesota Public Utilities Commission  
 Consumer Affairs Office  
 121-7th Place East  
 St. Paul, MN 55101-2147**

**7826.2000 REPORTING CUSTOMER COMPLAINTS**  
 For the period of January 01, 2017 to December 31, 2017

**Name of Utility:** Northern States Power Company  
**Address:** 3115 Centre Pointe Drive, Roseville, MN 55113  
**Prepared by:** Philip Johnson, Customer Advocate Analyst. Customer Care 715-737-3033

**E. The Number of Complaints forwarded to the Utility by the Commission's Consumer Affairs Office for Further Investigation and Action**

| Customer Type            | Source              | Month    |          |          |          |          |           |           |           |           |           |          |          | 2017       |          |
|--------------------------|---------------------|----------|----------|----------|----------|----------|-----------|-----------|-----------|-----------|-----------|----------|----------|------------|----------|
|                          |                     | Jan-17   | Feb-17   | Mar-17   | Apr-17   | May-17   | Jun-17    | Jul-17    | Aug-17    | Sep-17    | Oct-17    | Nov-17   | Dec-17   |            |          |
| Commercial               | Commission          | 0        | 0        | 1        | 1        | 1        | 0         | 0         | 1         | 1         | 0         | 0        | 0        | 0          | 5        |
| <b>Commercial Total</b>  |                     | <b>0</b> | <b>0</b> | <b>1</b> | <b>1</b> | <b>1</b> | <b>0</b>  | <b>0</b>  | <b>1</b>  | <b>1</b>  | <b>0</b>  | <b>0</b> | <b>0</b> | <b>0</b>   | <b>5</b> |
| <b>Industrial Total</b>  |                     | <b>0</b> | <b>0</b> | <b>0</b> | <b>0</b> | <b>0</b> | <b>0</b>  | <b>0</b>  | <b>0</b>  | <b>0</b>  | <b>0</b>  | <b>0</b> | <b>0</b> | <b>0</b>   | <b>0</b> |
| Residential              | Commission          | 4        | 3        | 4        | 8        | 4        | 16        | 9         | 9         | 17        | 15        | 7        | 6        | 102        |          |
|                          | Commission/Internal | 0        | 0        | 0        | 0        | 0        | 0         | 1         | 0         | 0         | 0         | 2        | 1        | 4          |          |
|                          | Commission/BBB      | 0        | 0        | 0        | 0        | 0        | 0         | 0         | 0         | 0         | 1         | 0        | 1        | 2          |          |
| <b>Residential Total</b> |                     | <b>4</b> | <b>3</b> | <b>4</b> | <b>8</b> | <b>4</b> | <b>16</b> | <b>10</b> | <b>9</b>  | <b>17</b> | <b>16</b> | <b>9</b> | <b>8</b> | <b>108</b> |          |
| <b>Government Total</b>  |                     | <b>0</b> | <b>0</b> | <b>0</b> | <b>0</b> | <b>0</b> | <b>0</b>  | <b>0</b>  | <b>0</b>  | <b>0</b>  | <b>0</b>  | <b>0</b> | <b>0</b> | <b>0</b>   |          |
| <b>Grand Total</b>       |                     | <b>4</b> | <b>3</b> | <b>5</b> | <b>9</b> | <b>5</b> | <b>16</b> | <b>10</b> | <b>10</b> | <b>18</b> | <b>16</b> | <b>9</b> | <b>8</b> | <b>113</b> |          |

**Customer Complaint Report  
 January, 2017**

|                                     | Agree         | Compromise   | Demonstrate  | Refuse       | Total         | %      | Turnaround Days for Closing a Complaint |                |                     |
|-------------------------------------|---------------|--------------|--------------|--------------|---------------|--------|---|----------------|---------------------|
|                                     |               |              |              |              |               |        | Initial Inquiry                         | within 10 days | Longer than 10 days |
| <b>Commercial</b>                   |               |              |              |              |               |        |   |                |                     |
| Billing errors                      | 1,810         | 10           | 10           | 1            | 1,831         | 71.80% | 1,820                                   | 11             | 0                   |
| Inaccurate Metering                 | 1             | 0            | 0            | 0            | 1             | 0.04%  | 1                                       | 0              | 0                   |
| Wrongful Disconnect                 | 204           | 0            | 1            | 0            | 205           | 8.04%  | 204                                     | 1              | 0                   |
| High Bill*                          | 99            | 1            | 1            | 0            | 101           | 3.96%  | 99                                      | 2              | 0                   |
| Inadequate Service                  | 301           | 1            | 1            | 0            | 303           | 11.88% | 302                                     | 1              | 0                   |
| Service Extension                   | 0             | 0            | 0            | 0            | 0             | 0.00%  | 0                                       | 0              | 0                   |
| Service Restoration                 | 107           | 1            | 1            | 0            | 109           | 4.27%  | 108                                     | 1              | 0                   |
| Complaint                           | 0             | 0            | 0            | 0            | 0             | 0.00%  | 0                                       | 0              | 0                   |
| <b>Total Commercial</b>             | <b>2,522</b>  | <b>13</b>    | <b>14</b>    | <b>1</b>     | <b>2,550</b>  |        | <b>2,534</b>                            | <b>16</b>      | <b>0</b>            |
| <b>Total Commercial Percentage</b>  | <b>98.90%</b> | <b>0.51%</b> | <b>0.55%</b> | <b>0.04%</b> |               |        |   |                |                     |
| <b>Industrial</b>                   |               |              |              |              |               |        |   |                |                     |
| Billing errors                      | 295           | 2            | 1            | 0            | 298           | 68.35% | 296                                     | 2              | 0                   |
| Inaccurate Metering                 | 1             | 0            | 0            | 0            | 1             | 0.23%  | 1                                       | 0              | 0                   |
| Wrongful Disconnect                 | 23            | 0            | 0            | 0            | 23            | 5.28%  | 23                                      | 0              | 0                   |
| High Bill*                          | 9             | 0            | 0            | 0            | 9             | 2.06%  | 9                                       | 0              | 0                   |
| Inadequate Service                  | 55            | 0            | 0            | 0            | 55            | 12.61% | 55                                      | 0              | 0                   |
| Service Extension                   | 0             | 0            | 0            | 0            | 0             | 0.00%  | 0                                       | 0              | 0                   |
| Service Restoration                 | 50            | 0            | 0            | 0            | 50            | 11.47% | 50                                      | 0              | 0                   |
| <b>Total Industrial</b>             | <b>433</b>    | <b>2</b>     | <b>1</b>     | <b>0</b>     | <b>436</b>    |        | <b>434</b>                              | <b>2</b>       | <b>0</b>            |
| <b>Total Industrial Percentage</b>  | <b>99.31%</b> | <b>0.46%</b> | <b>0.23%</b> | <b>0.00%</b> |               |        |   |                |                     |
| <b>Residential</b>                  |               |              |              |              |               |        |   |                |                     |
| Billing errors                      | 22,952        | 271          | 420          | 5            | 23,648        | 50.46% | 23,640                                  | 8              | 0                   |
| Inaccurate Metering                 | 24            | 0            | 0            | 0            | 24            | 0.05%  | 24                                      | 0              | 0                   |
| Wrongful Disconnect                 | 3,535         | 249          | 198          | 0            | 3,982         | 8.50%  | 3,982                                   | 0              | 0                   |
| High Bill*                          | 1,867         | 9            | 56           | 0            | 1,932         | 4.12%  | 1,931                                   | 1              | 0                   |
| Inadequate Service                  | 15,938        | 285          | 310          | 2            | 16,535        | 35.28% | 16,531                                  | 4              | 0                   |
| Service Extension                   | 3             | 1            | 0            | 0            | 4             | 0.01%  | 4                                       | 0              | 0                   |
| Service Restoration                 | 721           | 4            | 13           | 1            | 739           | 1.58%  | 739                                     | 0              | 0                   |
| MR-Special Call Cntr                | 0             | 0            | 0            | 0            | 0             | 0.00%  | 0                                       | 0              | 0                   |
| Complaint                           | 2             | 0            | 0            | 0            | 2             | 0.00%  | 2                                       | 0              | 0                   |
| <b>Total Residential</b>            | <b>45,042</b> | <b>819</b>   | <b>997</b>   | <b>8</b>     | <b>46,866</b> |        | <b>46,853</b>                           | <b>13</b>      | <b>0</b>            |
| <b>Total Residential Percentage</b> | <b>96.11%</b> | <b>1.75%</b> | <b>2.13%</b> | <b>0.02%</b> |               |        |   |                |                     |
| <b>Total State of Minnesota</b>     | <b>47,997</b> | <b>834</b>   | <b>1,012</b> | <b>9</b>     | <b>49,852</b> |        | <b>49,821</b>                           | <b>31</b>      | <b>0</b>            |
| <b>Total ST of MN Percentage</b>    | <b>96.28%</b> | <b>1.67%</b> | <b>2.03%</b> | <b>0.02%</b> |               |        |   |                |                     |

\* Includes Decoupling Complaints which are reported annually in separate filing on February 1st, Docket No. E002/GR-13-868.

**Customer Complaint Report  
 February, 2017**

|                                     | Agree         | Compromise   | Demonstrate  | Refuse       | Total         | %      | Turnaround Days for Closing a Complaint |                |                     |
|-------------------------------------|---------------|--------------|--------------|--------------|---------------|--------|---|----------------|---------------------|
|                                     |               |              |              |              |               |        | Initial Inquiry                         | within 10 days | Longer than 10 days |
| <b>Commercial</b>                   |               |              |              |              |               |        |   |                |                     |
| Billing errors                      | 1,998         | 7            | 3            | 0            | 2,008         | 70.78% | 2,003                                   | 5              | 0                   |
| Inaccurate Metering                 | 4             | 0            | 0            | 0            | 4             | 0.14%  | 4                                       | 0              | 0                   |
| Wrongful Disconnect                 | 221           | 3            | 0            | 0            | 224           | 7.90%  | 224                                     | 0              | 0                   |
| High Bill*                          | 57            | 1            | 2            | 0            | 60            | 2.11%  | 60                                      | 0              | 0                   |
| Inadequate Service                  | 371           | 3            | 0            | 0            | 374           | 13.18% | 371                                     | 3              | 0                   |
| Service Extension                   | 0             | 0            | 0            | 0            | 0             | 0.00%  | 0                                       | 0              | 0                   |
| Service Restoration                 | 164           | 2            | 1            | 0            | 167           | 5.89%  | 167                                     | 0              | 0                   |
| Complaint                           | 0             | 0            | 0            | 0            | 0             | 0.00%  | 0                                       | 0              | 0                   |
| <b>Total Commercial</b>             | <b>2,815</b>  | <b>16</b>    | <b>6</b>     | <b>0</b>     | <b>2,837</b>  |        | <b>2,829</b>                            | <b>8</b>       | <b>0</b>            |
| <b>Total Commercial Percentage</b>  | <b>99.22%</b> | <b>0.56%</b> | <b>0.21%</b> | <b>0.00%</b> |               |        |   |                |                     |
| <b>Industrial</b>                   |               |              |              |              |               |        |   |                |                     |
| Billing errors                      | 309           | 1            | 0            | 0            | 310           | 66.67% | 307                                     | 3              | 0                   |
| Inaccurate Metering                 | 0             | 0            | 0            | 0            | 0             | 0.00%  | 0                                       | 0              | 0                   |
| Wrongful Disconnect                 | 30            | 0            | 0            | 0            | 30            | 6.45%  | 30                                      | 0              | 0                   |
| High Bill*                          | 5             | 0            | 0            | 0            | 5             | 1.08%  | 5                                       | 0              | 0                   |
| Inadequate Service                  | 68            | 0            | 2            | 0            | 70            | 15.05% | 70                                      | 0              | 0                   |
| Service Extension                   | 0             | 0            | 0            | 0            | 0             | 0.00%  | 0                                       | 0              | 0                   |
| Service Restoration                 | 49            | 0            | 1            | 0            | 50            | 10.75% | 50                                      | 0              | 0                   |
| <b>Total Industrial</b>             | <b>461</b>    | <b>1</b>     | <b>3</b>     | <b>0</b>     | <b>465</b>    |        | <b>462</b>                              | <b>3</b>       | <b>0</b>            |
| <b>Total Industrial Percentage</b>  | <b>99.14%</b> | <b>0.22%</b> | <b>0.65%</b> | <b>0.00%</b> |               |        |   |                |                     |
| <b>Residential</b>                  |               |              |              |              |               |        |   |                |                     |
| Billing errors                      | 20,462        | 320          | 417          | 6            | 21,205        | 49.66% | 21,192                                  | 13             | 0                   |
| Inaccurate Metering                 | 18            | 0            | 1            | 0            | 19            | 0.04%  | 19                                      | 0              | 0                   |
| Wrongful Disconnect                 | 3,667         | 200          | 172          | 3            | 4,042         | 9.47%  | 4,041                                   | 1              | 0                   |
| High Bill*                          | 760           | 13           | 34           | 1            | 808           | 1.89%  | 807                                     | 1              | 0                   |
| Inadequate Service                  | 15,148        | 179          | 260          | 0            | 15,587        | 36.51% | 15,582                                  | 5              | 0                   |
| Service Extension                   | 7             | 0            | 3            | 0            | 10            | 0.02%  | 10                                      | 0              | 0                   |
| Service Restoration                 | 997           | 2            | 26           | 0            | 1,025         | 2.40%  | 1,022                                   | 3              | 0                   |
| MR-Special Call Cntr                | 0             | 0            | 0            | 0            | 0             | 0.00%  | 0                                       | 0              | 0                   |
| Complaint                           | 1             | 0            | 0            | 0            | 1             | 0.00%  | 1                                       | 0              | 0                   |
| <b>Total Residential</b>            | <b>41,060</b> | <b>714</b>   | <b>913</b>   | <b>10</b>    | <b>42,697</b> |        | <b>42,674</b>                           | <b>23</b>      | <b>0</b>            |
| <b>Total Residential Percentage</b> | <b>96.17%</b> | <b>1.67%</b> | <b>2.14%</b> | <b>0.02%</b> |               |        |   |                |                     |
| <b>Total State of Minnesota</b>     | <b>44,336</b> | <b>731</b>   | <b>922</b>   | <b>10</b>    | <b>45,999</b> |        | <b>45,965</b>                           | <b>34</b>      | <b>0</b>            |
| <b>Total ST of MN Percentage</b>    | <b>96.38%</b> | <b>1.59%</b> | <b>2.00%</b> | <b>0.02%</b> |               |        |   |                |                     |

\* Includes Decoupling Complaints which are reported annually in separate filing on February 1st, Docket No. E002/GR-13-868.



**Customer Complaint Report  
 March, 2017**

|                                     | Agree         | Compromise   | Demonstrate  | Refuse       | Total         | %      | Turnaround Days for Closing a Complaint |                |                     |
|-------------------------------------|---------------|--------------|--------------|--------------|---------------|--------|---|----------------|---------------------|
|                                     |               |              |              |              |               |        | Initial Inquiry                         | within 10 days | Longer than 10 days |
| <b>Commercial</b>                   |               |              |              |              |               |        |   |                |                     |
| Billing errors                      | 1,936         | 11           | 8            | 0            | 1,955         | 69.01% | 1,953                                   | 2              | 0                   |
| Inaccurate Metering                 | 9             | 0            | 0            | 0            | 9             | 0.32%  | 9                                       | 0              | 0                   |
| Wrongful Disconnect                 | 261           | 2            | 0            | 0            | 263           | 9.28%  | 262                                     | 1              | 0                   |
| High Bill*                          | 33            | 0            | 4            | 0            | 37            | 1.31%  | 37                                      | 0              | 0                   |
| Inadequate Service                  | 366           | 0            | 0            | 0            | 366           | 12.92% | 366                                     | 0              | 0                   |
| Service Extension                   | 0             | 0            | 1            | 0            | 1             | 0.04%  | 1                                       | 0              | 0                   |
| Service Restoration                 | 200           | 0            | 2            | 0            | 202           | 7.13%  | 202                                     | 0              | 0                   |
| Complaint                           | 0             | 0            | 0            | 0            | 0             | 0.00%  | 0                                       | 0              | 0                   |
| <b>Total Commercial</b>             | <b>2,805</b>  | <b>13</b>    | <b>15</b>    | <b>0</b>     | <b>2,833</b>  |        | <b>2,830</b>                            | <b>3</b>       | <b>0</b>            |
| <b>Total Commercial Percentage</b>  | <b>99.01%</b> | <b>0.46%</b> | <b>0.53%</b> | <b>0.00%</b> |               |        |   |                |                     |
| <b>Industrial</b>                   |               |              |              |              |               |        |   |                |                     |
| Billing errors                      | 309           | 3            | 0            | 0            | 312           | 65.96% | 311                                     | 0              | 1                   |
| Inaccurate Metering                 | 0             | 0            | 0            | 0            | 0             | 0.00%  | 0                                       | 0              | 0                   |
| Wrongful Disconnect                 | 23            | 0            | 0            | 0            | 23            | 4.86%  | 23                                      | 0              | 0                   |
| High Bill*                          | 1             | 0            | 0            | 0            | 1             | 0.21%  | 1                                       | 0              | 0                   |
| Inadequate Service                  | 60            | 1            | 0            | 0            | 61            | 12.90% | 61                                      | 0              | 0                   |
| Service Extension                   | 0             | 0            | 0            | 0            | 0             | 0.00%  | 0                                       | 0              | 0                   |
| Service Restoration                 | 75            | 0            | 1            | 0            | 76            | 16.07% | 76                                      | 0              | 0                   |
| <b>Total Industrial</b>             | <b>468</b>    | <b>4</b>     | <b>1</b>     | <b>0</b>     | <b>473</b>    |        | <b>472</b>                              | <b>0</b>       | <b>1</b>            |
| <b>Total Industrial Percentage</b>  | <b>98.94%</b> | <b>0.85%</b> | <b>0.21%</b> | <b>0.00%</b> |               |        |   |                |                     |
| <b>Residential</b>                  |               |              |              |              |               |        |   |                |                     |
| Billing errors                      | 22,076        | 372          | 624          | 4            | 23,076        | 45.81% | 23,066                                  | 9              | 1                   |
| Inaccurate Metering                 | 9             | 1            | 1            | 0            | 11            | 0.02%  | 11                                      | 0              | 0                   |
| Wrongful Disconnect                 | 4,610         | 266          | 222          | 2            | 5,100         | 10.12% | 5,098                                   | 2              | 0                   |
| High Bill*                          | 394           | 9            | 24           | 0            | 427           | 0.85%  | 427                                     | 0              | 0                   |
| Inadequate Service                  | 19,749        | 292          | 328          | 7            | 20,376        | 40.45% | 20,365                                  | 11             | 0                   |
| Service Extension                   | 4             | 0            | 0            | 1            | 5             | 0.01%  | 5                                       | 0              | 0                   |
| Service Restoration                 | 1,328         | 10           | 35           | 0            | 1,373         | 2.73%  | 1,370                                   | 3              | 0                   |
| MR-Special Call Cntr                | 2             | 0            | 0            | 0            | 2             | 0.00%  | 0                                       | 2              | 0                   |
| Complaint                           | 1             | 0            | 0            | 0            | 1             | 0.00%  | 1                                       | 0              | 0                   |
| <b>Total Residential</b>            | <b>48,173</b> | <b>950</b>   | <b>1,234</b> | <b>14</b>    | <b>50,371</b> |        | <b>50,343</b>                           | <b>27</b>      | <b>1</b>            |
| <b>Total Residential Percentage</b> | <b>95.64%</b> | <b>1.89%</b> | <b>2.45%</b> | <b>0.03%</b> |               |        |   |                |                     |
| <b>Total State of Minnesota</b>     | <b>51,446</b> | <b>967</b>   | <b>1,250</b> | <b>14</b>    | <b>53,677</b> |        | <b>53,645</b>                           | <b>30</b>      | <b>2</b>            |
| <b>Total ST of MN Percentage</b>    | <b>95.84%</b> | <b>1.80%</b> | <b>2.33%</b> | <b>0.03%</b> |               |        |   |                |                     |

\* Includes Decoupling Complaints which are reported annually in separate filing on February 1st, Docket No. E002/GR-13-868.

**Customer Complaint Report  
 April, 2017**

|                                     | Agree         | Compromise   | Demonstrate  | Refuse       | Total         | %      | Turnaround Days for Closing a Complaint |                |                     |
|-------------------------------------|---------------|--------------|--------------|--------------|---------------|--------|---|----------------|---------------------|
|                                     |               |              |              |              |               |        | Initial Inquiry                         | within 10 days | Longer than 10 days |
| <b>Commercial</b>                   |               |              |              |              |               |        |   |                |                     |
| Billing errors                      | 1,692         | 10           | 13           | 2            | 1,717         | 70.92% | 1,710                                   | 7              | 0                   |
| Inaccurate Metering                 | 1             | 0            | 0            | 0            | 1             | 0.04%  | 1                                       | 0              | 0                   |
| Wrongful Disconnect                 | 209           | 1            | 5            | 0            | 215           | 8.88%  | 215                                     | 0              | 0                   |
| High Bill*                          | 17            | 1            | 0            | 0            | 18            | 0.74%  | 18                                      | 0              | 0                   |
| Inadequate Service                  | 296           | 2            | 3            | 0            | 301           | 12.43% | 301                                     | 0              | 0                   |
| Service Extension                   | 0             | 0            | 0            | 0            | 0             | 0.00%  | 0                                       | 0              | 0                   |
| Service Restoration                 | 165           | 2            | 2            | 0            | 169           | 6.98%  | 169                                     | 0              | 0                   |
| Complaint                           | 0             | 0            | 0            | 0            | 0             | 0.00%  | 0                                       | 0              | 0                   |
| <b>Total Commercial</b>             | <b>2,380</b>  | <b>16</b>    | <b>23</b>    | <b>2</b>     | <b>2,421</b>  |        | <b>2,414</b>                            | <b>7</b>       | <b>0</b>            |
| <b>Total Commercial Percentage</b>  | <b>98.31%</b> | <b>0.66%</b> | <b>0.95%</b> | <b>0.08%</b> |               |        |   |                |                     |
| <b>Industrial</b>                   |               |              |              |              |               |        |   |                |                     |
| Billing errors                      | 249           | 2            | 1            | 0            | 252           | 65.12% | 252                                     | 0              | 0                   |
| Inaccurate Metering                 | 0             | 0            | 0            | 0            | 0             | 0.00%  | 0                                       | 0              | 0                   |
| Wrongful Disconnect                 | 24            | 0            | 0            | 0            | 24            | 6.20%  | 24                                      | 0              | 0                   |
| High Bill*                          | 1             | 0            | 0            | 0            | 1             | 0.26%  | 1                                       | 0              | 0                   |
| Inadequate Service                  | 54            | 0            | 0            | 0            | 54            | 13.95% | 54                                      | 0              | 0                   |
| Service Extension                   | 0             | 0            | 0            | 0            | 0             | 0.00%  | 0                                       | 0              | 0                   |
| Service Restoration                 | 54            | 1            | 0            | 1            | 56            | 14.47% | 56                                      | 0              | 0                   |
| <b>Total Industrial</b>             | <b>382</b>    | <b>3</b>     | <b>1</b>     | <b>1</b>     | <b>387</b>    |        | <b>387</b>                              | <b>0</b>       | <b>0</b>            |
| <b>Total Industrial Percentage</b>  | <b>98.71%</b> | <b>0.78%</b> | <b>0.26%</b> | <b>0.26%</b> |               |        |   |                |                     |
| <b>Residential</b>                  |               |              |              |              |               |        |   |                |                     |
| Billing errors                      | 20,152        | 500          | 499          | 6            | 21,157        | 38.42% | 21,152                                  | 5              | 0                   |
| Inaccurate Metering                 | 9             | 0            | 0            | 0            | 9             | 0.02%  | 9                                       | 0              | 0                   |
| Wrongful Disconnect                 | 7,270         | 411          | 466          | 6            | 8,153         | 14.81% | 8,153                                   | 0              | 0                   |
| High Bill*                          | 268           | 4            | 22           | 0            | 294           | 0.53%  | 294                                     | 0              | 0                   |
| Inadequate Service                  | 23,145        | 416          | 482          | 16           | 24,059        | 43.69% | 24,051                                  | 8              | 0                   |
| Service Extension                   | 8             | 0            | 1            | 0            | 9             | 0.02%  | 9                                       | 0              | 0                   |
| Service Restoration                 | 1,331         | 13           | 30           | 1            | 1,375         | 2.50%  | 1,374                                   | 1              | 0                   |
| MR-Special Call Cntr                | 1             | 0            | 0            | 0            | 1             | 0.00%  | 0                                       | 1              | 0                   |
| Complaint                           | 5             | 0            | 0            | 0            | 5             | 0.01%  | 5                                       | 0              | 0                   |
| <b>Total Residential</b>            | <b>52,189</b> | <b>1,344</b> | <b>1,500</b> | <b>29</b>    | <b>55,062</b> |        | <b>55,047</b>                           | <b>15</b>      | <b>0</b>            |
| <b>Total Residential Percentage</b> | <b>94.78%</b> | <b>2.44%</b> | <b>2.72%</b> | <b>0.05%</b> |               |        |   |                |                     |
| <b>Total State of Minnesota</b>     | <b>54,951</b> | <b>1,363</b> | <b>1,524</b> | <b>32</b>    | <b>57,870</b> |        | <b>57,848</b>                           | <b>22</b>      | <b>0</b>            |
| <b>Total ST of MN Percentage</b>    | <b>94.96%</b> | <b>2.36%</b> | <b>2.63%</b> | <b>0.06%</b> |               |        |   |                |                     |

\* Includes Decoupling Complaints which are reported annually in separate filing on February 1st, Docket No. E002/GR-13-868.

**Customer Complaint Report  
 May, 2017**

|                                     | Agree         | Compromise   | Demonstrate  | Refuse       | Total         | %      | Turnaround Days for Closing a Complaint |                |                     |
|-------------------------------------|---------------|--------------|--------------|--------------|---------------|--------|---|----------------|---------------------|
|                                     |               |              |              |              |               |        | Initial Inquiry                         | within 10 days | Longer than 10 days |
| <b>Commercial</b>                   |               |              |              |              |               |        |   |                |                     |
| Billing errors                      | 1,681         | 7            | 4            | 0            | 1,692         | 68.95% | 1,686                                   | 6              | 0                   |
| Inaccurate Metering                 | 1             | 0            | 0            | 0            | 1             | 0.04%  | 1                                       | 0              | 0                   |
| Wrongful Disconnect                 | 204           | 1            | 0            | 0            | 205           | 8.35%  | 205                                     | 0              | 0                   |
| High Bill*                          | 15            | 0            | 3            | 0            | 18            | 0.73%  | 18                                      | 0              | 0                   |
| Inadequate Service                  | 344           | 3            | 3            | 0            | 350           | 14.26% | 350                                     | 0              | 0                   |
| Service Extension                   | 1             | 0            | 0            | 0            | 1             | 0.04%  | 1                                       | 0              | 0                   |
| Service Restoration                 | 185           | 0            | 2            | 0            | 187           | 7.62%  | 187                                     | 0              | 0                   |
| Complaint                           | 0             | 0            | 0            | 0            | 0             | 0.00%  | 0                                       | 0              | 0                   |
| <b>Total Commercial</b>             | <b>2,431</b>  | <b>11</b>    | <b>12</b>    | <b>0</b>     | <b>2,454</b>  |        | <b>2,448</b>                            | <b>6</b>       | <b>0</b>            |
| <b>Total Commercial Percentage</b>  | <b>99.06%</b> | <b>0.45%</b> | <b>0.49%</b> | <b>0.00%</b> |               |        |   |                |                     |
| <b>Industrial</b>                   |               |              |              |              |               |        |   |                |                     |
| Billing errors                      | 236           | 2            | 2            | 0            | 240           | 58.97% | 236                                     | 3              | 1                   |
| Inaccurate Metering                 | 0             | 0            | 0            | 0            | 0             | 0.00%  | 0                                       | 0              | 0                   |
| Wrongful Disconnect                 | 12            | 0            | 0            | 0            | 12            | 2.95%  | 12                                      | 0              | 0                   |
| High Bill*                          | 1             | 0            | 1            | 0            | 2             | 0.49%  | 2                                       | 0              | 0                   |
| Inadequate Service                  | 72            | 0            | 1            | 0            | 73            | 17.94% | 73                                      | 0              | 0                   |
| Service Extension                   | 0             | 0            | 0            | 0            | 0             | 0.00%  | 0                                       | 0              | 0                   |
| Service Restoration                 | 78            | 1            | 1            | 0            | 80            | 19.66% | 80                                      | 0              | 0                   |
| <b>Total Industrial</b>             | <b>399</b>    | <b>3</b>     | <b>5</b>     | <b>0</b>     | <b>407</b>    |        | <b>403</b>                              | <b>3</b>       | <b>1</b>            |
| <b>Total Industrial Percentage</b>  | <b>98.03%</b> | <b>0.74%</b> | <b>1.23%</b> | <b>0.00%</b> |               |        |   |                |                     |
| <b>Residential</b>                  |               |              |              |              |               |        |   |                |                     |
| Billing errors                      | 21,863        | 386          | 206          | 9            | 22,464        | 41.83% | 22,457                                  | 6              | 1                   |
| Inaccurate Metering                 | 17            | 0            | 1            | 0            | 18            | 0.03%  | 18                                      | 0              | 0                   |
| Wrongful Disconnect                 | 6,733         | 461          | 299          | 2            | 7,495         | 13.96% | 7,493                                   | 2              | 0                   |
| High Bill*                          | 246           | 8            | 15           | 0            | 269           | 0.50%  | 269                                     | 0              | 0                   |
| Inadequate Service                  | 21,154        | 474          | 359          | 16           | 22,003        | 40.97% | 21,984                                  | 19             | 0                   |
| Service Extension                   | 11            | 0            | 4            | 0            | 15            | 0.03%  | 14                                      | 1              | 0                   |
| Service Restoration                 | 1,402         | 12           | 20           | 1            | 1,435         | 2.67%  | 1,434                                   | 1              | 0                   |
| MR-Special Call Cntr                | 0             | 1            | 0            | 0            | 1             | 0.00%  | 0                                       | 1              | 0                   |
| Complaint                           | 6             | 2            | 0            | 0            | 8             | 0.01%  | 2                                       | 6              | 0                   |
| <b>Total Residential</b>            | <b>51,432</b> | <b>1,344</b> | <b>904</b>   | <b>28</b>    | <b>53,708</b> |        | <b>53,671</b>                           | <b>36</b>      | <b>1</b>            |
| <b>Total Residential Percentage</b> | <b>95.76%</b> | <b>2.50%</b> | <b>1.68%</b> | <b>0.05%</b> |               |        |   |                |                     |
| <b>Total State of Minnesota</b>     | <b>54,262</b> | <b>1,358</b> | <b>921</b>   | <b>28</b>    | <b>56,569</b> |        | <b>56,522</b>                           | <b>45</b>      | <b>2</b>            |
| <b>Total ST of MN Percentage</b>    | <b>95.92%</b> | <b>2.40%</b> | <b>1.63%</b> | <b>0.05%</b> |               |        |   |                |                     |

\* Includes Decoupling Complaints which are reported annually in separate filing on February 1st, Docket No. E002/GR-13-868.

**Customer Complaint Report  
 June, 2017**

|                                     | Agree         | Compromise   | Demonstrate  | Refuse       | Total         | %      | Turnaround Days for Closing a Complaint |                |                     |
|-------------------------------------|---------------|--------------|--------------|--------------|---------------|--------|---|----------------|---------------------|
|                                     |               |              |              |              |               |        | Initial Inquiry                         | within 10 days | Longer than 10 days |
| <b>Commercial</b>                   |               |              |              |              |               |        |   |                |                     |
| Billing errors                      | 1,577         | 8            | 4            | 1            | 1,590         | 62.11% | 1,587                                   | 3              | 0                   |
| Inaccurate Metering                 | 0             | 0            | 0            | 0            | 0             | 0.00%  | 0                                       | 0              | 0                   |
| Wrongful Disconnect                 | 148           | 3            | 0            | 0            | 151           | 5.90%  | 151                                     | 0              | 0                   |
| High Bill*                          | 22            | 0            | 0            | 0            | 22            | 0.86%  | 22                                      | 0              | 0                   |
| Inadequate Service                  | 292           | 3            | 3            | 0            | 298           | 11.64% | 297                                     | 1              | 0                   |
| Service Extension                   | 0             | 0            | 0            | 0            | 0             | 0.00%  | 0                                       | 0              | 0                   |
| Service Restoration                 | 495           | 1            | 2            | 1            | 499           | 19.49% | 499                                     | 0              | 0                   |
| Complaint                           | 0             | 0            | 0            | 0            | 0             | 0.00%  | 0                                       | 0              | 0                   |
| <b>Total Commercial</b>             | <b>2,534</b>  | <b>15</b>    | <b>9</b>     | <b>2</b>     | <b>2,560</b>  |        | <b>2,556</b>                            | <b>4</b>       | <b>0</b>            |
| <b>Total Commercial Percentage</b>  | <b>98.98%</b> | <b>0.59%</b> | <b>0.35%</b> | <b>0.08%</b> |               |        |   |                |                     |
| <b>Industrial</b>                   |               |              |              |              |               |        |   |                |                     |
| Billing errors                      | 262           | 1            | 1            | 0            | 264           | 44.07% | 259                                     | 4              | 1                   |
| Inaccurate Metering                 | 0             | 0            | 0            | 0            | 0             | 0.00%  | 0                                       | 0              | 0                   |
| Wrongful Disconnect                 | 23            | 0            | 1            | 0            | 24            | 4.01%  | 24                                      | 0              | 0                   |
| High Bill*                          | 2             | 0            | 0            | 0            | 2             | 0.33%  | 2                                       | 0              | 0                   |
| Inadequate Service                  | 68            | 0            | 0            | 0            | 68            | 11.35% | 68                                      | 0              | 0                   |
| Service Extension                   | 0             | 0            | 0            | 0            | 0             | 0.00%  | 0                                       | 0              | 0                   |
| Service Restoration                 | 239           | 0            | 2            | 0            | 241           | 40.23% | 241                                     | 0              | 0                   |
| <b>Total Industrial</b>             | <b>594</b>    | <b>1</b>     | <b>4</b>     | <b>0</b>     | <b>599</b>    |        | <b>594</b>                              | <b>4</b>       | <b>1</b>            |
| <b>Total Industrial Percentage</b>  | <b>99.17%</b> | <b>0.17%</b> | <b>0.67%</b> | <b>0.00%</b> |               |        |   |                |                     |
| <b>Residential</b>                  |               |              |              |              |               |        |   |                |                     |
| Billing errors                      | 23,433        | 286          | 123          | 4            | 23,846        | 41.06% | 23,838                                  | 7              | 1                   |
| Inaccurate Metering                 | 12            | 0            | 0            | 0            | 12            | 0.02%  | 12                                      | 0              | 0                   |
| Wrongful Disconnect                 | 5,103         | 403          | 199          | 8            | 5,713         | 9.84%  | 5,713                                   | 0              | 0                   |
| High Bill*                          | 340           | 6            | 14           | 0            | 360           | 0.62%  | 360                                     | 0              | 0                   |
| Inadequate Service                  | 20,583        | 533          | 328          | 6            | 21,450        | 36.93% | 21,436                                  | 14             | 0                   |
| Service Extension                   | 11            | 1            | 4            | 0            | 16            | 0.03%  | 16                                      | 0              | 0                   |
| Service Restoration                 | 6,552         | 50           | 71           | 3            | 6,676         | 11.49% | 6,668                                   | 8              | 0                   |
| MR-Special Call Cntr                | 1             | 0            | 0            | 0            | 1             | 0.00%  | 0                                       | 1              | 0                   |
| Complaint                           | 5             | 0            | 0            | 0            | 5             | 0.01%  | 3                                       | 2              | 0                   |
| <b>Total Residential</b>            | <b>56,040</b> | <b>1,279</b> | <b>739</b>   | <b>21</b>    | <b>58,079</b> |        | <b>58,046</b>                           | <b>32</b>      | <b>1</b>            |
| <b>Total Residential Percentage</b> | <b>96.49%</b> | <b>2.20%</b> | <b>1.27%</b> | <b>0.04%</b> |               |        |   |                |                     |
| <b>Total State of Minnesota</b>     | <b>59,168</b> | <b>1,295</b> | <b>752</b>   | <b>23</b>    | <b>61,238</b> |        | <b>61,196</b>                           | <b>40</b>      | <b>2</b>            |
| <b>Total ST of MN Percentage</b>    | <b>96.62%</b> | <b>2.11%</b> | <b>1.23%</b> | <b>0.04%</b> |               |        |   |                |                     |

\* Includes Decoupling Complaints which are reported annually in separate filing on February 1st, Docket No. E002/GR-13-868.

**Customer Complaint Report  
 July, 2017**

|                                     | Agree         | Compromise   | Demonstrate  | Refuse       | Total         | %      | Turnaround Days for Closing a Complaint |                |                     |
|-------------------------------------|---------------|--------------|--------------|--------------|---------------|--------|---|----------------|---------------------|
|                                     |               |              |              |              |               |        | Initial Inquiry                         | within 10 days | Longer than 10 days |
| <b>Commercial</b>                   |               |              |              |              |               |        |   |                |                     |
| Billing errors                      | 1,491         | 11           | 5            | 0            | 1,507         | 63.72% | 1,505                                   | 2              | 0                   |
| Inaccurate Metering                 | 1             | 0            | 0            | 0            | 1             | 0.04%  | 1                                       | 0              | 0                   |
| Wrongful Disconnect                 | 167           | 5            | 0            | 0            | 172           | 7.27%  | 171                                     | 1              | 0                   |
| High Bill*                          | 39            | 1            | 1            | 0            | 41            | 1.73%  | 41                                      | 0              | 0                   |
| Inadequate Service                  | 285           | 5            | 0            | 0            | 290           | 12.26% | 290                                     | 0              | 0                   |
| Service Extension                   | 0             | 0            | 0            | 0            | 0             | 0.00%  | 0                                       | 0              | 0                   |
| Service Restoration                 | 347           | 3            | 2            | 0            | 352           | 14.88% | 352                                     | 0              | 0                   |
| Complaint                           | 1             | 1            | 0            | 0            | 2             | 0.08%  | 0                                       | 2              | 0                   |
| <b>Total Commercial</b>             | <b>2,331</b>  | <b>26</b>    | <b>8</b>     | <b>0</b>     | <b>2,365</b>  |        | <b>2,360</b>                            | <b>5</b>       | <b>0</b>            |
| <b>Total Commercial Percentage</b>  | <b>98.56%</b> | <b>1.10%</b> | <b>0.34%</b> | <b>0.00%</b> |               |        |   |                |                     |
| <b>Industrial</b>                   |               |              |              |              |               |        |   |                |                     |
| Billing errors                      | 249           | 4            | 0            | 0            | 253           | 54.29% | 251                                     | 2              | 0                   |
| Inaccurate Metering                 | 0             | 0            | 0            | 0            | 0             | 0.00%  | 0                                       | 0              | 0                   |
| Wrongful Disconnect                 | 15            | 0            | 0            | 0            | 15            | 3.22%  | 15                                      | 0              | 0                   |
| High Bill*                          | 4             | 0            | 0            | 0            | 4             | 0.86%  | 4                                       | 0              | 0                   |
| Inadequate Service                  | 56            | 0            | 0            | 0            | 56            | 12.02% | 56                                      | 0              | 0                   |
| Service Extension                   | 0             | 0            | 0            | 0            | 0             | 0.00%  | 0                                       | 0              | 0                   |
| Service Restoration                 | 137           | 1            | 0            | 0            | 138           | 29.61% | 138                                     | 0              | 0                   |
| <b>Total Industrial</b>             | <b>461</b>    | <b>5</b>     | <b>0</b>     | <b>0</b>     | <b>466</b>    |        | <b>464</b>                              | <b>2</b>       | <b>0</b>            |
| <b>Total Industrial Percentage</b>  | <b>98.93%</b> | <b>1.07%</b> | <b>0.00%</b> | <b>0.00%</b> |               |        |   |                |                     |
| <b>Residential</b>                  |               |              |              |              |               |        |   |                |                     |
| Billing errors                      | 23,400        | 251          | 149          | 5            | 23,805        | 42.98% | 23,795                                  | 10             | 0                   |
| Inaccurate Metering                 | 24            | 0            | 0            | 0            | 24            | 0.04%  | 24                                      | 0              | 0                   |
| Wrongful Disconnect                 | 4,885         | 346          | 202          | 6            | 5,439         | 9.82%  | 5,437                                   | 2              | 0                   |
| High Bill*                          | 636           | 9            | 29           | 1            | 675           | 1.22%  | 674                                     | 1              | 0                   |
| Inadequate Service                  | 20,342        | 682          | 306          | 7            | 21,337        | 38.53% | 21,326                                  | 8              | 3                   |
| Service Extension                   | 22            | 1            | 2            | 0            | 25            | 0.05%  | 25                                      | 0              | 0                   |
| Service Restoration                 | 4,000         | 24           | 41           | 0            | 4,065         | 7.34%  | 4,063                                   | 2              | 0                   |
| MR-Special Call Cntr                | 0             | 0            | 0            | 0            | 0             | 0.00%  | 0                                       | 0              | 0                   |
| Complaint                           | 13            | 0            | 0            | 0            | 13            | 0.02%  | 6                                       | 7              | 0                   |
| <b>Total Residential</b>            | <b>53,322</b> | <b>1,313</b> | <b>729</b>   | <b>19</b>    | <b>55,383</b> |        | <b>55,350</b>                           | <b>30</b>      | <b>3</b>            |
| <b>Total Residential Percentage</b> | <b>96.28%</b> | <b>2.37%</b> | <b>1.32%</b> | <b>0.03%</b> |               |        |   |                |                     |
| <b>Total State of Minnesota</b>     | <b>56,114</b> | <b>1,344</b> | <b>737</b>   | <b>19</b>    | <b>58,214</b> |        | <b>58,174</b>                           | <b>37</b>      | <b>3</b>            |
| <b>Total ST of MN Percentage</b>    | <b>96.39%</b> | <b>2.31%</b> | <b>1.27%</b> | <b>0.03%</b> |               |        |   |                |                     |

\* Includes Decoupling Complaints which are reported annually in separate filing on February 1st, Docket No. E002/GR-13-868.

**Customer Complaint Report  
 August, 2017**

|                                     | Agree         | Compromise   | Demonstrate  | Refuse       | Total         | %      | Turnaround Days for Closing a Complaint |                |                     |
|-------------------------------------|---------------|--------------|--------------|--------------|---------------|--------|---|----------------|---------------------|
|                                     |               |              |              |              |               |        | Initial Inquiry                         | within 10 days | Longer than 10 days |
| <b>Commercial</b>                   |               |              |              |              |               |        |   |                |                     |
| Billing errors                      | 1,770         | 6            | 4            | 0            | 1,780         | 65.44% | 1,768                                   | 12             | 0                   |
| Inaccurate Metering                 | 2             | 0            | 0            | 0            | 2             | 0.07%  | 2                                       | 0              | 0                   |
| Wrongful Disconnect                 | 202           | 2            | 0            | 0            | 204           | 7.50%  | 204                                     | 0              | 0                   |
| High Bill*                          | 47            | 1            | 4            | 0            | 52            | 1.91%  | 52                                      | 0              | 0                   |
| Inadequate Service                  | 377           | 4            | 2            | 0            | 383           | 14.08% | 381                                     | 2              | 0                   |
| Service Extension                   | 0             | 0            | 0            | 0            | 0             | 0.00%  | 0                                       | 0              | 0                   |
| Service Restoration                 | 296           | 2            | 1            | 0            | 299           | 10.99% | 298                                     | 1              | 0                   |
| Complaint                           | 0             | 0            | 0            | 0            | 0             | 0.00%  | 0                                       | 0              | 0                   |
| <b>Total Commercial</b>             | <b>2,694</b>  | <b>15</b>    | <b>11</b>    | <b>0</b>     | <b>2,720</b>  |        | <b>2,705</b>                            | <b>15</b>      | <b>0</b>            |
| <b>Total Commercial Percentage</b>  | <b>99.04%</b> | <b>0.55%</b> | <b>0.40%</b> | <b>0.00%</b> |               |        |   |                |                     |
| <b>Industrial</b>                   |               |              |              |              |               |        |   |                |                     |
| Billing errors                      | 246           | 1            | 1            | 0            | 248           | 48.53% | 247                                     | 1              | 0                   |
| Inaccurate Metering                 | 1             | 0            | 0            | 0            | 1             | 0.20%  | 1                                       | 0              | 0                   |
| Wrongful Disconnect                 | 13            | 0            | 0            | 0            | 13            | 2.54%  | 13                                      | 0              | 0                   |
| High Bill*                          | 9             | 0            | 0            | 0            | 9             | 1.76%  | 9                                       | 0              | 0                   |
| Inadequate Service                  | 73            | 0            | 0            | 0            | 73            | 14.29% | 72                                      | 1              | 0                   |
| Service Extension                   | 0             | 0            | 0            | 0            | 0             | 0.00%  | 0                                       | 0              | 0                   |
| Service Restoration                 | 165           | 0            | 2            | 0            | 167           | 32.68% | 167                                     | 0              | 0                   |
| <b>Total Industrial</b>             | <b>507</b>    | <b>1</b>     | <b>3</b>     | <b>0</b>     | <b>511</b>    |        | <b>509</b>                              | <b>2</b>       | <b>0</b>            |
| <b>Total Industrial Percentage</b>  | <b>99.22%</b> | <b>0.20%</b> | <b>0.59%</b> | <b>0.00%</b> |               |        |   |                |                     |
| <b>Residential</b>                  |               |              |              |              |               |        |   |                |                     |
| Billing errors                      | 24,603        | 228          | 134          | 12           | 24,977        | 42.15% | 24,959                                  | 16             | 2                   |
| Inaccurate Metering                 | 32            | 0            | 0            | 0            | 32            | 0.05%  | 32                                      | 0              | 0                   |
| Wrongful Disconnect                 | 5,605         | 304          | 273          | 7            | 6,189         | 10.44% | 6,187                                   | 2              | 0                   |
| High Bill*                          | 759           | 3            | 28           | 1            | 791           | 1.33%  | 791                                     | 0              | 0                   |
| Inadequate Service                  | 23,515        | 774          | 416          | 14           | 24,719        | 41.71% | 24,703                                  | 15             | 1                   |
| Service Extension                   | 15            | 0            | 1            | 0            | 16            | 0.03%  | 16                                      | 0              | 0                   |
| Service Restoration                 | 2,497         | 14           | 19           | 0            | 2,530         | 4.27%  | 2,530                                   | 0              | 0                   |
| MR-Special Call Cntr                | 2             | 0            | 0            | 0            | 2             | 0.00%  | 0                                       | 2              | 0                   |
| Complaint                           | 2             | 0            | 0            | 0            | 2             | 0.00%  | 1                                       | 1              | 0                   |
| <b>Total Residential</b>            | <b>57,030</b> | <b>1,323</b> | <b>871</b>   | <b>34</b>    | <b>59,258</b> |        | <b>59,219</b>                           | <b>36</b>      | <b>3</b>            |
| <b>Total Residential Percentage</b> | <b>96.24%</b> | <b>2.23%</b> | <b>1.47%</b> | <b>0.06%</b> |               |        |   |                |                     |
| <b>Total State of Minnesota</b>     | <b>60,231</b> | <b>1,339</b> | <b>885</b>   | <b>34</b>    | <b>62,489</b> |        | <b>62,433</b>                           | <b>53</b>      | <b>3</b>            |
| <b>Total ST of MN Percentage</b>    | <b>96.39%</b> | <b>2.14%</b> | <b>1.42%</b> | <b>0.05%</b> |               |        |   |                |                     |

\* Includes Decoupling Complaints which are reported annually in separate filing on February 1st, Docket No. E002/GR-13-868.

**Customer Complaint Report  
September, 2017**

|                                  | Agree         | Compromise   | Demonstrate  | Refuse       | Total         | %      | Turnaround Days for Closing a Complaint |                |                     |
|----------------------------------|---------------|--------------|--------------|--------------|---------------|--------|---|----------------|---------------------|
|                                  |               |              |              |              |               |        | Initial Inquiry                         | within 10 days | Longer than 10 days |
| <b>Commercial</b>                |               |              |              |              |               |        |   |                |                     |
| Billing errors                   | 1,577         | 7            | 4            | 0            | 1,588         | 65.57% | 1,584                                   | 4              | 0                   |
| Inaccurate Metering              | 1             | 0            | 0            | 0            | 1             | 0.04%  | 1                                       | 0              | 0                   |
| Wrongful Disconnect              | 157           | 0            | 0            | 0            | 157           | 6.48%  | 157                                     | 0              | 0                   |
| High Bill*                       | 34            | 1            | 0            | 0            | 35            | 1.45%  | 34                                      | 1              | 0                   |
| Inadequate Service               | 342           | 2            | 1            | 0            | 345           | 14.24% | 345                                     | 0              | 0                   |
| Service Extension                | 1             | 0            | 2            | 0            | 3             | 0.12%  | 3                                       | 0              | 0                   |
| Service Restoration              | 291           | 1            | 1            | 0            | 293           | 12.10% | 293                                     | 0              | 0                   |
| Complaint                        | 0             | 0            | 0            | 0            | 0             | 0.00%  | 0                                       | 0              | 0                   |
| Total Commercial                 | 2,403         | 11           | 8            | 0            | 2,422         |        | 2,417                                   | 5              | 0                   |
| Total Commercial Percentage      | 99.22%        | 0.45%        | 0.33%        | 0.00%        |               |        |   |                |                     |
| <b>Industrial</b>                |               |              |              |              |               |        |   |                |                     |
| Billing errors                   | 201           | 1            | 0            | 0            | 202           | 53.16% | 201                                     | 1              | 0                   |
| Inaccurate Metering              | 0             | 0            | 0            | 0            | 0             | 0.00%  | 0                                       | 0              | 0                   |
| Wrongful Disconnect              | 11            | 0            | 1            | 0            | 12            | 3.16%  | 12                                      | 0              | 0                   |
| High Bill*                       | 7             | 0            | 0            | 0            | 7             | 1.84%  | 7                                       | 0              | 0                   |
| Inadequate Service               | 46            | 1            | 0            | 0            | 47            | 12.37% | 47                                      | 0              | 0                   |
| Service Extension                | 0             | 0            | 0            | 0            | 0             | 0.00%  | 0                                       | 0              | 0                   |
| Service Restoration              | 110           | 1            | 1            | 0            | 112           | 29.47% | 112                                     | 0              | 0                   |
| Total Industrial                 | 375           | 3            | 2            | 0            | 380           |        | 379                                     | 1              | 0                   |
| Total Industrial Percentage      | 98.68%        | 0.79%        | 0.53%        | 0.00%        |               |        |   |                |                     |
| <b>Residential</b>               |               |              |              |              |               |        |   |                |                     |
| Billing errors                   | 22,238        | 258          | 121          | 8            | 22,625        | 39.64% | 22,609                                  | 15             | 1                   |
| Inaccurate Metering              | 14            | 0            | 0            | 0            | 14            | 0.02%  | 14                                      | 0              | 0                   |
| Wrongful Disconnect              | 6,107         | 372          | 259          | 11           | 6,749         | 11.82% | 6,743                                   | 6              | 0                   |
| High Bill*                       | 293           | 6            | 15           | 0            | 314           | 0.55%  | 314                                     | 0              | 0                   |
| Inadequate Service               | 24,327        | 771          | 385          | 23           | 25,506        | 44.69% | 25,499                                  | 7              | 0                   |
| Service Extension                | 11            | 0            | 6            | 0            | 17            | 0.03%  | 17                                      | 0              | 0                   |
| Service Restoration              | 1,806         | 13           | 26           | 0            | 1,845         | 3.23%  | 1,844                                   | 1              | 0                   |
| MR-Special Call Cntr             | 2             | 0            | 0            | 0            | 2             | 0.00%  | 0                                       | 2              | 0                   |
| Complaint                        | 6             | 0            | 0            | 0            | 6             | 0.01%  | 1                                       | 4              | 1                   |
| Total Residential                | 54,804        | 1,420        | 812          | 42           | 57,078        |        | 57,041                                  | 35             | 2                   |
| Total Residential Percentage     | 96.02%        | 2.49%        | 1.42%        | 0.07%        |               |        |   |                |                     |
| <b>Total State of Minnesota</b>  | <b>57,582</b> | <b>1,434</b> | <b>822</b>   | <b>42</b>    | <b>59,880</b> |        | <b>59,837</b>                           | <b>41</b>      | <b>2</b>            |
| <b>Total ST of MN Percentage</b> | <b>96.16%</b> | <b>2.39%</b> | <b>1.37%</b> | <b>0.07%</b> |               |        |   |                |                     |

\* Includes Decoupling Complaints which are reported annually in separate filing on February 1st, Docket No. E002/GR-13-868.

**Customer Complaint Report  
 October, 2017**

|                                     | Agree         | Compromise   | Demonstrate  | Refuse       | Total         | %      | Turnaround Days for Closing a Complaint |                |                     |
|-------------------------------------|---------------|--------------|--------------|--------------|---------------|--------|---|----------------|---------------------|
|                                     |               |              |              |              |               |        | Initial Inquiry                         | within 10 days | Longer than 10 days |
| <b>Commercial</b>                   |               |              |              |              |               |        |   |                |                     |
| Billing errors                      | 1,772         | 10           | 4            | 1            | 1,787         | 64.79% | 1,782                                   | 4              | 1                   |
| Inaccurate Metering                 | 7             | 0            | 0            | 0            | 7             | 0.25%  | 6                                       | 1              | 0                   |
| Wrongful Disconnect                 | 172           | 2            | 3            | 0            | 177           | 6.42%  | 177                                     | 0              | 0                   |
| High Bill*                          | 34            | 0            | 1            | 0            | 35            | 1.27%  | 35                                      | 0              | 0                   |
| Inadequate Service                  | 416           | 5            | 1            | 0            | 422           | 15.30% | 420                                     | 2              | 0                   |
| Service Extension                   | 0             | 0            | 0            | 0            | 0             | 0.00%  | 0                                       | 0              | 0                   |
| Service Restoration                 | 328           | 1            | 1            | 0            | 330           | 11.97% | 329                                     | 1              | 0                   |
| Complaint                           | 0             | 0            | 0            | 0            | 0             | 0.00%  | 0                                       | 0              | 0                   |
| <b>Total Commercial</b>             | <b>2,729</b>  | <b>18</b>    | <b>10</b>    | <b>1</b>     | <b>2,758</b>  |        | <b>2,749</b>                            | <b>8</b>       | <b>1</b>            |
| <b>Total Commercial Percentage</b>  | <b>98.95%</b> | <b>0.65%</b> | <b>0.36%</b> | <b>0.04%</b> |               |        |   |                |                     |
| <b>Industrial</b>                   |               |              |              |              |               |        |   |                |                     |
| Billing errors                      | 264           | 2            | 0            | 0            | 266           | 58.59% | 264                                     | 2              | 0                   |
| Inaccurate Metering                 | 0             | 0            | 0            | 0            | 0             | 0.00%  | 0                                       | 0              | 0                   |
| Wrongful Disconnect                 | 14            | 0            | 0            | 0            | 14            | 3.08%  | 14                                      | 0              | 0                   |
| High Bill*                          | 1             | 0            | 0            | 0            | 1             | 0.22%  | 1                                       | 0              | 0                   |
| Inadequate Service                  | 59            | 0            | 0            | 0            | 59            | 13.00% | 59                                      | 0              | 0                   |
| Service Extension                   | 0             | 1            | 0            | 0            | 1             | 0.22%  | 1                                       | 0              | 0                   |
| Service Restoration                 | 112           | 0            | 1            | 0            | 113           | 24.89% | 113                                     | 0              | 0                   |
| <b>Total Industrial</b>             | <b>450</b>    | <b>3</b>     | <b>1</b>     | <b>0</b>     | <b>454</b>    |        | <b>452</b>                              | <b>2</b>       | <b>0</b>            |
| <b>Total Industrial Percentage</b>  | <b>99.12%</b> | <b>0.66%</b> | <b>0.22%</b> | <b>0.00%</b> |               |        |   |                |                     |
| <b>Residential</b>                  |               |              |              |              |               |        |   |                |                     |
| Billing errors                      | 23,356        | 250          | 152          | 11           | 23,769        | 42.95% | 23,752                                  | 15             | 2                   |
| Inaccurate Metering                 | 15            | 0            | 2            | 0            | 17            | 0.03%  | 17                                      | 0              | 0                   |
| Wrongful Disconnect                 | 3,788         | 269          | 163          | 6            | 4,226         | 7.64%  | 4,225                                   | 1              | 0                   |
| High Bill*                          | 316           | 2            | 15           | 1            | 334           | 0.60%  | 333                                     | 1              | 0                   |
| Inadequate Service                  | 23,548        | 713          | 323          | 13           | 24,597        | 44.44% | 24,588                                  | 9              | 0                   |
| Service Extension                   | 13            | 0            | 1            | 0            | 14            | 0.03%  | 14                                      | 0              | 0                   |
| Service Restoration                 | 2,340         | 17           | 29           | 1            | 2,387         | 4.31%  | 2,386                                   | 1              | 0                   |
| MR-Special Call Cntr                | 0             | 0            | 0            | 0            | 0             | 0.00%  | 0                                       | 0              | 0                   |
| Complaint                           | 2             | 0            | 1            | 0            | 3             | 0.01%  | 1                                       | 2              | 0                   |
| <b>Total Residential</b>            | <b>53,378</b> | <b>1,251</b> | <b>686</b>   | <b>32</b>    | <b>55,347</b> |        | <b>55,316</b>                           | <b>29</b>      | <b>2</b>            |
| <b>Total Residential Percentage</b> | <b>96.44%</b> | <b>2.26%</b> | <b>1.24%</b> | <b>0.06%</b> |               |        |   |                |                     |
| <b>Total State of Minnesota</b>     | <b>56,557</b> | <b>1,272</b> | <b>697</b>   | <b>33</b>    | <b>58,559</b> |        | <b>58,517</b>                           | <b>39</b>      | <b>3</b>            |
| <b>Total ST of MN Percentage</b>    | <b>96.58%</b> | <b>2.17%</b> | <b>1.19%</b> | <b>0.06%</b> |               |        |   |                |                     |

\* Includes Decoupling Complaints which are reported annually in separate filing on February 1st, Docket No. E002/GR-13-868.



**Customer Complaint Report  
 November, 2017**

|                                     | Agree         | Compromise   | Demonstrate  | Refuse       | Total         | %      | Turnaround Days for Closing a Complaint |                |                     |
|-------------------------------------|---------------|--------------|--------------|--------------|---------------|--------|---|----------------|---------------------|
|                                     |               |              |              |              |               |        | Initial Inquiry                         | within 10 days | Longer than 10 days |
| <b>Commercial</b>                   |               |              |              |              |               |        |   |                |                     |
| Billing errors                      | 1,659         | 10           | 5            | 0            | 1,674         | 67.15% | 1,664                                   | 10             | 0                   |
| Inaccurate Metering                 | 3             | 0            | 0            | 0            | 3             | 0.12%  | 3                                       | 0              | 0                   |
| Wrongful Disconnect                 | 218           | 2            | 2            | 0            | 222           | 8.90%  | 222                                     | 0              | 0                   |
| High Bill*                          | 11            | 0            | 1            | 0            | 12            | 0.48%  | 12                                      | 0              | 0                   |
| Inadequate Service                  | 386           | 4            | 3            | 1            | 394           | 15.80% | 394                                     | 0              | 0                   |
| Service Extension                   | 0             | 0            | 0            | 0            | 0             | 0.00%  | 0                                       | 0              | 0                   |
| Service Restoration                 | 186           | 1            | 1            | 0            | 188           | 7.54%  | 187                                     | 1              | 0                   |
| Complaint                           | 0             | 0            | 0            | 0            | 0             | 0.00%  | 0                                       | 0              | 0                   |
| <b>Total Commercial</b>             | <b>2,463</b>  | <b>17</b>    | <b>12</b>    | <b>1</b>     | <b>2,493</b>  |        | <b>2,482</b>                            | <b>11</b>      | <b>0</b>            |
| <b>Total Commercial Percentage</b>  | <b>98.80%</b> | <b>0.68%</b> | <b>0.48%</b> | <b>0.04%</b> |               |        |   |                |                     |
| <b>Industrial</b>                   |               |              |              |              |               |        |   |                |                     |
| Billing errors                      | 218           | 1            | 1            | 0            | 220           | 64.33% | 219                                     | 1              | 0                   |
| Inaccurate Metering                 | 0             | 0            | 0            | 0            | 0             | 0.00%  | 0                                       | 0              | 0                   |
| Wrongful Disconnect                 | 14            | 0            | 0            | 0            | 14            | 4.09%  | 14                                      | 0              | 0                   |
| High Bill*                          | 2             | 0            | 0            | 0            | 2             | 0.58%  | 2                                       | 0              | 0                   |
| Inadequate Service                  | 54            | 0            | 1            | 0            | 55            | 16.08% | 55                                      | 0              | 0                   |
| Service Extension                   | 1             | 0            | 0            | 0            | 1             | 0.29%  | 1                                       | 0              | 0                   |
| Service Restoration                 | 50            | 0            | 0            | 0            | 50            | 14.62% | 50                                      | 0              | 0                   |
| <b>Total Industrial</b>             | <b>339</b>    | <b>1</b>     | <b>2</b>     | <b>0</b>     | <b>342</b>    |        | <b>341</b>                              | <b>1</b>       | <b>0</b>            |
| <b>Total Industrial Percentage</b>  | <b>99.12%</b> | <b>0.29%</b> | <b>0.58%</b> | <b>0.00%</b> |               |        |   |                |                     |
| <b>Residential</b>                  |               |              |              |              |               |        |   |                |                     |
| Billing errors                      | 21,344        | 212          | 105          | 5            | 21,666        | 44.24% | 21,659                                  | 7              | 0                   |
| Inaccurate Metering                 | 15            | 0            | 0            | 0            | 15            | 0.03%  | 15                                      | 0              | 0                   |
| Wrongful Disconnect                 | 3,138         | 238          | 135          | 3            | 3,514         | 7.18%  | 3,512                                   | 2              | 0                   |
| High Bill*                          | 250           | 1            | 14           | 0            | 265           | 0.54%  | 264                                     | 1              | 0                   |
| Inadequate Service                  | 21,107        | 712          | 356          | 5            | 22,180        | 45.29% | 22,176                                  | 4              | 0                   |
| Service Extension                   | 8             | 0            | 1            | 0            | 9             | 0.02%  | 9                                       | 0              | 0                   |
| Service Restoration                 | 1,298         | 6            | 15           | 0            | 1,319         | 2.69%  | 1,319                                   | 0              | 0                   |
| MR-Special Call Cntr                | 1             | 0            | 0            | 0            | 1             | 0.00%  | 0                                       | 0              | 0                   |
| Complaint                           | 1             | 0            | 0            | 0            | 1             | 0.00%  | 0                                       | 1              | 0                   |
| <b>Total Residential</b>            | <b>47,162</b> | <b>1,169</b> | <b>626</b>   | <b>13</b>    | <b>48,970</b> |        | <b>48,954</b>                           | <b>15</b>      | <b>0</b>            |
| <b>Total Residential Percentage</b> | <b>96.31%</b> | <b>2.39%</b> | <b>1.28%</b> | <b>0.03%</b> |               |        |   |                |                     |
| <b>Total State of Minnesota</b>     | <b>49,964</b> | <b>1,187</b> | <b>640</b>   | <b>14</b>    | <b>51,805</b> |        | <b>51,777</b>                           | <b>27</b>      | <b>0</b>            |
| <b>Total ST of MN Percentage</b>    | <b>96.45%</b> | <b>2.29%</b> | <b>1.24%</b> | <b>0.03%</b> |               |        |   |                |                     |

\* Includes Decoupling Complaints which are reported annually in separate filing on February 1st, Docket No. E002/GR-13-868.

**Customer Complaint Report  
 December, 2017**

|                                     | Agree         | Compromise   | Demonstrate  | Refuse       | Total         | %      | Turnaround Days for Closing a Complaint |                |                     |
|-------------------------------------|---------------|--------------|--------------|--------------|---------------|--------|---|----------------|---------------------|
|                                     |               |              |              |              |               |        | Initial Inquiry                         | within 10 days | Longer than 10 days |
| <b>Commercial</b>                   |               |              |              |              |               |        |   |                |                     |
| Billing errors                      | 1,519         | 14           | 4            | 0            | 1,537         | 66.22% | 1,526                                   | 8              | 3                   |
| Inaccurate Metering                 | 2             | 0            | 0            | 0            | 2             | 0.09%  | 2                                       | 0              | 0                   |
| Wrongful Disconnect                 | 171           | 2            | 0            | 0            | 173           | 7.45%  | 173                                     | 0              | 0                   |
| High Bill*                          | 37            | 1            | 0            | 0            | 38            | 1.64%  | 38                                      | 0              | 0                   |
| Inadequate Service                  | 388           | 2            | 1            | 1            | 392           | 16.89% | 392                                     | 0              | 0                   |
| Service Extension                   | 1             | 0            | 0            | 0            | 1             | 0.04%  | 1                                       | 0              | 0                   |
| Service Restoration                 | 175           | 0            | 2            | 1            | 178           | 7.67%  | 178                                     | 0              | 0                   |
| Complaint                           | 0             | 0            | 0            | 0            | 0             | 0.00%  | 0                                       | 0              | 0                   |
| <b>Total Commercial</b>             | <b>2,293</b>  | <b>19</b>    | <b>7</b>     | <b>2</b>     | <b>2,321</b>  |        | <b>2,310</b>                            | <b>8</b>       | <b>3</b>            |
| <b>Total Commercial Percentage</b>  | <b>98.79%</b> | <b>0.82%</b> | <b>0.30%</b> | <b>0.09%</b> |               |        |   |                |                     |
| <b>Industrial</b>                   |               |              |              |              |               |        |   |                |                     |
| Billing errors                      | 216           | 0            | 0            | 0            | 216           | 66.06% | 216                                     | 0              | 0                   |
| Inaccurate Metering                 | 0             | 0            | 0            | 0            | 0             | 0.00%  | 0                                       | 0              | 0                   |
| Wrongful Disconnect                 | 15            | 0            | 0            | 0            | 15            | 4.59%  | 15                                      | 0              | 0                   |
| High Bill*                          | 2             | 0            | 0            | 0            | 2             | 0.61%  | 2                                       | 0              | 0                   |
| Inadequate Service                  | 39            | 2            | 0            | 0            | 41            | 12.54% | 41                                      | 0              | 0                   |
| Service Extension                   | 0             | 0            | 0            | 0            | 0             | 0.00%  | 0                                       | 0              | 0                   |
| Service Restoration                 | 52            | 1            | 0            | 0            | 53            | 16.21% | 53                                      | 0              | 0                   |
| <b>Total Industrial</b>             | <b>324</b>    | <b>3</b>     | <b>0</b>     | <b>0</b>     | <b>327</b>    |        | <b>327</b>                              | <b>0</b>       | <b>0</b>            |
| <b>Total Industrial Percentage</b>  | <b>99.08%</b> | <b>0.92%</b> | <b>0.00%</b> | <b>0.00%</b> |               |        |   |                |                     |
| <b>Residential</b>                  |               |              |              |              |               |        |   |                |                     |
| Billing errors                      | 20,433        | 157          | 100          | 5            | 20,695        | 44.09% | 20,686                                  | 9              | 0                   |
| Inaccurate Metering                 | 6             | 0            | 0            | 0            | 6             | 0.01%  | 6                                       | 0              | 0                   |
| Wrongful Disconnect                 | 2,365         | 193          | 112          | 3            | 2,673         | 5.69%  | 2,672                                   | 1              | 0                   |
| High Bill*                          | 518           | 1            | 12           | 0            | 531           | 1.13%  | 530                                     | 1              | 0                   |
| Inadequate Service                  | 20,719        | 667          | 352          | 8            | 21,746        | 46.33% | 21,738                                  | 7              | 1                   |
| Service Extension                   | 6             | 0            | 0            | 0            | 6             | 0.01%  | 6                                       | 0              | 0                   |
| Service Restoration                 | 1,262         | 11           | 7            | 0            | 1,280         | 2.73%  | 1,280                                   | 0              | 0                   |
| MR-Special Call Cntr                | 2             | 0            | 0            | 0            | 2             | 0.00%  | 0                                       | 2              | 0                   |
| Complaint                           | 0             | 0            | 0            | 0            | 0             | 0.00%  | 0                                       | 0              | 0                   |
| <b>Total Residential</b>            | <b>45,311</b> | <b>1,029</b> | <b>583</b>   | <b>16</b>    | <b>46,939</b> |        | <b>46,918</b>                           | <b>20</b>      | <b>1</b>            |
| <b>Total Residential Percentage</b> | <b>96.53%</b> | <b>2.19%</b> | <b>1.24%</b> | <b>0.03%</b> |               |        |   |                |                     |
| <b>Total State of Minnesota</b>     | <b>47,928</b> | <b>1,051</b> | <b>590</b>   | <b>18</b>    | <b>49,587</b> |        | <b>49,555</b>                           | <b>28</b>      | <b>4</b>            |
| <b>Total ST of MN Percentage</b>    | <b>96.65%</b> | <b>2.12%</b> | <b>1.19%</b> | <b>0.04%</b> |               |        |   |                |                     |

\* Includes Decoupling Complaints which are reported annually in separate filing on February 1st, Docket No. E002/GR-13-868.

|                   |             |             |             |             |             | <b>5 Year Avg</b><br><b>(CAIDI using SAIDI/SAIFI)</b> |
|-------------------|-------------|-------------|-------------|-------------|-------------|---|
|                   |             |             |             |             |             | <b>Proposed Standards</b><br><b>for 2018</b>          |
| <b>Metro East</b> | <b>2013</b> | <b>2014</b> | <b>2015</b> | <b>2016</b> | <b>2017</b> |   |
| <b>SAIFI</b>      | 0.83        | 0.86        | 0.92        | 0.82        | 0.69        | <b>0.83</b>   |
| <b>CAIDI</b>      | 97.75       | 92.46       | 109.67      | 102.91      | 95.33       | <b>99.93</b>  |
| <b>SAIDI</b>      | 81.28       | 79.73       | 101.38      | 84.89       | 66.17       | <b>82.69</b>  |

|                   |             |             |             |             |             | <b>Proposed Standards</b><br><b>for 2018</b> |
|-------------------|-------------|-------------|-------------|-------------|-------------|--|
| <b>Metro West</b> | <b>2013</b> | <b>2014</b> | <b>2015</b> | <b>2016</b> | <b>2017</b> |  |
| <b>SAIFI</b>      | 0.94        | 0.84        | 0.84        | 0.82        | 0.71        | <b>0.83</b>                                  |
| <b>CAIDI</b>      | 105.09      | 98.50       | 108.44      | 101.43      | 97.84       | <b>102.46</b>                                |
| <b>SAIDI</b>      | 98.71       | 83.02       | 90.95       | 83.64       | 69.51       | <b>85.17</b>                                 |

|                  |             |             |             |             |             | <b>Proposed Standards</b><br><b>for 2018</b> |
|------------------|-------------|-------------|-------------|-------------|-------------|--|
| <b>Northwest</b> | <b>2013</b> | <b>2014</b> | <b>2015</b> | <b>2016</b> | <b>2017</b> |  |
| <b>SAIFI</b>     | 0.93        | 0.82        | 0.65        | 0.80        | 0.76        | <b>0.79</b>                                  |
| <b>CAIDI</b>     | 102.86      | 101.02      | 115.32      | 149.53      | 100.28      | <b>113.45</b>                                |
| <b>SAIDI</b>     | 95.90       | 82.80       | 75.27       | 119.36      | 75.77       | <b>89.82</b>                                 |

|                  |             |             |             |             |             | <b>Proposed Standards</b><br><b>for 2018</b> |
|------------------|-------------|-------------|-------------|-------------|-------------|--|
| <b>Southeast</b> | <b>2013</b> | <b>2014</b> | <b>2015</b> | <b>2016</b> | <b>2017</b> |  |
| <b>SAIFI</b>     | 0.75        | 0.81        | 0.72        | 0.81        | 0.80        | <b>0.78</b>                                  |
| <b>CAIDI</b>     | 145.11      | 158.78      | 115.64      | 126.85      | 109.73      | <b>131.46</b>                                |
| <b>SAIDI</b>     | 108.83      | 129.20      | 82.96       | 103.28      | 87.67       | <b>102.39</b>                                |

Notes:

Each year's calculations use storm day thresholds based on the prior five years of outage history.  
 SD Divisional feeders serving Minnesota customers are included in Southeast region  
 ND Divisional feeders serving Minnesota customers are included in Northwest region

This Attachment addresses the requirements of the Commission's Orders in past Service Quality Rules dockets, specifically:

- *Required Xcel to augment its next filing to include a description of the policies, procedures and actions that it has implemented, and plans to implement, to assure reliability, including information on how it is demonstrating pro-active management of the system as a whole, increased reliability, and active contingency planning*
- *Required Xcel to incorporate into its next filing a summary table that allows the reader to more easily assess the overall reliability of the system and identify the main factors that affect reliability.*

## **Overview**

Each year, Xcel Energy develops and manages programs to maintain and improve the performance of its transmission and distribution assets. We identify and implement these programs in an effort to assure reliability, enable proactive management of the system as a whole, and effectively respond when outages occur.

In this document, we provide a snapshot of our 2017 reliability results. We additionally outline our process for developing and implementing programs to maintain and improve our system, detail key indicators of the highest impact programs, and graphically chart current year outages by cause codes. We also provide reliability cost matrices, which compare reliability-related Capital and Operating and Maintenance expenses to our reliability results.

We have also included three tables to illustrate our reliability performance trending as well as a discussion around CEMI (Customers Experiencing Multiple Interruptions) tools to better reflect the customer experience.

## **2017 Reliability Results**

In 2017, we achieved a SAIDI result of 73.80 minutes, which exceeds our Quality of Service Plan tariff goal of 133.23 minutes.<sup>1</sup> Our 2017 SAIFI result of 0.72 outage events also exceeds the QSP tariff goal of 1.21 outage events.<sup>2</sup> The below graphs show overall system performance for the years 2014 through 2017, with storm days excluded, per the QSP tariff calculation method.

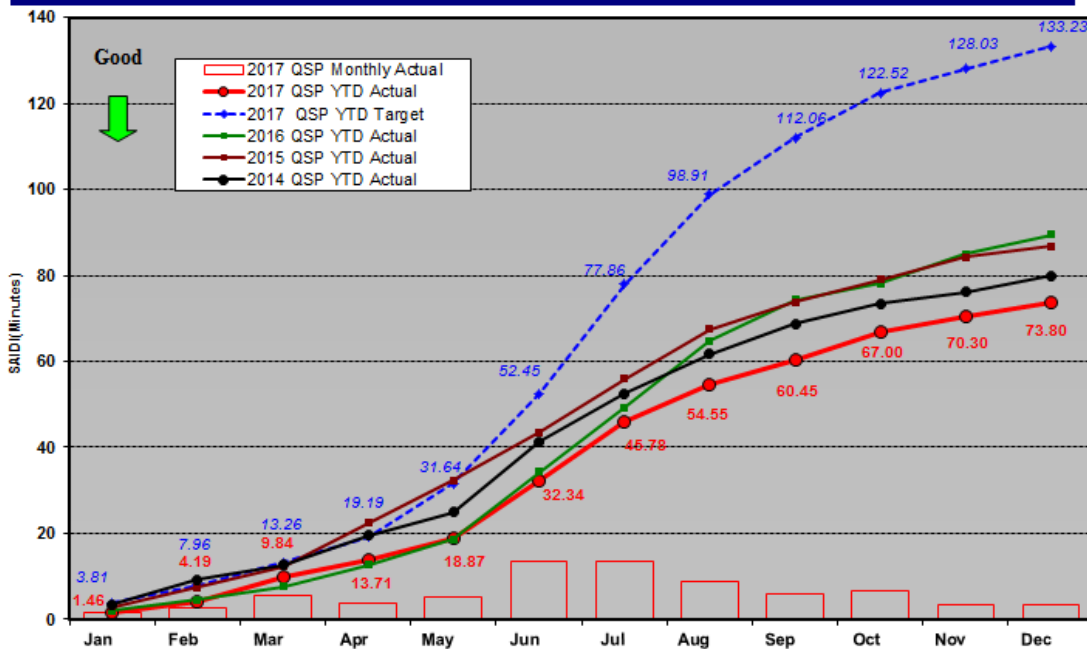
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<sup>1</sup> Minnesota Electric Rate Book MPUC. No. 2 Section 6, Sheets 7.1 through 7.11, approved by the Commission's August 12, 2013 Order in Docket Nos. E,G002/CI-02-2034 and E,G002/M-12-383

<sup>2</sup> In this context, "exceeding" the goals is a positive result, reflecting good system performance.



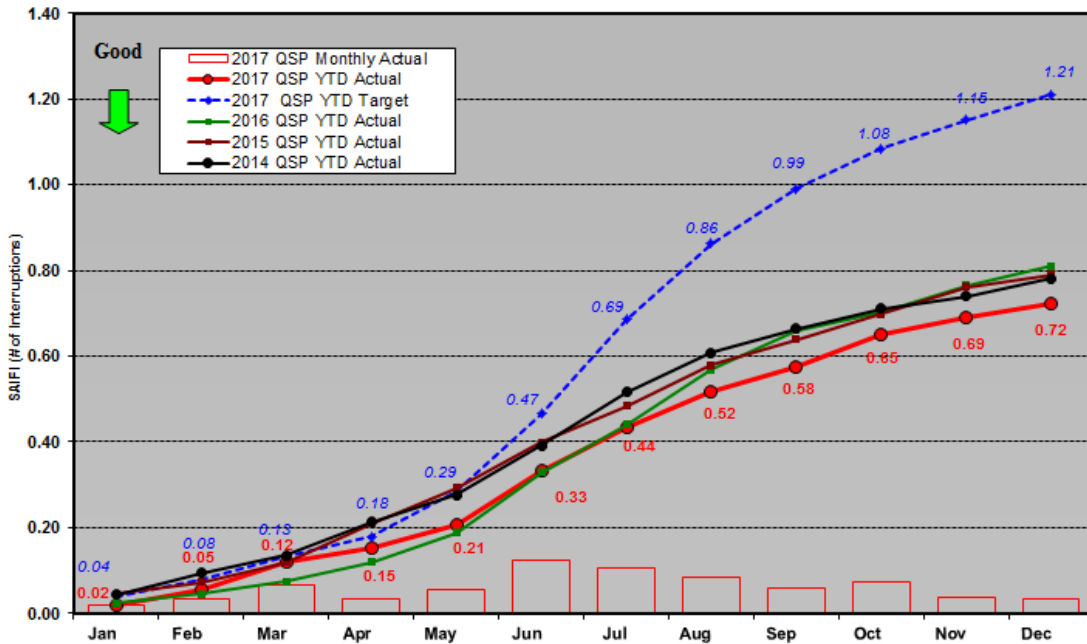
**MINNESOTA QSP SAIDI - YTD (Tariff Method/Threshold)**  
 (Excluding Transmission Line level, Including All Causes)



IEEE Normalized by Region after excluding Transmission Line level  
 Based on sustained outages only (>5 minutes), excluding Transmission Line level, including all Causes, Meter-based customer counts



**MINNESOTA QSP SAIFI - YTD (Tariff Method/Threshold)**  
 (Excluding Transmission Line level, Including All Causes)



IEEE Normalized by Region after excluding Transmission Line level  
 Based on sustained outages only (>5 minutes), excluding Transmission Line level, including all Causes, Meter-based customer counts

In an effort to provide the Commission a better idea of our reliability performance trending, we have provided three tables showing the historical performance, storm days and the current targets under three methodologies (including storms, our QSP Tariff, and the Minnesota Rules). These three tables are below.

| <b>Historical Reliability Indices &amp; Storm Day Exclusions</b> |       |             |             |             |             |             |             |             |             |             |
|--|-------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| <b>With Storms<sup>1</sup></b>                                   |       | <b>2009</b> | <b>2010</b> | <b>2011</b> | <b>2012</b> | <b>2013</b> | <b>2014</b> | <b>2015</b> | <b>2016</b> | <b>2017</b> |
| <b>Minnesota</b>   | SAIDI | 79.66       | 274.42      | 207.77      | 149.15      | 562.11      | 116.43      | 184.50      | 214.39      | 141.70      |
|  | SAIFI | 0.76        | 1.50        | 1.11        | 1.07        | 1.39        | 0.92        | 0.96        | 1.05        | 0.90        |
|  | CAIDI | 104.58      | 183.43      | 187.11      | 139.51      | 404.36      | 126.00      | 192.32      | 204.84      | 158.10      |
| <b>Metro East</b>  | SAIDI | 76.66       | 270.43      | 113.90      | 190.95      | 352.30      | 123.54      | 177.19      | 223.67      | 136.51      |
|  | SAIFI | 0.76        | 1.59        | 0.96        | 1.20        | 1.27        | 0.98        | 1.04        | 1.08        | 0.95        |
|  | CAIDI | 101.50      | 170.23      | 118.95      | 159.23      | 278.46      | 125.93      | 169.86      | 206.85      | 144.37      |
| <b>Metro West</b>  | SAIDI | 86.77       | 301.09      | 238.03      | 139.19      | 810.01      | 105.98      | 229.78      | 198.25      | 148.58      |
|  | SAIFI | 0.81        | 1.54        | 1.19        | 1.10        | 1.55        | 0.89        | 1.00        | 1.00        | 0.86        |
|  | CAIDI | 106.87      | 196.10      | 199.66      | 126.85      | 523.66      | 118.70      | 229.92      | 198.86      | 173.27      |
| <b>Northwest<sup>4</sup></b>                                     | SAIDI | 62.08       | 181.38      | 470.05      | 109.75      | 468.22      | 82.82       | 75.61       | 225.74      | 173.71      |
|  | SAIFI | 0.65        | 1.26        | 1.40        | 0.87        | 1.40        | 0.82        | 0.66        | 1.07        | 0.98        |
|  | CAIDI | 96.21       | 143.66      | 334.78      | 126.17      | 335.53      | 101.00      | 115.40      | 211.50      | 177.46      |
| <b>Southeast<sup>5</sup></b>                                     | SAIDI | 73.10       | 251.24      | 125.28      | 97.25       | 179.29      | 173.45      | 98.23       | 249.05      | 96.37       |
|  | SAIFI | 0.66        | 1.24        | 0.95        | 0.71        | 1.06        | 0.98        | 0.79        | 1.15        | 0.84        |
|  | CAIDI | 110.52      | 203.04      | 131.69      | 137.84      | 168.93      | 176.51      | 125.07      | 217.15      | 114.75      |

| <b>MN Tariff<sup>2</sup></b> |          | <b>2009</b> | <b>2010</b>                        | <b>2011</b>                         | <b>2012</b>                     | <b>2013</b>                      | <b>2014</b>                  | <b>2015</b>     | <b>2016</b>                  | <b>2017</b>              | <b>'17 Target</b> |
|------------------------------|----------|-------------|------------------------------------|-------------------------------------|---------------------------------|----------------------------------|------------------------------|-----------------|------------------------------|--------------------------|-------------------|
| <b>Minnesota</b>             | SAIDI    | 74.48       | 110.83                             | 83.87                               | 96.20                           | 91.12                            | 79.85                        | 86.83           | 89.49                        | 73.80                    | 133.23            |
|                              | SAIFI    | 0.71        | 1.12                               | 0.82                                | 0.88                            | 0.86                             | 0.78                         | 0.79            | 0.81                         | 0.72                     | 1.21              |
|                              | CAIDI    | 104.90      | 99.24                              | 102.08                              | 109.60                          | 106.51                           | 102.07                       | 109.90          | 110.54                       | 102.10                   | NA                |
| <b>Metro East</b>            | SAIDI    | 69.43       | 102.03                             | 79.34                               | 90.70                           | 83.56                            | 77.58                        | 93.71           | 95.49                        | 75.70                    |                   |
|                              | SAIFI    | 0.70        | 1.20                               | 0.83                                | 0.88                            | 0.83                             | 0.82                         | 0.90            | 0.87                         | 0.75                     |                   |
|                              | CAIDI    | 98.60       | 85.09                              | 96.00                               | 103.35                          | 100.72                           | 94.81                        | 104.58          | 110.07                       | 100.79                   |                   |
|                              | MED Days | 0<br>None   | 4<br>6/25,7/17,<br>10/26,11/13     | 2<br>7/1,7/10                       | 5<br>6/10,6/19,7/3<br>8/3,11/10 | 3<br>6/21,6/22,<br>6/23          | 3<br>2/20,6/14,6/16          | 2<br>7/12, 7/18 | 3<br>7/5,7/6,7/21            | 3<br>6/11, 6/14,<br>7/12 |                   |
| <b>Metro West</b>            | SAIDI    | 85.69       | 123.25                             | 88.20                               | 103.42                          | 101.24                           | 81.85                        | 88.98           | 82.90                        | 69.28                    |                   |
|                              | SAIFI    | 0.80        | 1.22                               | 0.87                                | 0.97                            | 0.96                             | 0.82                         | 0.82            | 0.82                         | 0.70                     |                   |
|                              | CAIDI    | 107.03      | 101.10                             | 101.09                              | 106.83                          | 105.85                           | 100.15                       | 108.90          | 101.51                       | 98.40                    |                   |
|                              | MED Days | 0<br>None   | 4<br>6/25,7/17,<br>10/26,11/13     | 5<br>5/22,7/1,7/10,<br>7/18,8/1     | 3<br>2/29,6/19,8/3              | 5<br>6/21,6/22,<br>6/23,6/24,8/6 | 1<br>6/14                    | 1<br>7/18       | 3<br>7/5,7/6,7/21            | 2<br>6/11, 6/14          |                   |
| <b>Northwest<sup>4</sup></b> | SAIDI    | 52.61       | 102.79                             | 79.42                               | 94.20                           | 85.78                            | 62.16                        | 69.39           | 80.19                        | 69.41                    |                   |
|                              | SAIFI    | 0.45        | 0.80                               | 0.69                                | 0.73                            | 0.75                             | 0.61                         | 0.57            | 0.56                         | 0.64                     |                   |
|                              | CAIDI    | 116.70      | 129.28                             | 115.38                              | 128.31                          | 113.87                           | 102.05                       | 121.05          | 143.58                       | 107.70                   |                   |
|                              | MED Days | 0<br>None   | 2<br>8/13,10/26                    | 6<br>2/20,5/30,7/1,<br>7/10,8/1,8/2 | 0<br>None                       | 2<br>6/21,6/22                   | 0<br>None                    | 0<br>None       | 4<br>5/19,6/19,7/5,<br>11/18 | 1<br>6/11                |                   |
| <b>Southeast<sup>5</sup></b> | SAIDI    | 59.71       | 89.58                              | 82.70                               | 82.40                           | 73.58                            | 94.45                        | 70.78           | 109.59                       | 92.84                    |                   |
|                              | SAIFI    | 0.56        | 0.69                               | 0.70                                | 0.59                            | 0.57                             | 0.67                         | 0.52            | 0.82                         | 0.79                     |                   |
|                              | CAIDI    | 107.39      | 130.66                             | 118.72                              | 138.48                          | 129.93                           | 141.93                       | 135.23          | 133.06                       | 117.19                   |                   |
|                              | MED Days | 0<br>None   | 5<br>6/25,6/26,7/24,<br>8/13,11/13 | 2<br>7/1,7/23                       | 1<br>8/4                        | 4<br>4/9,5/2,5/26,<br>6/21       | 4<br>2/20,6/16,8/4,<br>12/15 | 1<br>7/18       | 3<br>6/10,7/5,7/6            | 0<br>None                |                   |

| Annual Rules <sup>3</sup> |            | 2009      | 2010  | 2011   | 2012                            | 2013   | 2014  | 2015           | 2016                             | 2017                                      | '17 Target |
|---------------------------|------------|-----------|---|--|---------------------------------|--|---|----------------|----------------------------------|---|------------|
| Minnesota                 | SAIDI      | 77.36     | 101.99  | 81.10  | 99.00                           | 93.73  | 86.63   | 92.08          | 89.43                            | 70.85                                     | NA         |
|                           | SAIFI      | 0.74      | 1.10  | 0.82   | 0.90                            | 0.88   | 0.84  | 0.84           | 0.82                             | 0.72                                      | NA         |
|                           | CAIDI      | 104.49    | 92.54   | 98.75  | 109.47                          | 106.06   | 102.63  | 110.02         | 108.92                           | 98.63                                     | NA         |
| Metro East                | SAIDI      | 74.21     | 88.30   | 69.89  | 98.35                           | 81.28  | 79.73   | 101.38         | 84.89                            | 66.17                                     | 89.13      |
|                           | SAIFI      | 0.73      | 1.15  | 0.78   | 0.91                            | 0.83   | 0.86  | 0.92           | 0.82                             | 0.69                                      | 0.87       |
|                           | CAIDI      | 101.87    | 76.87   | 89.61  | 108.36                          | 97.75  | 92.46   | 109.67         | 102.91                           | 95.33                                     | 102.42     |
|                           | Storm Days | 1<br>5/20 | 7<br>6/25,7/17,8/10,<br>9/21,10/26,<br>10/27,11/13                    | 5<br>7/1,7/10,7/18,<br>8/1,8/2                   | 5<br>2/29,6/10,<br>6/19,7/3,8/3 | 5<br>4/23,6/21,<br>6/22,6/23,6/24              | 3<br>2/20,6/14,6/16                             | 1<br>7/18      | 5<br>6/25,7/5,7/6,<br>7/21,11/18 | 6<br>3/7,6/10,6/11,<br>6/14,7/12,7/<br>26 |            |
| Metro West                | SAIDI      | 84.43     | 114.85  | 85.07  | 103.98                          | 98.71  | 83.02   | 90.95          | 83.64                            | 69.51                                     | 92.06      |
|                           | SAIFI      | 0.79      | 1.19  | 0.87   | 0.98                            | 0.94   | 0.84  | 0.84           | 0.82                             | 0.71                                      | 0.89       |
|                           | CAIDI      | 106.58    | 96.49   | 98.20  | 105.93                          | 105.09   | 98.50   | 108.44         | 101.43                           | 97.84                                     | 103.98     |
|                           | Storm Days | 1<br>5/20 | 5<br>6/25,7/17,10/2<br>6 10/27,11/13                                  | 7<br>5/22,6/21,7/1,<br>7/10,7/18,8/1,<br>9/29    | 3<br>2/29,6/19,8/3              | 7<br>6/21,6/22,<br>6/23,6/24,<br>6/25,6/26,8/6 | 1<br>6/14                                       | 1<br>7/18      | 3<br>7/5,7/6,7/21                | 2<br>6/11,6/14                            |            |
| Northwest <sup>4</sup>    | SAIDI      | 62.07     | 84.02   | 103.27   | 106.07                          | 95.90  | 82.80   | 75.27          | 119.36                           | 75.77                                     | 95.88      |
|                           | SAIFI      | 0.65      | 0.77  | 0.85   | 0.84                            | 0.93   | 0.82  | 0.65           | 0.80                             | 0.76                                      | 0.81       |
|                           | CAIDI      | 96.21     | 108.70  | 122.13   | 125.62                          | 102.86   | 101.02  | 115.32         | 149.53                           | 100.28                                    | 118.45     |
|                           | Storm Days | 0<br>None | 8<br>5/22,6/11,7/17,<br>8/12,8/13,10/2<br>6,10/27,11/13               | 8<br>5/30,6/21,7/1,<br>7/5,7/10,7/15,<br>8/1,8/2 | 1<br>6/19                       | 3<br>6/21,6/22,6/23                            | 0<br>None                                       | 1<br>7/28      | 3<br>6/17,7/5,11/1<br>8          | 1<br>6/11                                 |            |
| Southeast <sup>5</sup>    | SAIDI      | 69.37     | 103.67  | 78.15  | 71.54                           | 108.83   | 129.20  | 82.96          | 103.28                           | 87.67                                     | 99.16      |
|                           | SAIFI      | 0.63      | 0.86  | 0.72   | 0.59                            | 0.75   | 0.81  | 0.72           | 0.81                             | 0.80                                      | 0.74       |
|                           | CAIDI      | 110.06    | 121.07  | 107.92   | 120.50                          | 145.11   | 158.78  | 115.64         | 126.85                           | 109.73                                    | 134.40     |
|                           | Storm Days | 1<br>5/20 | 10<br>6/11,6/17,6/25,<br>6/26,6/27,7/24,<br>8/10,8/13,10/2<br>6,11/13 | 7<br>6/14,7/1,7/11,<br>7/15,7/18,7/23<br>,7/27   | 5<br>6/14,6/19,6/2<br>0 8/4,9/5 | 4<br>5/2,6/21,7/13,<br>10/3                    | 7<br>2/20,4/27,<br>6/15,6/16,6/17<br>,6/18,8/21 | 2<br>6/22,7/18 | 4<br>6/10,6/14,7/5<br>,7/6       | 2<br>6/12,7/19                            |            |

- 1) With Storms - Includes All Days, Levels and Causes, Meter-based customer counts
- 2) MN Tariff - Normalized using IEEE 1366 at the Regional level after removing Transmission Line level. All Causes, Meter-based customer counts
- 3) Annual Rules - Normalized using 3 sigma of rolling 5 year count of sustained outages at the Regional level.  
All Levels, All Causes, Meter-based customer counts
- 4) Northwest - Includes customers counts and outages in the North Dakota work region that impact Minnesota customers
- 5) Southeast - Includes customers counts and outages in the South Dakota work region that impact Minnesota customers

## Reliability Management Program (RMP) Development

Our annual reliability planning process begins with an analysis of the causes for historical outages. We use pareto charts in our analysis, as provided below, which show outage cause codes for a multi-year time period, ranked in descending order by the number of Sustained Customer Interruptions (SCI).<sup>3</sup>

*Pareto Analysis.* The following pareto charts show feeder, tap, substation and transmission level customer interruptions by primary cause code for the years 2013 through 2017. The “balloons” highlight areas our plans are currently focusing on.

Comparable to last year’s report, these charts are based on Minnesota only using our QSP Tariff methodology.

<sup>3</sup> Electric service interruptions greater than five minutes in length.

We note that programs typically require multiple years before their full impact is realized. At first, the programs may only halt SCI increases, but continuing investment eventually reverses adverse trends.

Our current RMP investments are maintaining appropriate levels of overhead (OH) and underground (UG) system performance. Programs such as our Feeder Performance Improvement Program (FPIP) and Outage Exception Reporting Tool (OERT) have realized significant contributions in system performance, and are helping to eliminate or mitigate the failures that would be otherwise typical of aging equipment.

We recognize that it is critical to combine our RMP process with a longer-term view of the aging distribution system in order to provide our customers with reliable electric service, and are taking actions to that end.

**[TRADE SECRET BEGINS**

**TRADE SECRET ENDS]**



**[TRADE SECRET BEGINS**

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**TRADE SECRET ENDS]**

1. *Reliability Management Programs – ‘Star Chart’*

After considering the most common failures and their causes, as well as at-risk equipment, we develop work plans, or programs, to target our investments; we provide these programs in the ‘Star Chart’ on the following page. These programs represent those proactive investments in our transmission and distribution systems that we believe are most likely to improve overall reliability, asset health, and meet various contingency planning requirements. These investments are made in addition to other capital investments that provide for adequate capacity to meet customer requirements and to accommodate load switching during outage response to minimize customer impacts.

**[TRADE SECRET BEGINS**

**[TRADE SECRET ENDS]**

We have indicated the primary performance impacts of these programs with a red star, where applicable; possible performance impacts include SAIFI (System Average Interruption Frequency Index), CAIDI (Customer Average Interruption Duration Index), CEMI (Customers Experiencing Multiple Interruptions) and Customer Complaints.

These programs become part of the annual RMP. A Reliability Core Team (RCT), consisting of both Field and Planning functions monitors system performance and progress against the RMP on a monthly basis, taking actions as necessary to ensure the best possible system performance.

2. *Reliability Management Programs – Key Initiatives*

The chart below outlines primary program indicators for our key initiatives/programs. The actual amount of work completed under each program varies from year to year, and is based primarily on assessments of those areas requiring the greatest attention, as well as the results of our condition assessment (*i.e.*, the number of deficiencies requiring corrective action). For further description of the programs described in the Key Initiatives Chart, please see the Star Chart.

[TRADE SECRET BEGINS

TRADE SECRET ENDS]

3. *Reliability Management Programs – Work Practices*

Improvements to existing work practices that the RCT members and their staffs identify and implement are also an important contributor to the customer reliability experience and our reliability performance. These are operational and/or procedural changes intended to either reduce the *duration* of outages should they occur, or to reduce the *frequency* of outages.

As noted in the Reliability Management Work Practices Chart below, we assess and prioritize the actions based on a balance of their ability to positively impact reliability

(high, medium or low), as well our ability to incorporate into standard work practices – with most occurring concurrently. Many of these actions do not require additional funding to implement, and are achieved via ongoing employee training and/or incorporation into standard work procedures. We continuously monitor all actions, and update our plan as appropriate.

**[TRADE SECRET BEGINS**

**TRADE SECRET ENDS]**

**[TRADE SECRET BEGINS**

**TRADE SECRET ENDS]**

### **Reliability Cost Matrices**

Isolating the costs associated with providing customers reliable electric service is a challenge, which stems primarily from the interrelatedness of the work that our construction, maintenance, engineering, and other field operations areas perform. These functions are involved in repairing the system when it fails, performing maintenance on the system, and making capacity additions or other upgrades for our customers – all activities that contribute to providing our customers with reliable service.

For example, when we increase the capacity of a portion of our system for new customers, those improvements may also bring reliability improvements to current customers by providing them additional redundancy to the facilities currently serving them.

Given the inherent challenge of capturing the relevant costs of providing reliable service to our customers, we have identified two cost categories that we believe represent significant contributors to our reliability performance:

- 1) Distribution Control Center and Trouble Operations O&M costs; and,
- 2) Distribution Capital Reliability Expenditures.

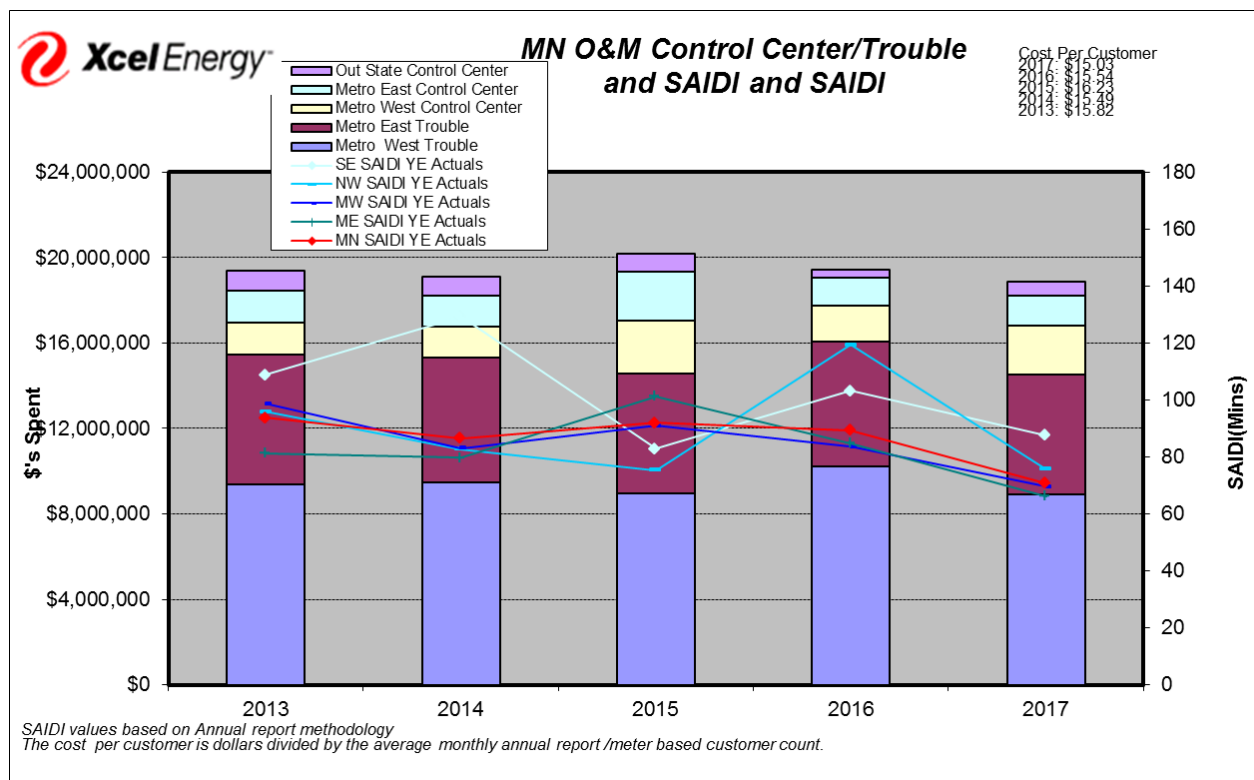
We provide below, graphs demonstrating these costs compared to both SAIDI and SAIFI for 2013-2017.

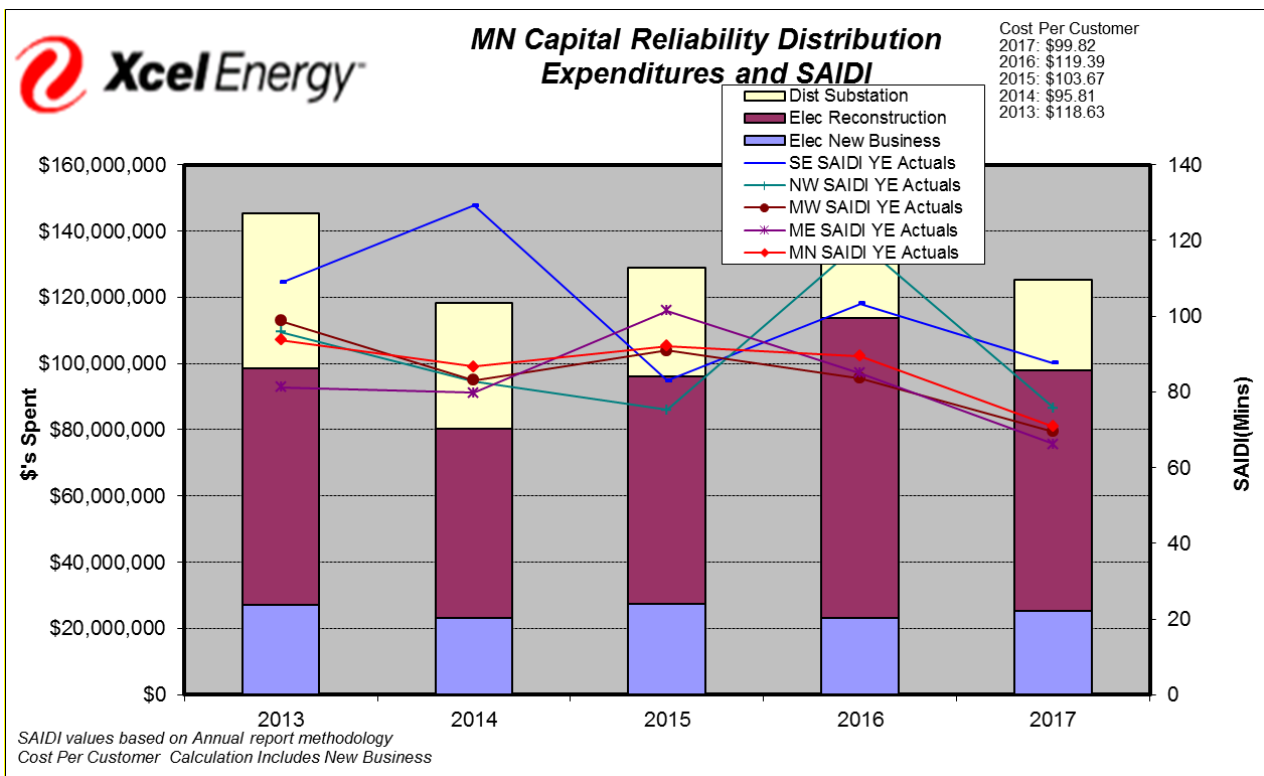
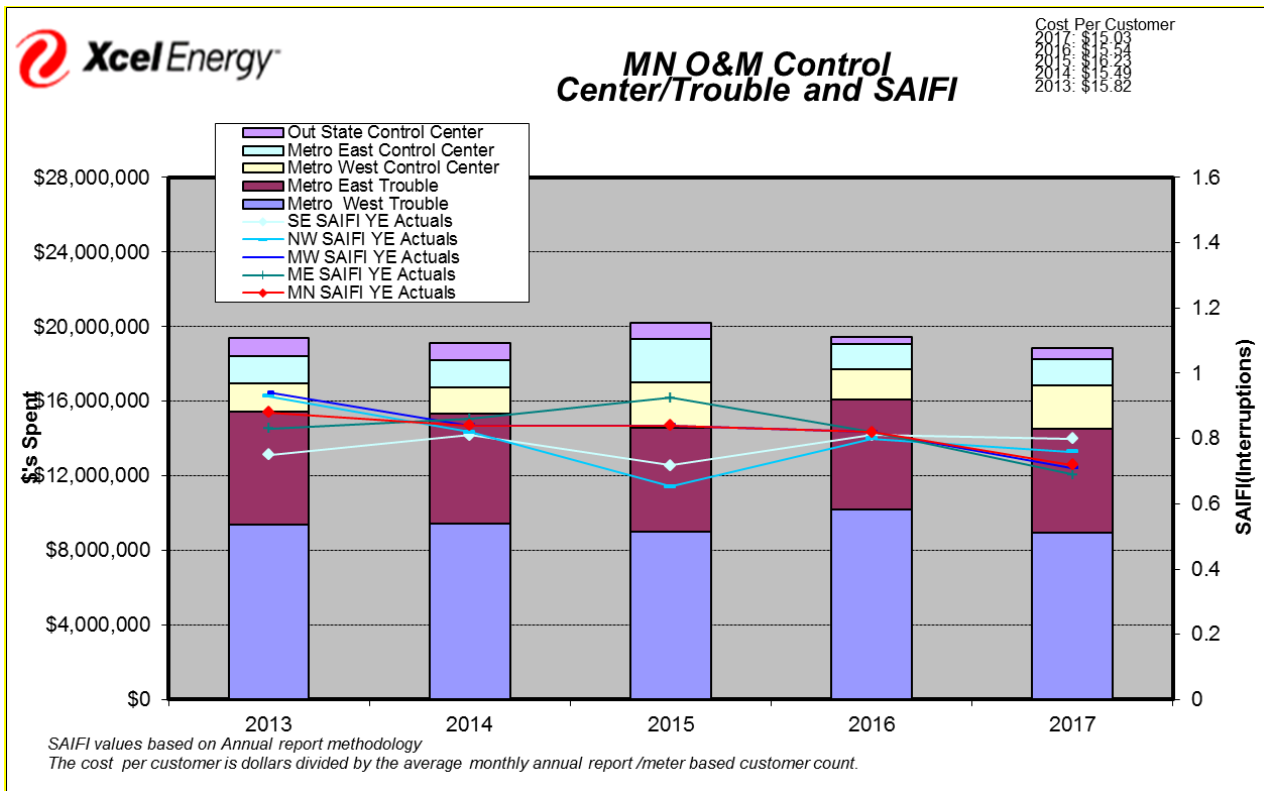


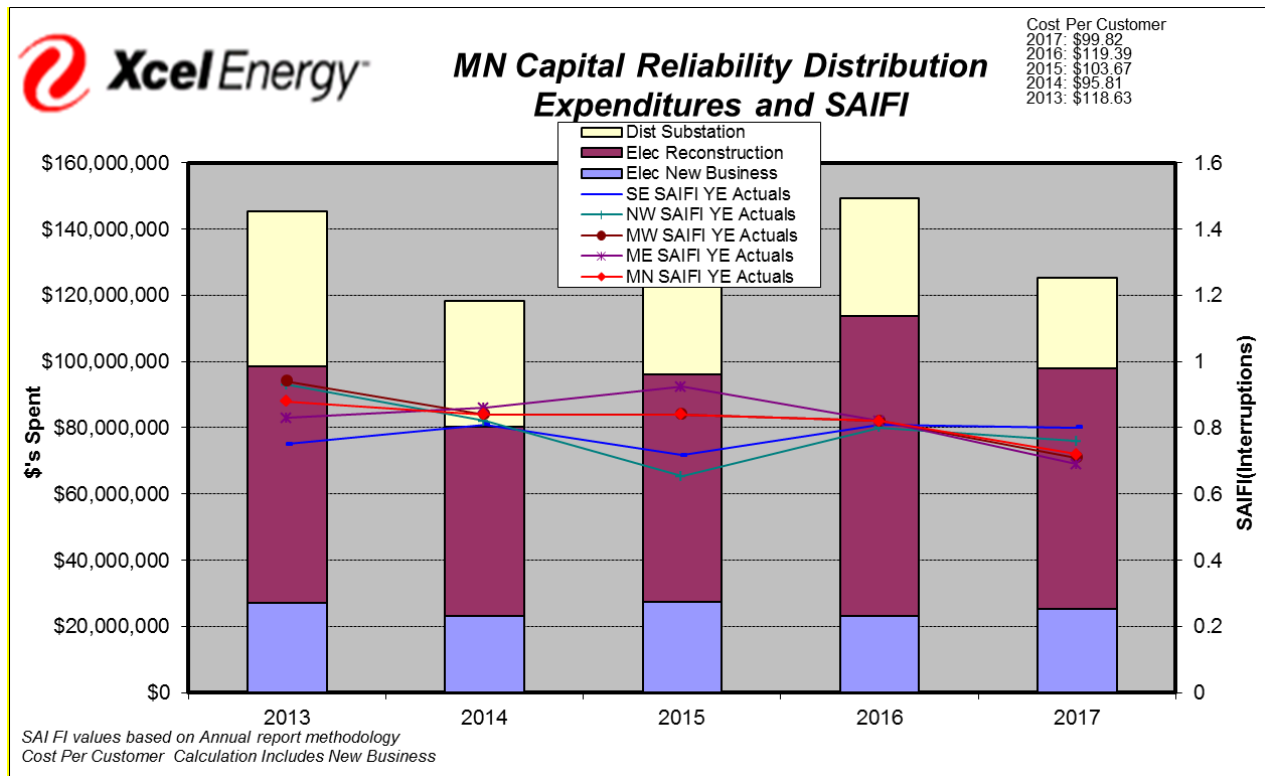
We note that we calculated the below Minnesota O&M Control Center/Trouble costs using the actual expenses (labor, fleet, materials, and other) of the five business areas whose primary responsibility is outage restoration and emergency response. We note that this includes dispatchers from North Dakota and South Dakota

Additionally, we provide graphs demonstrating our SAIDI and SAIFI performance compared to our Capital Reliability Expenditures.

We note that the following capital expenditures include any dollars spent that *may* have an impact on reliability. For example, this would include capacity funding and capital projects, such as cable replacement and our FPIP. On the following graphs, “new business” indicates areas where we are not established and needed to install either overhead or underground lines and “reconstruction” is any rebuilding or construction that is related to existing customers.







## CEMI Tools

Xcel Energy developed tools that allow us to better track the causes of our CEMI (Customers Experiencing Multiple Interruptions). In conjunction with a mapping tool we can look at our customers' experience as it identifies customers with multiple outages over a revolving 12 months and then provide a visual representation of those outages in our service territory. Although, the metric measures customers who have experienced at least six sustained outages during non-storm days, we can study customers' experience earlier. This customer centric tool helps highlight customers that have had outages from different causes rather than a single root cause. In other words, this tool does not look at the device that caused the outage, it examines how many times a customer was out of service regardless of the reason.

These tools compliment other programs, such as the Outage Exception Reporting Tool (OERT) that help us identify specific equipment issues (for instance, the same device tripping multiple times). The CEMI tools provide the link from the outage information to the specific customer information on a holistic basis. Since much of our analysis has focused on a system perspective, this new tool really rounds out our reliability planning by helping focus on the customers' experience.

There are many reasons a customer could have an outage. These causes include downed trees, animal contact, a car hitting a pole, or even a lightning strike. Each one of these causes could show up on a different report for a different piece of equipment that all flow down to the same customer. These tools allow us to analyze customer experience *truly* from a customers' experience. These tools help our efforts in the long term to reduce repeated outages for customers.

Using these tools, we created the attached maps of our service territory. The first map, **Attachment M1**, is an overall view of our entire Minnesota service territory and the second view, **Attachment M2**, is a zoomed in version of that same map for the Twin Cities metro area. Both of these maps are interactive and the views can be zoomed in and out to make the data more meaningful. Green dots represent those feeders that did not have any customers experiencing more than five outages in 2017.

Notes about the Map:

- Data is based on the CEMI under performance measure requirement of customers experiencing greater than 5 outages in a single year.
- Bubbles are color coded based on the number of customers in that area that experienced greater than 5 outages.
- The geographic location of the bubble is not a precise location of an individual problem but rather generally indicates the area affected.
- Outages occurring on major event days (storm days) are not included as part of the customer outage experience indicated on the map.

## Conclusion

In summary, this document outlines the Company's reliability results, provides trend information, and correlates both the impact of outside forces, as well as the positive actions we have taken to achieve our results. We have summarized the processes and data that we use to determine areas of greatest impact, develop targeted investment strategies, ensure the execution of annual work plans, and assure reliability and ongoing satisfactory performance of the system as a whole. We know that positive results are a direct reflection of consistent and sustained focus, and as such, believe our RMP and other actions provide a solid foundation on which to deliver reliable performance of our distribution system.

Color coding is representative of general outage experience in the area. It does not depict experience of anyone customer or set of customers. Outages occurring on a Major Event Day (storm) are not included in calculations based on IEEE 1366..

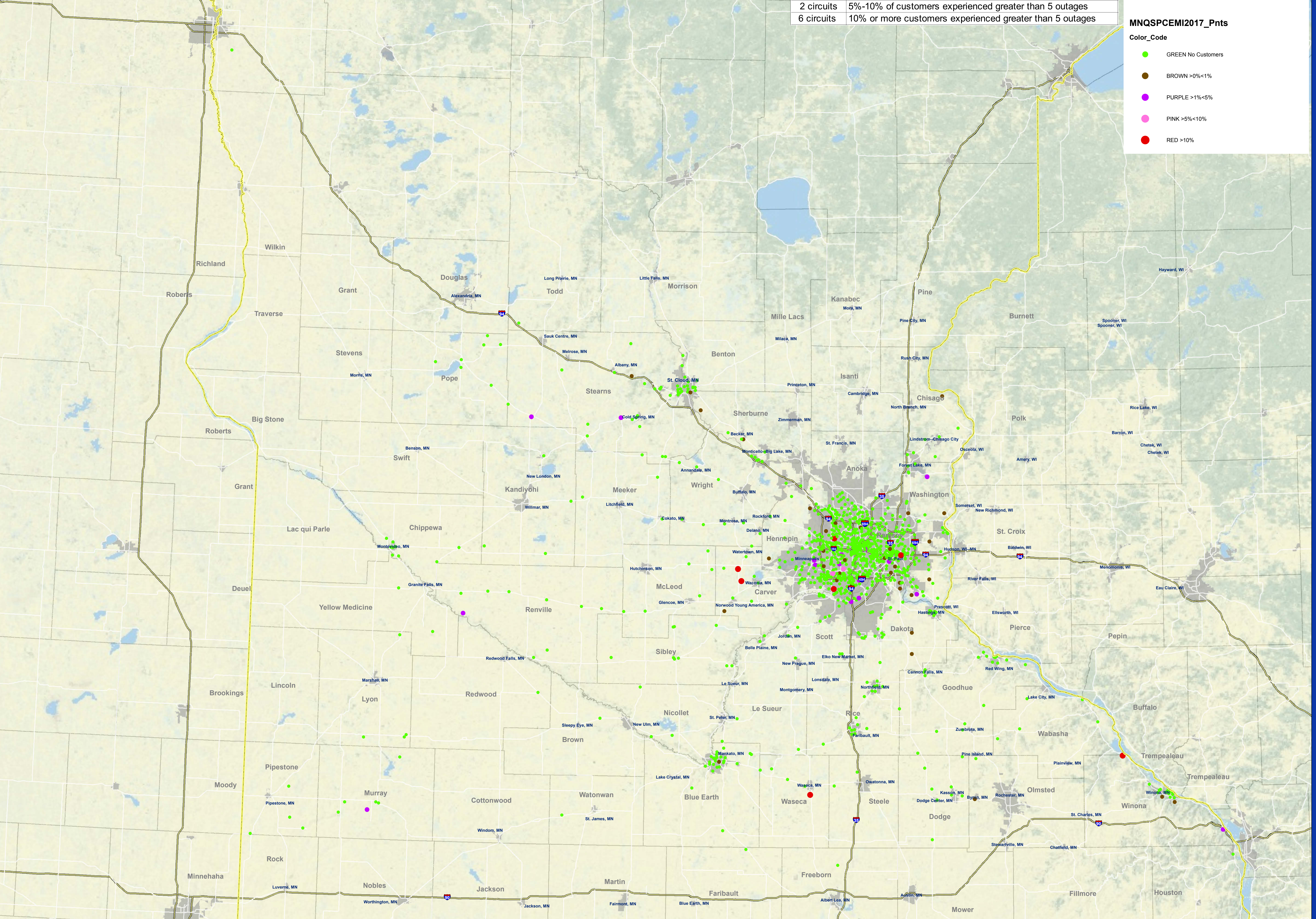
| NSPM Minnesota 2017 Distribution Circuit Feeder Performance |  |
|---|--|
| 984 circuits  | no customers experienced greater than 5 outages              |
| 35 circuits   | less than 1% of customers experienced greater than 5 outages |
| 15 circuits   | 1%-5% of customers experienced greater than 5 outages        |
| 2 circuits  | 5%-10% of customers experienced greater than 5 outages       |
| 6 circuits  | 10% or more customers experienced greater than 5 outages     |

**Legend**  
Customers experiencing greater than 5 outages in 2017

**MNQSPCEMI2017\_Pnts**

Color\_Code

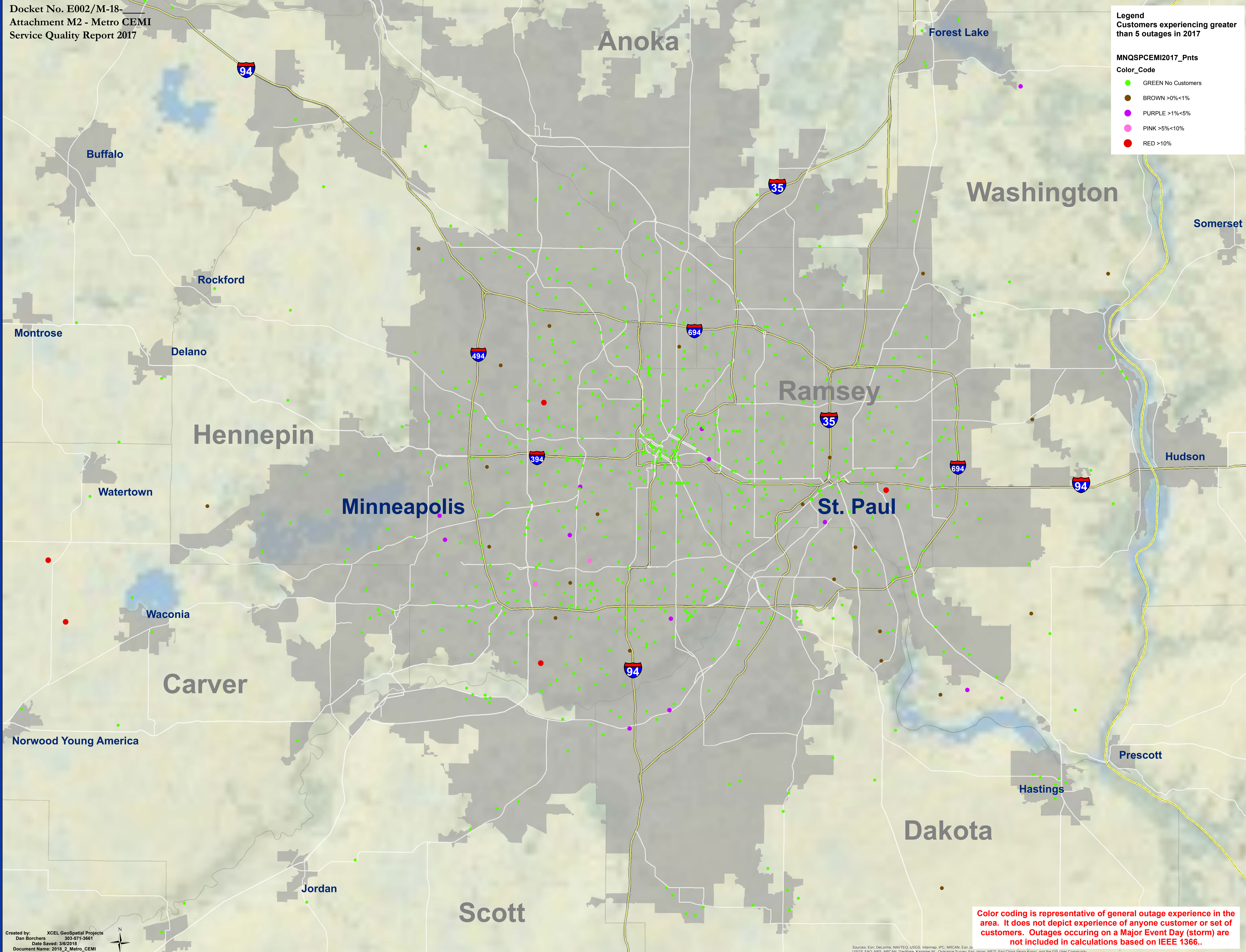
- GREEN No Customers
- BROWN >0%<1%
- PURPLE >1%<5%
- PINK >5%<10%
- RED >10%



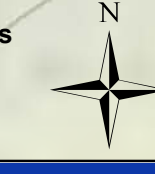
**Legend**  
Customers experiencing greater than 5 outages in 2017

MNQSPCEMI2017\_Pnts  
Color\_Code

- GREEN No Customers
- BROWN >0%<1%
- PURPLE >1%<5%
- PINK >5%<10%
- RED >10%



Color coding is representative of general outage experience in the area. It does not depict experience of anyone customer or set of customers. Outages occurring on a Major Event Day (storm) are not included in calculations based on IEEE 1366..



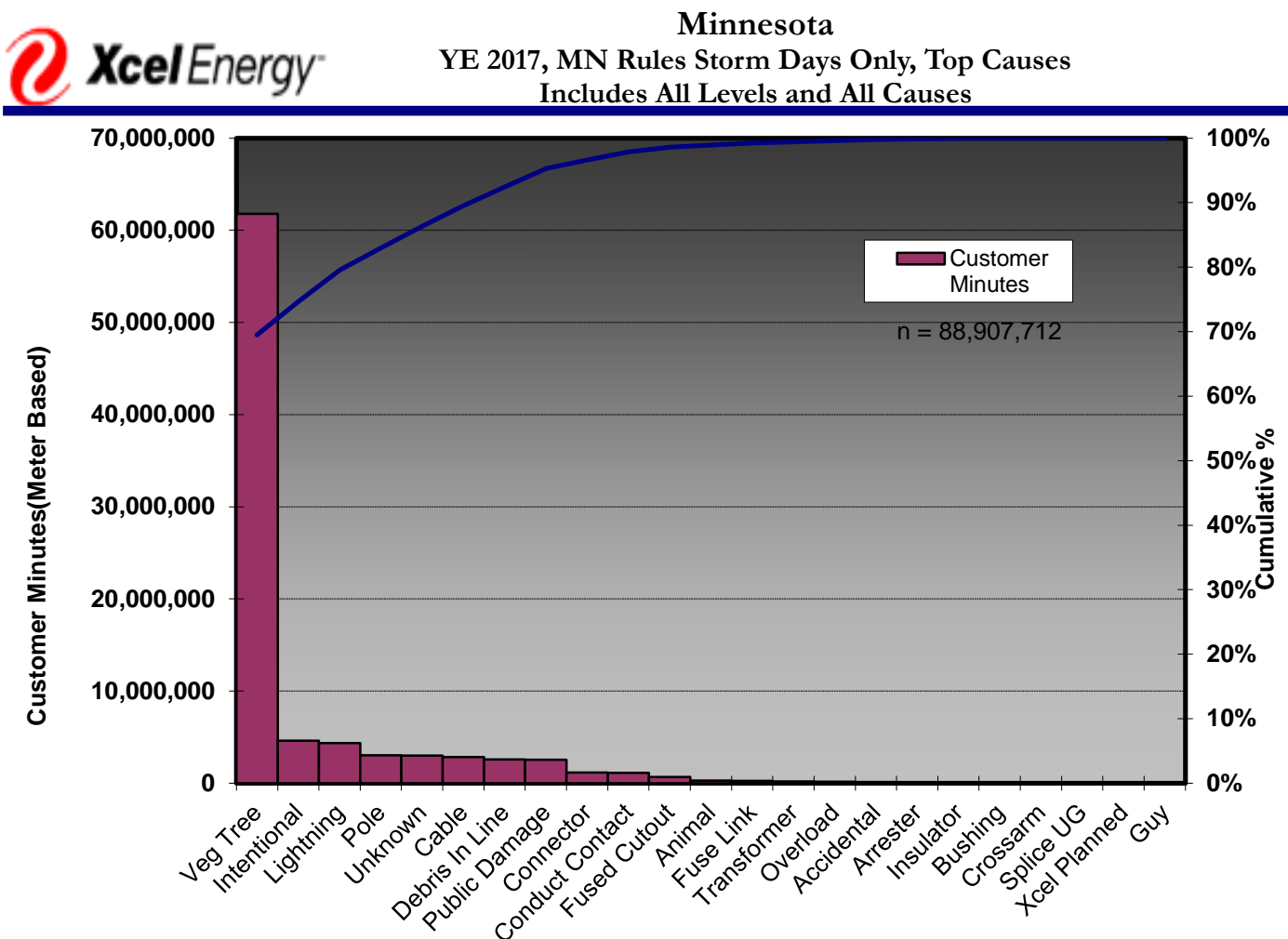
In this Attachment, we provide the following reliability-related information:

- Storm Day outage causes;
- “Near miss” storm days; and,
- Momentary Average Interruption Frequency Index (MAIFI) results.

In addition, in compliance with the Commission’s Order issued September 3, 2013 in Docket No. E002/GR-12-961 and the commitment we made in our September 19, 2013 Final Rates Compliance filing in that docket, we provide additional reporting of currently available MAIFI data.

### I. Storm Day Outage Causes

The below graph shows the major causes of outages for storm days using our Annual Rules storm normalization methodology.



## II. “Near-Miss” Storm Days

Following are the “near-miss” storm days by work center, using our Annual Rules storm normalization methodology. These days came within 10-30 percent of the storm threshold, thus, they came *close* to being designated as storm days:

### Annual Rules Normalization - Near Miss Days

| <u>Region</u>              | <u>Date</u> | <u>SAIDI on Days within 10% of Storm Threshold</u> | <u>SAIDI on Days within 10-20% of Storm Threshold</u> | <u>SAIDI on Days within 20-30% of Storm Threshold</u> |
|----------------------------|-------------|--|---|---|
| Metro East                 | 3/8/2017    | 2.1  |   |   |
| <i>Region Total Impact</i> |             | 2.1  |   |   |
|                            |             |  |   |   |
| Metro West                 | 6/10/2017   | 2.6  |   |   |
| Metro West                 | 6/12/2017   |  |   | 4.2   |
| <i>Region Total Impact</i> |             | 2.6  |   | 4.2   |
|                            |             |  |   |   |
| Northwest                  | 6/12/2017   |  | 0.4   |   |
| Northwest                  | 6/13/2017   |  | 2.1   |   |
| Northwest                  | 9/20/2017   | 2.4  |   |   |
| <i>Region Total Impact</i> |             | 2.4  | 2.6   |   |
|                            |             |  |   |   |
| Southeast                  | 7/10/2017   |  |   | 0.1   |
| <i>Region Total Impact</i> |             |  |   | 0.1   |
|                            |             |  |   |   |
| <b>MN Total Impact</b>     |             | 2.2  | 0.2   | 2.0   |

\* SAIDI impacts based on individual regional impacts.

\* MN Total based on overall state impacts. Not the additive of individual regional impacts.



### III. MAIFI Results

The following 2017 MAIFI reporting provides the MAIFI calculation for our SCADA-enabled Feeder-level protection devices that have operated within a five minute time period, using the IEEE Momentary Interruption Event definition.

Generally, momentary outage information is available at the Feeder-level and above, by Feeder circuit, and only on Feeders that are located in substations with Supervisory Control and Data Acquisition (SCADA) capability. With current distribution infrastructure, we are able to report MAIFI at the distribution Feeder level for approximately 92 percent of our retail customers.

Below are our 2017 MAIFI results followed by definitions of the calculation methodologies we applied:

**2017 MAIFI Results**

| <b>Region</b> | <b>Non-Normalized</b> | <b>Xcel Energy QSP Tariff</b> | <b>Xcel Energy Annual Rules</b> |
|---------------|-----------------------|-------------------------------|---------------------------------|
| Minnesota     | 0.76                  | 0.57                          | 0.70                            |
| Metro East    | 0.82                  | 0.65                          | 0.77                            |
| Metro West    | 0.61                  | 0.51                          | 0.55                            |
| Northwest     | 1.37                  | 0.85                          | 1.28                            |
| Southeast     | 0.73                  | 0.37                          | 0.69                            |

*Non-normalized*

- Includes outages occurring at all levels (distribution, substation, and transmission).
- Includes all outage cause codes.
- Calculations are based on the number of customers' billing accounts and meters.
- Include all days in calculations.

*Xcel Energy (Quality of Service Plan Tariff Method)*

- Excludes outages occurring at Transmission Line level.
- Includes all outage cause codes.
- Calculations are based on the number of customers' billing accounts and meters.

- Excludes all storm days that qualify under IEEE 2.5 normalization method after removing Transmission Line level.

*Xcel Energy (Annual Rules Method)*

- Includes outages occurring at all levels (distribution, substation, and transmission).
- Includes all outage cause codes.
- Calculations are based on the number of customers' billing accounts and meters.
- Excludes all storm days that qualify under Annual normalization method.

We have included the following five additional MAIFI reports as **Attachment N1**, in compliance with the Commission's Order issued September 3, 2013 in Docket No. E002/GR-12-961 and the template we provided in our September 19, 2013 Final Rates Compliance filing in that docket:

1. A table with annual MAIFI results for Minnesota and our four work centers using three different normalization methodologies;
2. A table with the MAIFI results and Customer Interruptions by month and by work center;
3. A five-year historical look for Minnesota MAIFI that shows the three different normalization methodologies and their associated trend lines;
4. A pareto chart showing the top causes for interruptions for the current year; and
5. A pareto chart showing the top causes for interruptions for the past five years.

Our system capabilities and procedures have changed and evolved over time. Therefore, the historical MAIFI results will be based on what our protocol and physical capabilities were for capturing momentary events at that point in time.

**With Storms - All Levels, All Causes**

| <b>MAIFI(&lt;=5Mins)</b> | <b>2013</b> | <b>2014</b> | <b>2015</b> | <b>2016</b> | <b>2017</b> |
|--------------------------|-------------|-------------|-------------|-------------|-------------|
| Metro East               | 0.97        | 0.70        | 0.89        | 0.80        | 0.82        |
| Metro West               | 0.87        | 0.82        | 0.73        | 0.85        | 0.61        |
| Northwest                | 1.82        | 1.51        | 1.44        | 1.42        | 1.37        |
| Southeast                | 0.89        | 1.20        | 0.88        | 1.05        | 0.73        |
| <b>Minnesota</b>         | 1.00        | 0.89        | 0.86        | 0.91        | 0.76        |

**New Tariff - No Transmission Line, All Causes**

| <b>MAIFI(&lt;=5Mins)</b> | <b>2013</b> | <b>2014</b> | <b>2015</b> | <b>2016</b> | <b>2017</b> |
|--------------------------|-------------|-------------|-------------|-------------|-------------|
| Metro East               | 0.77        | 0.55        | 0.81        | 0.70        | 0.65        |
| Metro West               | 0.65        | 0.67        | 0.55        | 0.65        | 0.51        |
| Northwest                | 0.67        | 0.81        | 0.69        | 0.64        | 0.85        |
| Southeast                | 0.35        | 0.34        | 0.32        | 0.39        | 0.37        |
| <b>Minnesota</b>         | 0.66        | 0.61        | 0.62        | 0.64        | 0.57        |

**Annual Rules - All Levels, All Causes**

| <b>MAIFI(&lt;=5Mins)</b> | <b>2013</b> | <b>2014</b> | <b>2015</b> | <b>2016</b> | <b>2017</b> |
|--------------------------|-------------|-------------|-------------|-------------|-------------|
| Metro East               | 0.80        | 0.57        | 0.83        | 0.74        | 0.77        |
| Metro West               | 0.77        | 0.80        | 0.64        | 0.76        | 0.55        |
| Northwest                | 1.28        | 1.51        | 1.32        | 0.96        | 1.28        |
| Southeast                | 0.78        | 0.98        | 0.83        | 0.99        | 0.69        |
| <b>Minnesota</b>         | 0.83        | 0.81        | 0.79        | 0.80        | 0.70        |

**MAIFI - <= 5 Minutes Duration**

| <b>Minnesota - MAIFI</b>                         |         |          |       |       |      |      |      |        |           |         |          |          |      |
|--|---------|----------|-------|-------|------|------|------|--------|-----------|---------|----------|----------|------|
|  | January | February | March | April | May  | June | July | August | September | October | November | December | YTD  |
| <b>2017</b> With Storms, All Levels, All Causes  | 0.04    | 0.02     | 0.06  | 0.06  | 0.04 | 0.14 | 0.10 | 0.04   | 0.09      | 0.13    | 0.01     | 0.03     | 0.76 |
| New Tariff Normalized, No Trans Line, All Causes | 0.03    | 0.02     | 0.04  | 0.04  | 0.04 | 0.07 | 0.09 | 0.04   | 0.08      | 0.08    | 0.01     | 0.03     | 0.57 |
| Annual Normalized, All Levels, All Causes        | 0.04    | 0.02     | 0.06  | 0.06  | 0.04 | 0.09 | 0.09 | 0.04   | 0.09      | 0.13    | 0.01     | 0.03     | 0.70 |
| <b>2016</b> With Storms, All Levels, All Causes  | 0.02    | 0.04     | 0.06  | 0.06  | 0.09 | 0.10 | 0.17 | 0.09   | 0.09      | 0.04    | 0.11     | 0.03     | 0.91 |
| New Tariff Normalized, No Trans Line, All Causes | 0.02    | 0.04     | 0.05  | 0.04  | 0.09 | 0.08 | 0.08 | 0.06   | 0.07      | 0.04    | 0.06     | 0.03     | 0.64 |
| Annual Normalized, All Levels, All Causes        | 0.02    | 0.04     | 0.06  | 0.06  | 0.09 | 0.10 | 0.11 | 0.09   | 0.09      | 0.04    | 0.07     | 0.03     | 0.80 |
| <b>2015</b> With Storms, All Levels, All Causes  | 0.04    | 0.02     | 0.04  | 0.04  | 0.10 | 0.12 | 0.22 | 0.07   | 0.10      | 0.03    | 0.04     | 0.02     | 0.86 |
| New Tariff Normalized, No Trans Line, All Causes | 0.04    | 0.00     | 0.03  | 0.03  | 0.08 | 0.10 | 0.12 | 0.06   | 0.08      | 0.03    | 0.03     | 0.02     | 0.62 |
| Annual Normalized, All Levels, All Causes        | 0.04    | 0.02     | 0.04  | 0.04  | 0.10 | 0.12 | 0.15 | 0.07   | 0.10      | 0.03    | 0.04     | 0.02     | 0.79 |
| <b>2014</b> With Storms, All Levels, All Causes  | 0.04    | 0.09     | 0.03  | 0.07  | 0.15 | 0.16 | 0.06 | 0.10   | 0.07      | 0.05    | 0.05     | 0.03     | 0.89 |
| New Tariff Normalized, No Trans Line, All Causes | 0.04    | 0.04     | 0.02  | 0.05  | 0.10 | 0.10 | 0.05 | 0.07   | 0.05      | 0.04    | 0.03     | 0.02     | 0.61 |
| Annual Normalized, All Levels, All Causes        | 0.04    | 0.06     | 0.03  | 0.07  | 0.15 | 0.11 | 0.06 | 0.10   | 0.07      | 0.05    | 0.05     | 0.03     | 0.81 |
| <b>2013</b> With Storms, All Levels, All Causes  | 0.03    | 0.04     | 0.05  | 0.10  | 0.09 | 0.25 | 0.10 | 0.11   | 0.05      | 0.06    | 0.03     | 0.07     | 1.00 |
| New Tariff Normalized, No Trans Line, All Causes | 0.03    | 0.03     | 0.05  | 0.09  | 0.07 | 0.09 | 0.10 | 0.07   | 0.05      | 0.05    | 0.02     | 0.02     | 0.66 |
| Annual Normalized, All Levels, All Causes        | 0.03    | 0.04     | 0.05  | 0.10  | 0.09 | 0.11 | 0.10 | 0.10   | 0.05      | 0.05    | 0.03     | 0.07     | 0.83 |

**MAIFI - <= 5 Minutes Duration**

| <b>Metro East - MAIFI</b>                        |         |          |       |       |      |      |      |        |           |         |          |          |      |
|--|---------|----------|-------|-------|------|------|------|--------|-----------|---------|----------|----------|------|
|  | January | February | March | April | May  | June | July | August | September | October | November | December | YTD  |
| <b>2017</b> With Storms, All Levels, All Causes  | 0.06    | 0.03     | 0.06  | 0.07  | 0.06 | 0.07 | 0.14 | 0.04   | 0.07      | 0.20    | 0.01     | 0.01     | 0.82 |
| New Tariff Normalized, No Trans Line, All Causes | 0.06    | 0.03     | 0.06  | 0.05  | 0.05 | 0.05 | 0.13 | 0.04   | 0.07      | 0.09    | 0.01     | 0.01     | 0.65 |
| Annual Normalized, All Levels, All Causes        | 0.06    | 0.03     | 0.05  | 0.07  | 0.06 | 0.05 | 0.12 | 0.04   | 0.07      | 0.20    | 0.01     | 0.01     | 0.77 |
| <b>2016</b> With Storms, All Levels, All Causes  | 0.02    | 0.07     | 0.08  | 0.10  | 0.07 | 0.06 | 0.11 | 0.09   | 0.12      | 0.03    | 0.06     | 0.01     | 0.80 |
| New Tariff Normalized, No Trans Line, All Causes | 0.02    | 0.07     | 0.08  | 0.07  | 0.07 | 0.06 | 0.06 | 0.09   | 0.10      | 0.03    | 0.06     | 0.01     | 0.70 |
| Annual Normalized, All Levels, All Causes        | 0.02    | 0.07     | 0.08  | 0.10  | 0.07 | 0.06 | 0.06 | 0.09   | 0.12      | 0.03    | 0.05     | 0.01     | 0.74 |
| <b>2015</b> With Storms, All Levels, All Causes  | 0.04    | 0.00     | 0.05  | 0.05  | 0.09 | 0.09 | 0.28 | 0.09   | 0.11      | 0.03    | 0.04     | 0.04     | 0.89 |
| New Tariff Normalized, No Trans Line, All Causes | 0.04    | 0.00     | 0.05  | 0.05  | 0.09 | 0.08 | 0.21 | 0.09   | 0.10      | 0.03    | 0.04     | 0.04     | 0.81 |
| Annual Normalized, All Levels, All Causes        | 0.04    | 0.00     | 0.05  | 0.05  | 0.09 | 0.09 | 0.21 | 0.09   | 0.11      | 0.03    | 0.04     | 0.04     | 0.83 |
| <b>2014</b> With Storms, All Levels, All Causes  | 0.04    | 0.06     | 0.02  | 0.05  | 0.10 | 0.16 | 0.07 | 0.04   | 0.02      | 0.03    | 0.08     | 0.02     | 0.70 |
| New Tariff Normalized, No Trans Line, All Causes | 0.04    | 0.01     | 0.02  | 0.05  | 0.10 | 0.08 | 0.07 | 0.04   | 0.02      | 0.03    | 0.06     | 0.02     | 0.55 |
| Annual Normalized, All Levels, All Causes        | 0.04    | 0.01     | 0.02  | 0.05  | 0.10 | 0.08 | 0.07 | 0.04   | 0.02      | 0.03    | 0.08     | 0.02     | 0.57 |
| <b>2013</b> With Storms, All Levels, All Causes  | 0.04    | 0.05     | 0.04  | 0.12  | 0.11 | 0.27 | 0.07 | 0.05   | 0.09      | 0.05    | 0.03     | 0.04     | 0.97 |
| New Tariff Normalized, No Trans Line, All Causes | 0.04    | 0.04     | 0.04  | 0.12  | 0.10 | 0.10 | 0.07 | 0.05   | 0.09      | 0.05    | 0.03     | 0.04     | 0.77 |
| Annual Normalized, All Levels, All Causes        | 0.04    | 0.05     | 0.04  | 0.12  | 0.11 | 0.10 | 0.07 | 0.05   | 0.09      | 0.05    | 0.03     | 0.04     | 0.80 |

**MAIFI - <= 5 Minutes Duration**

| <b>Metro West - MAIFI</b>                        | <b>January</b> | <b>February</b> | <b>March</b> | <b>April</b> | <b>May</b> | <b>June</b> | <b>July</b> | <b>August</b> | <b>September</b> | <b>October</b> | <b>November</b> | <b>December</b> | <b>YTD</b> |
|--|----------------|-----------------|--------------|--------------|------------|-------------|-------------|---------------|------------------|----------------|-----------------|-----------------|------------|
| <b>2017</b> With Storms, All Levels, All Causes  | 0.02           | 0.02            | 0.04         | 0.05         | 0.03       | 0.15        | 0.07        | 0.03          | 0.10             | 0.08           | 0.02            | 0.02            | 0.61       |
| New Tariff Normalized, No Trans Line, All Causes | 0.02           | 0.02            | 0.04         | 0.04         | 0.03       | 0.08        | 0.07        | 0.03          | 0.09             | 0.05           | 0.02            | 0.02            | 0.51       |
| Annual Normalized, All Levels, All Causes        | 0.02           | 0.02            | 0.04         | 0.05         | 0.03       | 0.08        | 0.07        | 0.03          | 0.10             | 0.08           | 0.02            | 0.02            | 0.55       |
| <b>2016</b> With Storms, All Levels, All Causes  | 0.02           | 0.04            | 0.04         | 0.04         | 0.11       | 0.14        | 0.19        | 0.06          | 0.04             | 0.04           | 0.09            | 0.06            | 0.85       |
| New Tariff Normalized, No Trans Line, All Causes | 0.02           | 0.04            | 0.04         | 0.03         | 0.11       | 0.10        | 0.08        | 0.03          | 0.04             | 0.04           | 0.07            | 0.06            | 0.65       |
| Annual Normalized, All Levels, All Causes        | 0.02           | 0.04            | 0.04         | 0.04         | 0.11       | 0.14        | 0.10        | 0.06          | 0.04             | 0.04           | 0.09            | 0.06            | 0.76       |
| <b>2015</b> With Storms, All Levels, All Causes  | 0.03           | 0.04            | 0.02         | 0.02         | 0.10       | 0.14        | 0.16        | 0.06          | 0.08             | 0.04           | 0.03            | 0.00            | 0.73       |
| New Tariff Normalized, No Trans Line, All Causes | 0.03           | 0.01            | 0.01         | 0.02         | 0.08       | 0.14        | 0.08        | 0.05          | 0.05             | 0.04           | 0.03            | 0.00            | 0.55       |
| Annual Normalized, All Levels, All Causes        | 0.03           | 0.04            | 0.02         | 0.02         | 0.10       | 0.14        | 0.08        | 0.06          | 0.08             | 0.04           | 0.03            | 0.00            | 0.64       |
| <b>2014</b> With Storms, All Levels, All Causes  | 0.01           | 0.08            | 0.03         | 0.06         | 0.15       | 0.14        | 0.06        | 0.12          | 0.09             | 0.05           | 0.02            | 0.02            | 0.82       |
| New Tariff Normalized, No Trans Line, All Causes | 0.01           | 0.07            | 0.03         | 0.06         | 0.09       | 0.11        | 0.05        | 0.08          | 0.09             | 0.05           | 0.02            | 0.02            | 0.67       |
| Annual Normalized, All Levels, All Causes        | 0.01           | 0.08            | 0.03         | 0.06         | 0.15       | 0.11        | 0.06        | 0.12          | 0.09             | 0.05           | 0.02            | 0.02            | 0.80       |
| <b>2013</b> With Storms, All Levels, All Causes  | 0.02           | 0.02            | 0.05         | 0.07         | 0.06       | 0.18        | 0.15        | 0.16          | 0.03             | 0.05           | 0.03            | 0.06            | 0.87       |
| New Tariff Normalized, No Trans Line, All Causes | 0.02           | 0.02            | 0.05         | 0.05         | 0.06       | 0.09        | 0.13        | 0.09          | 0.03             | 0.05           | 0.02            | 0.02            | 0.65       |
| Annual Normalized, All Levels, All Causes        | 0.02           | 0.02            | 0.05         | 0.07         | 0.06       | 0.11        | 0.15        | 0.13          | 0.03             | 0.05           | 0.03            | 0.06            | 0.77       |
| <b>MAIFI - &lt;= 5 Minutes Duration</b>          |                |                 |              |              |            |             |             |               |                  |                |                 |                 |            |
| <b>Northwest - MAIFI</b>                         | <b>January</b> | <b>February</b> | <b>March</b> | <b>April</b> | <b>May</b> | <b>June</b> | <b>July</b> | <b>August</b> | <b>September</b> | <b>October</b> | <b>November</b> | <b>December</b> | <b>YTD</b> |
| <b>2017</b> With Storms, All Levels, All Causes  | 0.09           | 0.01            | 0.20         | 0.08         | 0.09       | 0.27        | 0.08        | 0.06          | 0.18             | 0.17           | 0.00            | 0.13            | 1.37       |
| New Tariff Normalized, No Trans Line, All Causes | 0.05           | 0.01            | 0.09         | 0.02         | 0.03       | 0.10        | 0.05        | 0.04          | 0.17             | 0.17           | 0.00            | 0.13            | 0.85       |
| Annual Normalized, All Levels, All Causes        | 0.09           | 0.01            | 0.20         | 0.08         | 0.09       | 0.18        | 0.08        | 0.06          | 0.18             | 0.17           | 0.00            | 0.13            | 1.28       |
| <b>2016</b> With Storms, All Levels, All Causes  | 0.00           | 0.01            | 0.10         | 0.04         | 0.17       | 0.11        | 0.24        | 0.08          | 0.13             | 0.07           | 0.42            | 0.04            | 1.42       |
| New Tariff Normalized, No Trans Line, All Causes | 0.00           | 0.01            | 0.08         | 0.03         | 0.11       | 0.07        | 0.07        | 0.05          | 0.10             | 0.07           | 0.01            | 0.03            | 0.64       |
| Annual Normalized, All Levels, All Causes        | 0.00           | 0.01            | 0.10         | 0.04         | 0.17       | 0.11        | 0.19        | 0.08          | 0.13             | 0.07           | 0.01            | 0.04            | 0.96       |
| <b>2015</b> With Storms, All Levels, All Causes  | 0.10           | 0.02            | 0.16         | 0.08         | 0.16       | 0.15        | 0.37        | 0.07          | 0.23             | 0.01           | 0.05            | 0.05            | 1.44       |
| New Tariff Normalized, No Trans Line, All Causes | 0.07           | 0.01            | 0.05         | 0.04         | 0.09       | 0.04        | 0.16        | 0.03          | 0.15             | 0.01           | 0.01            | 0.03            | 0.69       |
| Annual Normalized, All Levels, All Causes        | 0.10           | 0.02            | 0.16         | 0.08         | 0.16       | 0.15        | 0.25        | 0.07          | 0.23             | 0.01           | 0.05            | 0.05            | 1.32       |
| <b>2014</b> With Storms, All Levels, All Causes  | 0.20           | 0.08            | 0.04         | 0.21         | 0.24       | 0.27        | 0.08        | 0.25          | 0.05             | 0.04           | 0.01            | 0.04            | 1.51       |
| New Tariff Normalized, No Trans Line, All Causes | 0.20           | 0.03            | 0.04         | 0.06         | 0.15       | 0.14        | 0.00        | 0.10          | 0.00             | 0.04           | 0.00            | 0.04            | 0.81       |
| Annual Normalized, All Levels, All Causes        | 0.20           | 0.08            | 0.04         | 0.21         | 0.24       | 0.27        | 0.08        | 0.25          | 0.05             | 0.04           | 0.01            | 0.04            | 1.51       |
| <b>2013</b> With Storms, All Levels, All Causes  | 0.08           | 0.10            | 0.10         | 0.20         | 0.18       | 0.65        | 0.04        | 0.15          | 0.05             | 0.09           | 0.01            | 0.16            | 1.82       |
| New Tariff Normalized, No Trans Line, All Causes | 0.05           | 0.03            | 0.09         | 0.16         | 0.10       | 0.06        | 0.04        | 0.04          | 0.03             | 0.06           | 0.00            | 0.01            | 0.67       |
| Annual Normalized, All Levels, All Causes        | 0.08           | 0.10            | 0.10         | 0.20         | 0.18       | 0.11        | 0.04        | 0.15          | 0.05             | 0.09           | 0.01            | 0.16            | 1.28       |
| <b>MAIFI - &lt;= 5 Minutes Duration</b>          |                |                 |              |              |            |             |             |               |                  |                |                 |                 |            |

| <b>Southeast - MAIFI</b>                  |  | <b>January</b> | <b>February</b> | <b>March</b> | <b>April</b> | <b>May</b> | <b>June</b> | <b>July</b> | <b>August</b> | <b>September</b> | <b>October</b> | <b>November</b> | <b>December</b> | <b>YTD</b> |
|---|--|----------------|-----------------|--------------|--------------|------------|-------------|-------------|---------------|------------------|----------------|-----------------|-----------------|------------|
| <b>2017</b>                               | With Storms, All Levels, All Causes              | 0.00           | 0.02            | 0.03         | 0.07         | 0.03       | 0.18        | 0.15        | 0.05          | 0.04             | 0.15           | 0.01            | 0.00            | 0.73       |
|   | New Tariff Normalized, No Trans Line, All Causes | 0.00           | 0.02            | 0.00         | 0.04         | 0.03       | 0.02        | 0.09        | 0.03          | 0.03             | 0.10           | 0.01            | 0.00            | 0.37       |
|   | Annual Normalized, All Levels, All Causes        | 0.00           | 0.02            | 0.03         | 0.07         | 0.03       | 0.16        | 0.13        | 0.05          | 0.04             | 0.15           | 0.01            | 0.00            | 0.69       |
| <b>2016</b>                               | With Storms, All Levels, All Causes              | 0.05           | 0.00            | 0.10         | 0.03         | 0.02       | 0.05        | 0.26        | 0.26          | 0.21             | 0.03           | 0.05            | 0.00            | 1.05       |
|   | New Tariff Normalized, No Trans Line, All Causes | 0.03           | 0.00            | 0.00         | 0.01         | 0.02       | 0.02        | 0.10        | 0.07          | 0.06             | 0.03           | 0.05            | 0.00            | 0.39       |
|   | Annual Normalized, All Levels, All Causes        | 0.05           | 0.00            | 0.10         | 0.03         | 0.02       | 0.02        | 0.22        | 0.26          | 0.21             | 0.03           | 0.05            | 0.00            | 0.99       |
| <b>2015</b>                               | With Storms, All Levels, All Causes              | 0.04           | 0.06            | 0.05         | 0.06         | 0.10       | 0.11        | 0.16        | 0.07          | 0.10             | 0.04           | 0.08            | 0.01            | 0.88       |
|   | New Tariff Normalized, No Trans Line, All Causes | 0.00           | 0.00            | 0.01         | 0.03         | 0.02       | 0.05        | 0.03        | 0.03          | 0.06             | 0.04           | 0.04            | 0.00            | 0.32       |
|   | Annual Normalized, All Levels, All Causes        | 0.04           | 0.06            | 0.05         | 0.06         | 0.10       | 0.06        | 0.16        | 0.07          | 0.10             | 0.04           | 0.08            | 0.01            | 0.83       |
| <b>2014</b>                               | With Storms, All Levels, All Causes              | 0.02           | 0.25            | 0.02         | 0.01         | 0.19       | 0.14        | 0.02        | 0.07          | 0.11             | 0.13           | 0.15            | 0.10            | 1.20       |
|   | New Tariff Normalized, No Trans Line, All Causes | 0.01           | 0.01            | 0.00         | 0.00         | 0.07       | 0.04        | 0.02        | 0.04          | 0.05             | 0.08           | 0.00            | 0.02            | 0.34       |
|   | Annual Normalized, All Levels, All Causes        | 0.02           | 0.10            | 0.02         | 0.01         | 0.19       | 0.08        | 0.02        | 0.05          | 0.11             | 0.13           | 0.15            | 0.10            | 0.98       |
| <b>2013</b>                               | With Storms, All Levels, All Causes              | 0.04           | 0.03            | 0.00         | 0.12         | 0.12       | 0.11        | 0.10        | 0.06          | 0.03             | 0.09           | 0.02            | 0.15            | 0.89       |
|   | New Tariff Normalized, No Trans Line, All Causes | 0.02           | 0.02            | 0.00         | 0.09         | 0.03       | 0.01        | 0.06        | 0.03          | 0.03             | 0.03           | 0.01            | 0.01            | 0.35       |
|   | Annual Normalized, All Levels, All Causes        | 0.04           | 0.03            | 0.00         | 0.12         | 0.06       | 0.11        | 0.09        | 0.06          | 0.03             | 0.06           | 0.02            | 0.15            | 0.78       |
| <b>MAIFI - &lt;= 5 Minutes Duration</b>   |  |                |                 |              |              |            |             |             |               |                  |                |                 |                 |            |
| <b>Minnesota - Customer Interruptions</b> |  | <b>January</b> | <b>February</b> | <b>March</b> | <b>April</b> | <b>May</b> | <b>June</b> | <b>July</b> | <b>August</b> | <b>September</b> | <b>October</b> | <b>November</b> | <b>December</b> | <b>YTD</b> |
| <b>2017</b>                               | With Storms, All Levels, All Causes              | 48,438         | 25,199          | 72,370       | 78,526       | 56,089     | 171,914     | 124,532     | 49,070        | 110,614          | 168,822        | 17,302          | 35,011          | 957,887    |
|   | New Tariff Normalized, No Trans Line, All Causes | 43,639         | 25,199          | 55,242       | 51,938       | 44,843     | 83,569      | 111,372     | 44,023        | 105,611          | 101,720        | 17,302          | 35,011          | 719,469    |
|   | Annual Normalized, All Levels, All Causes        | 48,438         | 25,199          | 70,669       | 78,526       | 56,089     | 110,348     | 113,975     | 49,070        | 110,614          | 168,822        | 17,302          | 35,011          | 884,063    |
|   | <b>CES Cust Served</b>                           | 1,253,235      | 1,253,916       | 1,254,234    | 1,254,354    | 1,254,432  | 1,254,973   | 1,254,729   | 1,255,562     | 1,256,281        | 1,256,880      | 1,258,571       | 1,259,394       |            |
| <b>2016</b>                               | With Storms, All Levels, All Causes              | 25,441         | 52,112          | 80,843       | 70,399       | 114,855    | 128,116     | 215,856     | 111,183       | 116,858          | 45,828         | 134,584         | 42,779          | 1,138,854  |
|   | New Tariff Normalized, No Trans Line, All Causes | 22,237         | 52,112          | 66,022       | 48,486       | 106,986    | 95,825      | 93,846      | 71,208        | 85,741           | 45,828         | 71,773          | 41,482          | 801,546    |
|   | Annual Normalized, All Levels, All Causes        | 25,441         | 52,112          | 80,843       | 70,399       | 114,855    | 121,924     | 132,820     | 111,183       | 116,858          | 45,828         | 81,547          | 42,779          | 996,589    |
|   | <b>CES Cust Served</b>                           | 1,248,344      | 1,249,470       | 1,250,387    | 1,250,350    | 1,249,681  | 1,249,044   | 1,250,095   | 1,249,999     | 1,250,203        | 1,250,886      | 1,251,414       | 1,252,586       |            |
| <b>2015</b>                               | With Storms, All Levels, All Causes              | 53,648         | 30,726          | 55,959       | 48,043       | 127,125    | 150,889     | 273,326     | 87,827        | 129,712          | 42,223         | 51,256          | 23,201          | 1,073,935  |
|   | New Tariff Normalized, No Trans Line, All Causes | 44,306         | 5,906           | 33,165       | 38,443       | 98,512     | 127,693     | 151,499     | 73,873        | 95,202           | 42,223         | 41,385          | 20,869          | 773,076    |
|   | Annual Normalized, All Levels, All Causes        | 53,648         | 30,726          | 55,959       | 48,043       | 127,125    | 145,355     | 181,747     | 87,827        | 129,712          | 42,223         | 51,256          | 23,201          | 976,822    |
|   | <b>CES Cust Served</b>                           | 1,240,765      | 1,243,499       | 1,244,176    | 1,244,298    | 1,243,059  | 1,242,418   | 1,242,902   | 1,243,049     | 1,243,408        | 1,244,577      | 1,245,663       | 1,247,112       |            |
| <b>2014</b>                               | With Storms, All Levels, All Causes              | 51,425         | 109,574         | 31,286       | 83,684       | 179,745    | 194,907     | 75,353      | 125,483       | 81,552           | 60,308         | 61,666          | 39,682          | 1,094,665  |
|   | New Tariff Normalized, No Trans Line, All Causes | 49,036         | 48,807          | 28,982       | 61,123       | 117,403    | 119,732     | 58,512      | 85,015        | 67,369           | 54,991         | 33,106          | 26,887          | 750,963    |
|   | Annual Normalized, All Levels, All Causes        | 51,425         | 72,087          | 31,286       | 83,684       | 179,745    | 139,794     | 75,353      | 122,714       | 81,552           | 60,308         | 61,666          | 39,682          | 999,296    |
|   | <b>CES Cust Served</b>                           | 1,231,703      | 1,232,212       | 1,234,076    | 1,234,577    | 1,233,718  | 1,233,259   | 1,234,483   | 1,235,520     | 1,236,117        | 1,237,649      | 1,238,571       | 1,239,207       |            |
| <b>2013</b>                               | With Storms, All Levels, All Causes              | 41,377         | 50,759          | 60,258       | 126,599      | 114,691    | 300,256     | 127,829     | 138,192       | 63,215           | 68,852         | 36,139          | 87,140          | 1,215,307  |
|   | New Tariff Normalized, No Trans Line, All Causes | 34,756         | 37,653          | 59,557       | 108,798      | 90,004     | 103,795     | 115,930     | 84,449        | 57,098           | 57,650         | 25,936          | 28,583          | 804,209    |
|   | Annual Normalized, All Levels, All Causes        | 41,377         | 50,759          | 60,258       | 124,501      | 107,258    | 128,206     | 126,006     | 120,234       | 63,215           | 65,498         | 36,139          | 87,140          | 1,010,591  |
|   | <b>CES Cust Served</b>                           | 1,217,604      | 1,218,204       | 1,219,026    | 1,219,379    | 1,218,531  | 1,218,072   | 1,218,582   | 1,218,899     | 1,219,310        | 1,220,894      | 1,221,687       | 1,222,327       |            |

| <b>Metro East - Customer Interruptions</b> |  | <b>January</b> | <b>February</b> | <b>March</b> | <b>April</b> | <b>May</b> | <b>June</b> | <b>July</b> | <b>August</b> | <b>September</b> | <b>October</b> | <b>November</b> | <b>December</b> | <b>YTD</b> |
|--|--|----------------|-----------------|--------------|--------------|------------|-------------|-------------|---------------|------------------|----------------|-----------------|-----------------|------------|
| <b>2017</b>                                | With Storms, All Levels, All Causes              | 23,529         | 10,552          | 23,793       | 29,693       | 26,334     | 30,215      | 56,586      | 17,240        | 27,139           | 84,099         | 5,706           | 5,862           | 340,748    |
|  | New Tariff Normalized, No Trans Line, All Causes | 23,529         | 10,552          | 23,793       | 19,335       | 22,105     | 18,646      | 54,678      | 17,240        | 27,139           | 38,693         | 5,706           | 5,862           | 267,278    |
|  | Annual Normalized, All Levels, All Causes        | 23,529         | 10,552          | 22,092       | 29,693       | 26,334     | 18,635      | 48,037      | 17,240        | 27,139           | 84,099         | 5,706           | 5,862           | 318,918    |
|  | <b>CES Cust Served</b>                           | 412,791        | 413,033         | 413,181      | 413,401      | 413,461    | 413,487     | 413,489     | 413,829       | 413,948          | 414,136        | 414,640         | 414,964         |            |
| <b>2016</b>                                | With Storms, All Levels, All Causes              | 8,042          | 30,312          | 31,530       | 39,980       | 28,813     | 25,258      | 44,241      | 35,094        | 49,970           | 10,848         | 24,347          | 2,540           | 330,975    |
|  | New Tariff Normalized, No Trans Line, All Causes | 8,042          | 30,312          | 31,530       | 27,061       | 27,881     | 25,258      | 24,527      | 35,094        | 41,452           | 10,848         | 24,347          | 2,540           | 288,892    |
|  | Annual Normalized, All Levels, All Causes        | 8,042          | 30,312          | 31,530       | 39,980       | 28,813     | 22,789      | 24,527      | 35,094        | 49,970           | 10,848         | 19,481          | 2,540           | 303,926    |
|  | <b>CES Cust Served</b>                           | 410,535        | 410,808         | 411,301      | 411,260      | 411,117    | 410,936     | 411,390     | 411,453       | 411,397          | 411,786        | 412,089         | 412,530         |            |
| <b>2015</b>                                | With Storms, All Levels, All Causes              | 16,105         | 96              | 18,601       | 18,599       | 37,233     | 35,887      | 113,389     | 36,108        | 44,337           | 13,870         | 15,477          | 15,312          | 365,014    |
|  | New Tariff Normalized, No Trans Line, All Causes | 16,105         | 96              | 18,601       | 18,599       | 37,233     | 32,726      | 84,999      | 36,108        | 41,180           | 13,870         | 15,352          | 15,312          | 330,181    |
|  | Annual Normalized, All Levels, All Causes        | 16,105         | 96              | 18,601       | 18,599       | 37,233     | 35,887      | 85,708      | 36,108        | 44,337           | 13,870         | 15,477          | 15,312          | 337,333    |
|  | <b>CES Cust Served</b>                           | 408,325        | 408,859         | 409,140      | 409,169      | 408,830    | 408,530     | 408,590     | 408,804       | 408,893          | 409,248        | 409,466         | 410,136         |            |
| <b>2014</b>                                | With Storms, All Levels, All Causes              | 17,785         | 24,419          | 8,617        | 21,651       | 39,547     | 66,289      | 27,386      | 18,159        | 7,948            | 11,472         | 31,248          | 9,845           | 284,366    |
|  | New Tariff Normalized, No Trans Line, All Causes | 17,785         | 5,324           | 8,617        | 21,651       | 39,547     | 34,170      | 27,386      | 18,159        | 7,948            | 11,472         | 22,587          | 7,397           | 222,043    |
|  | Annual Normalized, All Levels, All Causes        | 17,785         | 5,324           | 8,617        | 21,651       | 39,547     | 34,170      | 27,386      | 18,159        | 7,948            | 11,472         | 31,248          | 9,845           | 233,152    |
|  | <b>CES Cust Served</b>                           | 405,168        | 405,513         | 406,266      | 406,476      | 406,280    | 406,118     | 406,328     | 406,609       | 406,781          | 407,216        | 407,552         | 407,915         |            |
| <b>2013</b>                                | With Storms, All Levels, All Causes              | 17,691         | 21,577          | 16,627       | 49,307       | 44,434     | 106,410     | 26,547      | 21,835        | 37,927           | 18,819         | 13,534          | 14,335          | 389,043    |
|  | New Tariff Normalized, No Trans Line, All Causes | 17,691         | 18,012          | 16,627       | 49,307       | 39,834     | 41,338      | 26,547      | 21,835        | 34,170           | 18,819         | 10,738          | 14,335          | 309,253    |
|  | Annual Normalized, All Levels, All Causes        | 17,691         | 21,577          | 16,627       | 47,209       | 44,434     | 41,280      | 26,547      | 21,835        | 37,927           | 18,819         | 13,534          | 14,335          | 321,815    |
|  | <b>CES Cust Served</b>                           | 401,230        | 401,501         | 401,871      | 402,068      | 401,714    | 401,535     | 401,482     | 401,644       | 401,861          | 402,237        | 402,471         | 402,927         |            |
| <b>Metro West - Customer Interruptions</b> |  | <b>January</b> | <b>February</b> | <b>March</b> | <b>April</b> | <b>May</b> | <b>June</b> | <b>July</b> | <b>August</b> | <b>September</b> | <b>October</b> | <b>November</b> | <b>December</b> | <b>YTD</b> |
| <b>2017</b>                                | With Storms, All Levels, All Causes              | 13,443         | 11,028          | 21,059       | 30,168       | 14,998     | 86,309      | 39,284      | 18,933        | 57,172           | 45,207         | 10,641          | 13,463          | 361,705    |
|  | New Tariff Normalized, No Trans Line, All Causes | 13,443         | 11,028          | 21,059       | 24,943       | 14,998     | 49,924      | 39,284      | 18,933        | 55,280           | 30,413         | 10,641          | 13,463          | 303,409    |
|  | Annual Normalized, All Levels, All Causes        | 13,443         | 11,028          | 21,059       | 30,168       | 14,998     | 49,924      | 39,284      | 18,933        | 57,172           | 45,207         | 10,641          | 13,463          | 325,320    |
|  | <b>CES Cust Served</b>                           | 594,042        | 594,419         | 594,617      | 594,504      | 594,556    | 595,107     | 594,745     | 595,053       | 595,586          | 595,728        | 596,694         | 597,020         |            |
| <b>2016</b>                                | With Storms, All Levels, All Causes              | 10,618         | 20,783          | 24,765       | 21,968       | 63,448     | 83,030      | 110,665     | 33,826        | 24,568           | 22,046         | 54,918          | 35,894          | 506,529    |
|  | New Tariff Normalized, No Trans Line, All Causes | 10,618         | 20,783          | 24,765       | 16,991       | 63,448     | 60,133      | 47,503      | 20,215        | 24,568           | 22,046         | 40,310          | 35,894          | 387,274    |
|  | Annual Normalized, All Levels, All Causes        | 10,618         | 20,783          | 24,765       | 21,968       | 63,448     | 83,030      | 57,852      | 33,826        | 24,568           | 22,046         | 54,918          | 35,894          | 453,716    |
|  | <b>CES Cust Served</b>                           | 592,434        | 593,132         | 593,410      | 593,402      | 593,175    | 592,828     | 593,312     | 593,023       | 593,171          | 593,304        | 593,406         | 593,764         |            |
| <b>2015</b>                                | With Storms, All Levels, All Causes              | 20,248         | 20,802          | 12,793       | 12,377       | 58,604     | 83,970      | 95,498      | 35,098        | 44,974           | 22,670         | 19,724          | 1,539           | 428,297    |
|  | New Tariff Normalized, No Trans Line, All Causes | 20,026         | 4,566           | 7,306        | 11,263       | 48,212     | 83,970      | 44,452      | 29,636        | 28,777           | 22,670         | 19,724          | 1,539           | 322,141    |
|  | Annual Normalized, All Levels, All Causes        | 20,248         | 20,802          | 12,793       | 12,377       | 58,604     | 83,970      | 46,157      | 35,098        | 44,974           | 22,670         | 19,724          | 1,539           | 378,956    |
|  | <b>CES Cust Served</b>                           | 588,110        | 590,082         | 590,398      | 590,516      | 590,066    | 589,627     | 590,093     | 589,851       | 589,987          | 590,525        | 591,304         | 591,872         |            |
| <b>2014</b>                                | With Storms, All Levels, All Causes              | 7,411          | 44,827          | 15,601       | 36,712       | 88,611     | 79,703      | 36,033      | 69,195        | 53,337           | 28,313         | 10,034          | 12,011          | 481,788    |
|  | New Tariff Normalized, No Trans Line, All Causes | 7,411          | 38,344          | 15,601       | 32,285       | 51,254     | 64,184      | 28,749      | 49,688        | 53,337           | 28,313         | 10,034          | 12,011          | 391,211    |
|  | Annual Normalized, All Levels, All Causes        | 7,411          | 44,827          | 15,601       | 36,712       | 88,611     | 64,184      | 36,033      | 69,195        | 53,337           | 28,313         | 10,034          | 12,011          | 466,269    |
|  | <b>CES Cust Served</b>                           | 583,345        | 583,434         | 584,207      | 584,437      | 584,033    | 583,979     | 584,821     | 585,482       | 585,739          | 586,543        | 587,045         | 587,179         |            |
| <b>2013</b>                                | With Storms, All Levels, All Causes              | 9,069          | 12,973          | 31,592       | 38,102       | 34,675     | 104,623     | 83,557      | 90,881        | 15,726           | 28,293         | 18,748          | 35,661          | 503,900    |
|  | New Tariff Normalized, No Trans Line, All Causes | 9,069          | 12,973          | 31,592       | 29,691       | 34,675     | 54,484      | 76,404      | 54,616        | 15,726           | 28,293         | 13,612          | 12,249          | 373,384    |
|  | Annual Normalized, All Levels, All Causes        | 9,069          | 12,973          | 31,592       | 38,102       | 34,675     | 60,803      | 83,557      | 72,923        | 15,726           | 28,293         | 18,748          | 35,661          | 442,122    |
|  | <b>CES Cust Served</b>                           | 575,169        | 575,376         | 575,700      | 575,827      | 575,632    | 575,368     | 575,904     | 575,882       | 575,985          | 576,891        | 577,363         | 577,422         |            |

| Northwest - Customer Interruptions               |         |          |         |         |         |         |         |         |           |         |          |          | YTD     |
|--|---------|----------|---------|---------|---------|---------|---------|---------|-----------|---------|----------|----------|---------|
|  | January | February | March   | April   | May     | June    | July    | August  | September | October | November | December |         |
| 2017 With Storms, All Levels, All Causes         | 10,977  | 919      | 24,225  | 9,678   | 10,449  | 32,504  | 9,596   | 6,738   | 21,792    | 20,249  | 1        | 15,664   | 162,792 |
| New Tariff Normalized, No Trans Line, All Causes | 6,178   | 919      | 10,329  | 2,658   | 3,432   | 12,011  | 5,694   | 4,580   | 19,884    | 19,792  | 1        | 15,664   | 101,142 |
| Annual Normalized, All Levels, All Causes        | 10,977  | 919      | 24,225  | 9,678   | 10,449  | 21,891  | 9,596   | 6,738   | 21,792    | 20,249  | 1        | 15,664   | 152,179 |
| CES Cust Served                                  | 119,071 | 119,106  | 119,096 | 119,097 | 119,146 | 119,131 | 119,230 | 119,316 | 119,243   | 119,388 | 119,502  | 119,642  |         |
| 2016 With Storms, All Levels, All Causes         | 93      | 1,005    | 11,840  | 5,177   | 20,353  | 13,458  | 28,226  | 9,706   | 15,535    | 8,776   | 49,329   | 4,299    | 167,797 |
| New Tariff Normalized, No Trans Line, All Causes | 93      | 1,005    | 9,726   | 3,546   | 13,416  | 7,793   | 8,714   | 6,374   | 11,692    | 8,776   | 1,158    | 3,002    | 75,295  |
| Annual Normalized, All Levels, All Causes        | 93      | 1,005    | 11,840  | 5,177   | 20,353  | 13,458  | 21,946  | 9,706   | 15,535    | 8,776   | 1,158    | 4,299    | 113,346 |
| CES Cust Served                                  | 118,447 | 118,497  | 118,533 | 118,564 | 118,400 | 118,386 | 118,423 | 118,468 | 118,519   | 118,626 | 118,717  | 119,019  |         |
| 2015 With Storms, All Levels, All Causes         | 12,023  | 2,530    | 18,547  | 9,150   | 18,472  | 17,688  | 44,138  | 7,858   | 27,249    | 1,246   | 5,367    | 5,645    | 169,913 |
| New Tariff Normalized, No Trans Line, All Causes | 7,706   | 1,244    | 5,954   | 4,177   | 10,384  | 5,109   | 18,504  | 4,015   | 17,565    | 1,246   | 1,006    | 4,018    | 80,928  |
| Annual Normalized, All Levels, All Causes        | 12,023  | 2,530    | 18,547  | 9,150   | 18,472  | 17,688  | 29,581  | 7,858   | 27,249    | 1,246   | 5,367    | 5,645    | 155,356 |
| CES Cust Served                                  | 118,064 | 118,121  | 118,158 | 118,137 | 117,923 | 117,939 | 117,972 | 118,079 | 118,103   | 118,227 | 118,302  | 118,371  |         |
| 2014 With Storms, All Levels, All Causes         | 23,872  | 8,856    | 4,717   | 24,352  | 28,058  | 31,658  | 9,557   | 29,170  | 5,782     | 4,684   | 923      | 5,280    | 176,909 |
| New Tariff Normalized, No Trans Line, All Causes | 23,078  | 3,508    | 4,717   | 7,187   | 17,759  | 16,182  |         | 11,979  | 294       | 4,684   |          | 5,280    | 94,668  |
| Annual Normalized, All Levels, All Causes        | 23,872  | 8,856    | 4,717   | 24,352  | 28,058  | 31,658  | 9,557   | 29,170  | 5,782     | 4,684   | 923      | 5,280    | 176,909 |
| CES Cust Served                                  | 117,403 | 117,421  | 117,541 | 117,618 | 117,510 | 117,401 | 117,490 | 117,527 | 117,621   | 117,808 | 117,839  | 117,949  |         |
| 2013 With Storms, All Levels, All Causes         | 9,769   | 12,000   | 11,519  | 23,847  | 20,437  | 75,560  | 5,032   | 17,369  | 5,715     | 10,638  | 946      | 18,955   | 211,787 |
| New Tariff Normalized, No Trans Line, All Causes | 5,465   | 3,656    | 10,818  | 18,389  | 12,105  | 6,475   | 5,032   | 4,530   | 3,355     | 7,255   | 17       | 1,238    | 78,335  |
| Annual Normalized, All Levels, All Causes        | 9,769   | 12,000   | 11,519  | 23,847  | 20,437  | 12,460  | 5,032   | 17,369  | 5,715     | 10,638  | 946      | 18,955   | 148,687 |
| CES Cust Served                                  | 116,430 | 116,469  | 116,506 | 116,468 | 116,398 | 116,400 | 116,444 | 116,517 | 116,547   | 116,669 | 116,683  | 116,749  |         |

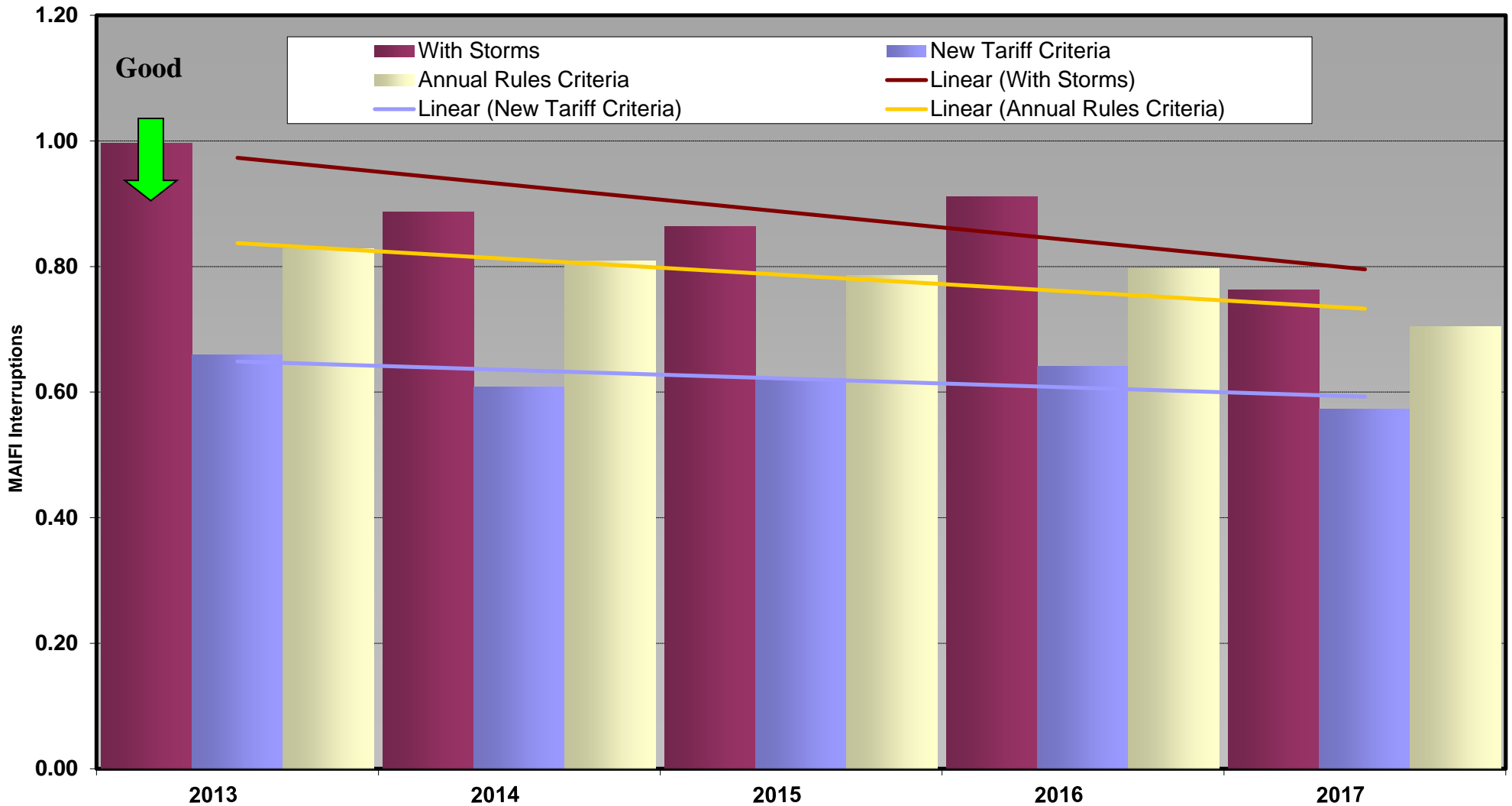
  

| Southeast - Customer Interruptions               |         |          |         |         |         |         |         |         |           |         |          |          | YTD     |
|--|---------|----------|---------|---------|---------|---------|---------|---------|-----------|---------|----------|----------|---------|
|  | January | February | March   | April   | May     | June    | July    | August  | September | October | November | December |         |
| 2017 With Storms, All Levels, All Causes         | 489     | 2,700    | 3,293   | 8,987   | 4,308   | 22,886  | 19,066  | 6,159   | 4,511     | 19,267  | 954      | 22       | 92,642  |
| New Tariff Normalized, No Trans Line, All Causes | 489     | 2,700    | 61      | 5,002   | 4,308   | 2,988   | 11,716  | 3,270   | 3,308     | 12,822  | 954      | 22       | 47,640  |
| Annual Normalized, All Levels, All Causes        | 489     | 2,700    | 3,293   | 8,987   | 4,308   | 19,898  | 17,058  | 6,159   | 4,511     | 19,267  | 954      | 22       | 87,646  |
| CES Cust Served                                  | 127,331 | 127,358  | 127,340 | 127,352 | 127,269 | 127,248 | 127,265 | 127,364 | 127,504   | 127,628 | 127,735  | 127,768  |         |
| 2016 With Storms, All Levels, All Causes         | 6,688   | 12       | 12,708  | 3,274   | 2,241   | 6,370   | 32,724  | 32,557  | 26,785    | 4,158   | 5,990    | 46       | 133,553 |
| New Tariff Normalized, No Trans Line, All Causes | 3,484   | 12       | 1       | 888     | 2,241   | 2,641   | 13,102  | 9,525   | 8,029     | 4,158   | 5,958    | 46       | 50,085  |
| Annual Normalized, All Levels, All Causes        | 6,688   | 12       | 12,708  | 3,274   | 2,241   | 2,647   | 28,495  | 32,557  | 26,785    | 4,158   | 5,990    | 46       | 125,601 |
| CES Cust Served                                  | 126,928 | 127,033  | 127,143 | 127,124 | 126,989 | 126,894 | 126,970 | 127,055 | 127,116   | 127,170 | 127,202  | 127,273  |         |
| 2015 With Storms, All Levels, All Causes         | 5,272   | 7,298    | 6,018   | 7,917   | 12,816  | 13,344  | 20,301  | 8,763   | 13,152    | 4,437   | 10,688   | 705      | 110,711 |
| New Tariff Normalized, No Trans Line, All Causes | 469     |          | 1,304   | 4,404   | 2,683   | 5,888   | 3,544   | 4,114   | 7,680     | 4,437   | 5,303    |          | 39,826  |
| Annual Normalized, All Levels, All Causes        | 5,272   | 7,298    | 6,018   | 7,917   | 12,816  | 7,810   | 20,301  | 8,763   | 13,152    | 4,437   | 10,688   | 705      | 105,177 |
| CES Cust Served                                  | 126,266 | 126,437  | 126,480 | 126,476 | 126,240 | 126,322 | 126,247 | 126,315 | 126,425   | 126,577 | 126,591  | 126,733  |         |
| 2014 With Storms, All Levels, All Causes         | 2,357   | 31,472   | 2,351   | 969     | 23,529  | 17,257  | 2,377   | 8,959   | 14,485    | 15,839  | 19,461   | 12,546   | 151,602 |
| New Tariff Normalized, No Trans Line, All Causes | 762     | 1,631    | 47      |         | 8,843   | 5,196   | 2,377   | 5,189   | 5,790     | 10,522  | 485      | 2,199    | 43,041  |
| Annual Normalized, All Levels, All Causes        | 2,357   | 13,080   | 2,351   | 969     | 23,529  | 9,782   | 2,377   | 6,190   | 14,485    | 15,839  | 19,461   | 12,546   | 122,966 |
| CES Cust Served                                  | 125,787 | 125,844  | 126,062 | 126,046 | 125,895 | 125,761 | 125,844 | 125,902 | 125,976   | 126,082 | 126,135  | 126,164  |         |
| 2013 With Storms, All Levels, All Causes         | 4,848   | 4,209    | 520     | 15,343  | 15,145  | 13,663  | 12,693  | 8,107   | 3,847     | 11,102  | 2,911    | 18,189   | 110,577 |
| New Tariff Normalized, No Trans Line, All Causes | 2,531   | 3,012    | 520     | 11,411  | 3,390   | 1,498   | 7,947   | 3,468   | 3,847     | 3,283   | 1,569    | 761      | 43,237  |
| Annual Normalized, All Levels, All Causes        | 4,848   | 4,209    | 520     | 15,343  | 7,712   | 13,663  | 10,870  | 8,107   | 3,847     | 7,748   | 2,911    | 18,189   | 97,967  |
| CES Cust Served                                  | 124,775 | 124,858  | 124,949 | 125,016 | 124,787 | 124,769 | 124,752 | 124,856 | 124,917   | 125,097 | 125,170  | 125,229  |         |





# MINNESOTA MAIFI



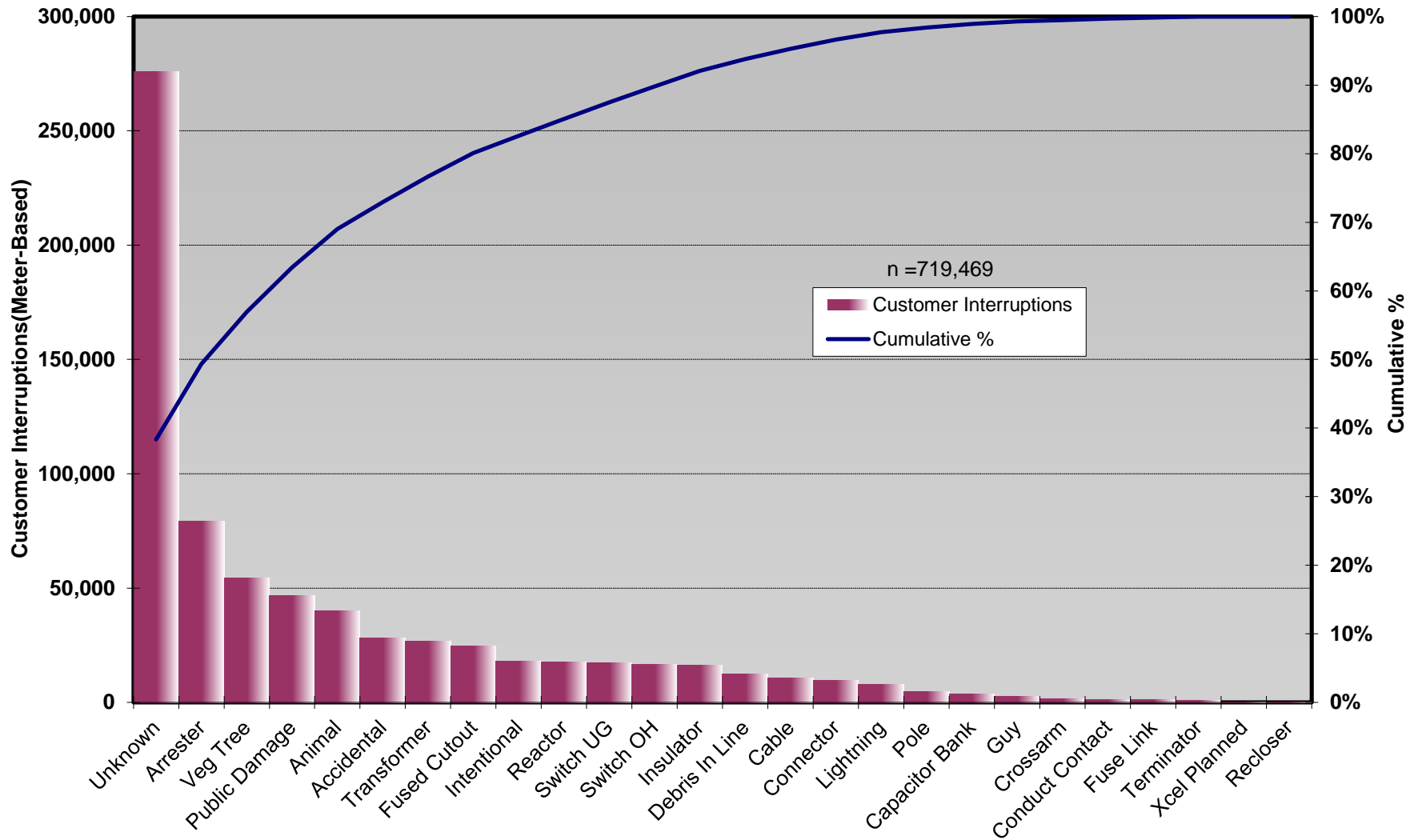
*With Storms - No normalization, All Levels, All*  
*Annual Rules - Normalized on Count of Outages, 5 year -rolling 3 sigma, All Levels, All Causes*  
*New Tariff - IEEE Normalization after removing Trans Lines, All Causes*

*Momentary events <= 5 Minutes*



# MINNESOTA MAIFI

## 2017, MN Tariff, No Transmission Lines, All Causes



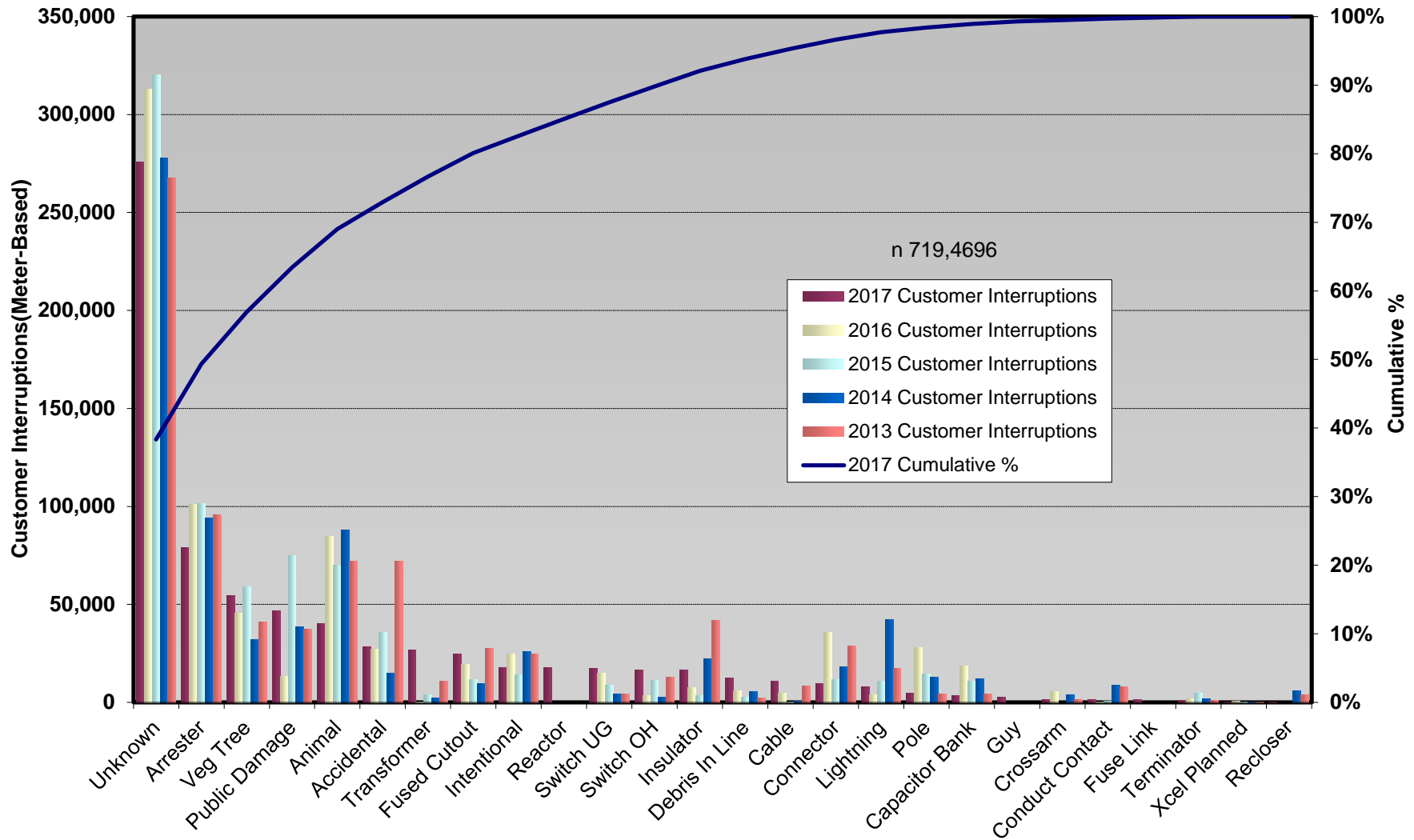
Tariff - IEEE Normalization after removing Trans Lines, All Causes

Momentary events <= 5 Minutes



# MINNESOTA MAIFI

## 5 Year, MN Tariff, No Transmission Lines, All Causes



Tariff - IEEE Normalization after removing Trans Lines, All Causes

Momentary events <= 5 Minutes

| Utility                 | Work Resolution           | Data           | Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec |      |      |      |      |      |      |      |      |      |      |      | Grand Total |
|-------------------------|---------------------------|----------------|---|------|------|------|------|------|------|------|------|------|------|------|-------------|
|                         |                           |                | Jan   | Feb  | Mar  | Apr  | May  | Jun  | Jul  | Aug  | Sep  | Oct  | Nov  | Dec  |             |
| Electric                | INVESTIGATE AND REMEDIATE | Order Count    | 218   | 250  | 253  | 197  | 200  | 209  | 313  | 332  | 365  | 342  | 282  | 423  | 3,384       |
|                         |                           | Average Days   | 3.71  | 3.30 | 3.01 | 3.09 | 3.39 | 2.72 | 3.14 | 3.42 | 3.55 | 3.23 | 3.38 | 3.51 | 3.31        |
|                         |                           | Min Days       | 1   | 1    | 1    | 1    | 1    | 0    | 0    | 1    | 1    | 0    | 1    | 1    | 0           |
|                         |                           | Max of Days    | 34  | 24   | 7    | 9    | 6    | 7    | 6    | 9    | 14   | 12   | 19   | 14   | 34          |
|                         |                           | StdDev of Days | 2.61  | 1.86 | 1.24 | 1.44 | 1.37 | 1.11 | 1.33 | 1.66 | 1.74 | 1.50 | 1.93 | 1.68 | 1.68        |
|                         | INVESTIGATE AND REFER     | Order Count    | 26  | 16   | 16   | 17   | 13   | 16   | 28   | 34   | 22   | 21   | 20   | 35   | 264         |
|                         |                           | Average Days   | 4.38  | 3.31 | 3.06 | 3.76 | 3.38 | 3.06 | 3.50 | 3.56 | 3.41 | 3.14 | 3.20 | 3.94 | 3.54        |
|                         |                           | Min Days       | 2   | 1    | 2    | 2    | 2    | 2    | 1    | 1    | 1    | 2    | 1    | 1    | 1           |
|                         |                           | Max of Days    | 11  | 6    | 5    | 7    | 7    | 5    | 7    | 6    | 7    | 5    | 6    | 6    | 11          |
|                         |                           | StdDev of Days | 1.88  | 1.49 | 1.06 | 1.75 | 1.61 | 1.06 | 1.58 | 1.65 | 1.71 | 1.35 | 1.40 | 1.59 | 1.58        |
|                         | REMEDiate UPON REFERRAL   | Order Count    |   |      |      |      |      |      |      |      |      |      |      |      |             |
|                         |                           | Average Days   |   |      |      |      |      |      |      |      |      |      |      |      |             |
|                         |                           | Min Days       |   |      |      |      |      |      |      |      |      |      |      |      |             |
|                         |                           | Max of Days    |   |      |      |      |      |      |      |      |      |      |      |      |             |
|                         |                           | StdDev of Days |   |      |      |      |      |      |      |      |      |      |      |      |             |
| Electric Order Count    |                           |                | 244   | 266  | 269  | 214  | 213  | 225  | 341  | 366  | 387  | 363  | 302  | 458  | 3,648       |
| Electric Average Days   |                           |                | 3.78  | 3.30 | 3.01 | 3.14 | 3.39 | 2.75 | 3.17 | 3.43 | 3.55 | 3.22 | 3.37 | 3.55 | 3.33        |
| Electric Min Days       |                           |                | 1   | 1    | 1    | 1    | 1    | 0    | 0    | 1    | 1    | 0    | 1    | 1    | 0           |
| Electric Max of Days    |                           |                | 34  | 24   | 7    | 9    | 7    | 7    | 7    | 9    | 14   | 12   | 19   | 14   | 34          |
| Electric StdDev of Days |                           |                | 2.55  | 1.84 | 1.23 | 1.47 | 1.38 | 1.11 | 1.35 | 1.66 | 1.74 | 1.49 | 1.90 | 1.67 | 1.67        |

|                          |                           |                |      |      |      |      |      |      |      |      |      |      |      |      |       |
|--------------------------|---------------------------|----------------|------|------|------|------|------|------|------|------|------|------|------|------|-------|
| Gas                      | INVESTIGATE AND REMEDIATE | Order Count    | 224  | 266  | 255  | 203  | 190  | 211  | 210  | 273  | 246  | 282  | 154  | 173  | 2,687 |
|                          |                           | Average Days   | 3.53 | 3.33 | 3.38 | 3.54 | 3.35 | 3.23 | 3.52 | 3.80 | 3.74 | 3.63 | 4.08 | 4.00 | 3.58  |
|                          |                           | Min Days       | 0    | 0    | 0    | 0    | 0    | 0    | 1    | 0    | 0    | 1    | 1    | 1    | 0     |
|                          |                           | Max of Days    | 10   | 10   | 7    | 11   | 13   | 9    | 12   | 11   | 14   | 8    | 11   | 13   | 14    |
|                          |                           | StdDev of Days | 1.65 | 1.77 | 1.61 | 2.16 | 1.90 | 1.49 | 1.77 | 1.72 | 2.00 | 1.52 | 1.92 | 2.22 | 1.81  |
|                          | INVESTIGATE AND REFER     | Order Count    | 71   | 83   | 104  | 73   | 49   | 41   | 29   | 39   | 35   | 37   | 21   | 40   | 622   |
|                          |                           | Average Days   | 3.37 | 3.12 | 2.83 | 3.48 | 2.84 | 3.05 | 3.34 | 3.72 | 3.43 | 3.46 | 3.62 | 3.63 | 3.25  |
|                          |                           | Min Days       | 0    | 1    | 1    | 1    | 1    | 2    | 1    | 1    | 1    | 2    | 2    | 1    | 0     |
|                          |                           | Max of Days    | 13   | 9    | 7    | 28   | 7    | 7    | 8    | 6    | 8    | 6    | 6    | 8    | 28    |
|                          |                           | StdDev of Days | 1.83 | 1.60 | 1.19 | 3.19 | 1.30 | 1.28 | 1.56 | 1.50 | 1.56 | 1.17 | 1.24 | 1.61 | 1.77  |
|                          | REMEDiate UPON REFERRAL   | Order Count    | 30   | 78   | 81   | 43   | 27   | 16   | 5    | 7    | 7    | 9    | 9    | 17   | 329   |
|                          |                           | Average Days   | 5.17 | 6.81 | 3.96 | 3.51 | 6.26 | 2.50 | 4.60 | 3.00 | 6.29 | 9.56 | 5.67 | 7.35 | 5.22  |
|                          |                           | Min Days       | 0    | 0    | 0    | 0    | 1    | 0    | 1    | 0    | 1    | 1    | 1    | 2    | 0     |
|                          |                           | Max of Days    | 16   | 29   | 20   | 14   | 21   | 15   | 12   | 6    | 12   | 27   | 13   | 24   | 29    |
|                          |                           | StdDev of Days | 4.81 | 6.95 | 4.21 | 3.07 | 5.23 | 3.60 | 4.51 | 2.38 | 3.55 | 9.15 | 4.69 | 5.50 | 5.39  |
| Gas Order Count          |                           |                | 325  | 427  | 440  | 319  | 266  | 268  | 244  | 319  | 288  | 328  | 184  | 230  | 3,638 |
| Gas Average Days         |                           |                | 3.65 | 3.93 | 3.36 | 3.52 | 3.55 | 3.16 | 3.52 | 3.77 | 3.77 | 3.77 | 4.11 | 4.18 | 3.67  |
| Gas Min Days             |                           |                | 0    | 0    | 0    | 0    | 0    | 0    | 1    | 0    | 0    | 1    | 1    | 1    | 0     |
| Gas Max of Days          |                           |                | 16   | 29   | 20   | 28   | 21   | 15   | 12   | 11   | 14   | 27   | 13   | 24   | 29    |
| Gas StdDev of Days       |                           |                | 2.22 | 3.61 | 2.28 | 2.55 | 2.54 | 1.66 | 1.83 | 1.71 | 2.03 | 2.26 | 2.09 | 2.66 | 2.42  |
| Total E & G Order Count  |                           |                | 569  | 693  | 709  | 533  | 479  | 493  | 585  | 685  | 675  | 691  | 486  | 688  | 7,286 |
| Total E & G Average Days |                           |                | 3.70 | 3.69 | 3.23 | 3.37 | 3.48 | 2.97 | 3.31 | 3.59 | 3.64 | 3.48 | 3.65 | 3.76 | 3.50  |
| Total E & G Days Min     |                           |                | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 1    | 1    | 0     |
| Total E & G Days Max     |                           |                | 34   | 29   | 20   | 28   | 21   | 15   | 12   | 11   | 14   | 27   | 19   | 24   | 34    |
| Total E & G Days Std Dev |                           |                | 2.36 | 3.07 | 1.95 | 2.19 | 2.10 | 1.45 | 1.58 | 1.69 | 1.87 | 1.92 | 2.01 | 2.08 | 2.08  |

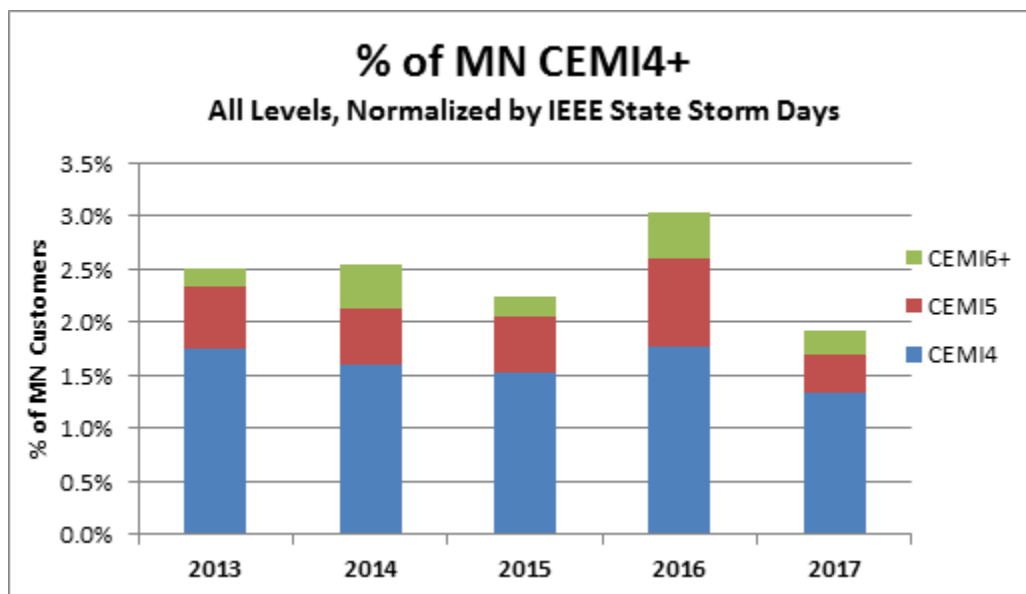


## Customers Experiencing Multiple Interruptions (CEMI)

The graph below illustrates CEMI results for 2013-2017, normalized using the IEEE methodology. The stacked bar graph breaks out customers that experience 4, 5 or 6 plus events. As shown, the customers experiencing six or more events are typically much smaller percentage than those experiencing only four or more events.

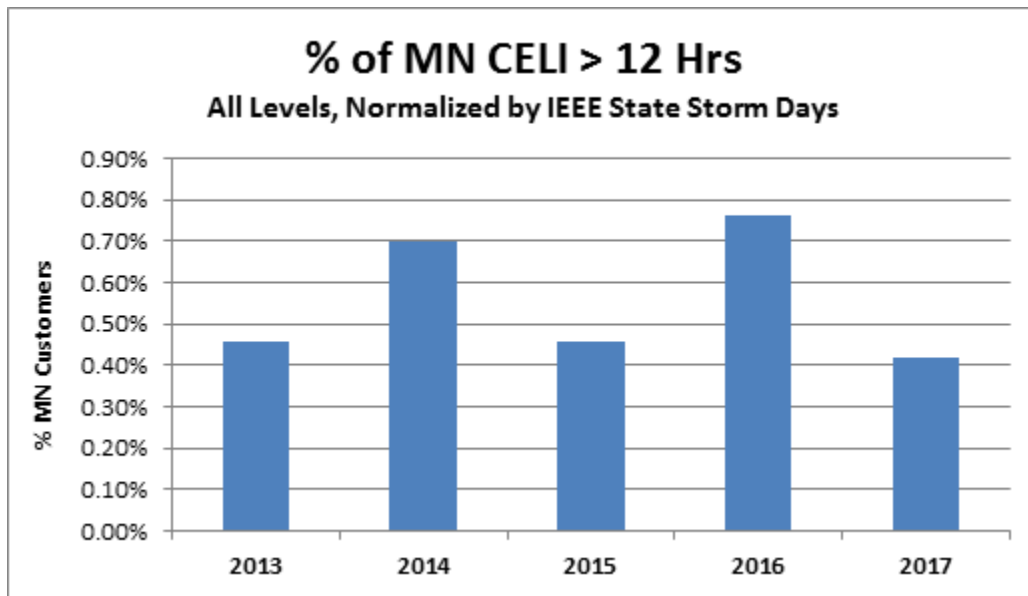
Internally, the Company tracks customers that experience four or more outages on a 12 month rolling basis and reviews opportunities to improve performance through mitigation efforts such as additional tree trimming or installation of animal protection. To track how the Company compares to other utilities, the Company does participate in an annual an EEI benchmarking study. Unfortunately due to a non-disclosure agreement no data from this benchmarking study is available outside the Company. Just as SAIDI varies from year to year, CEMI will vary from year to year, typically due to weather patterns.

The CEMI-related outage credits reported as part of our QSP tariff are paid to customers experiencing six or more outage events in a year.



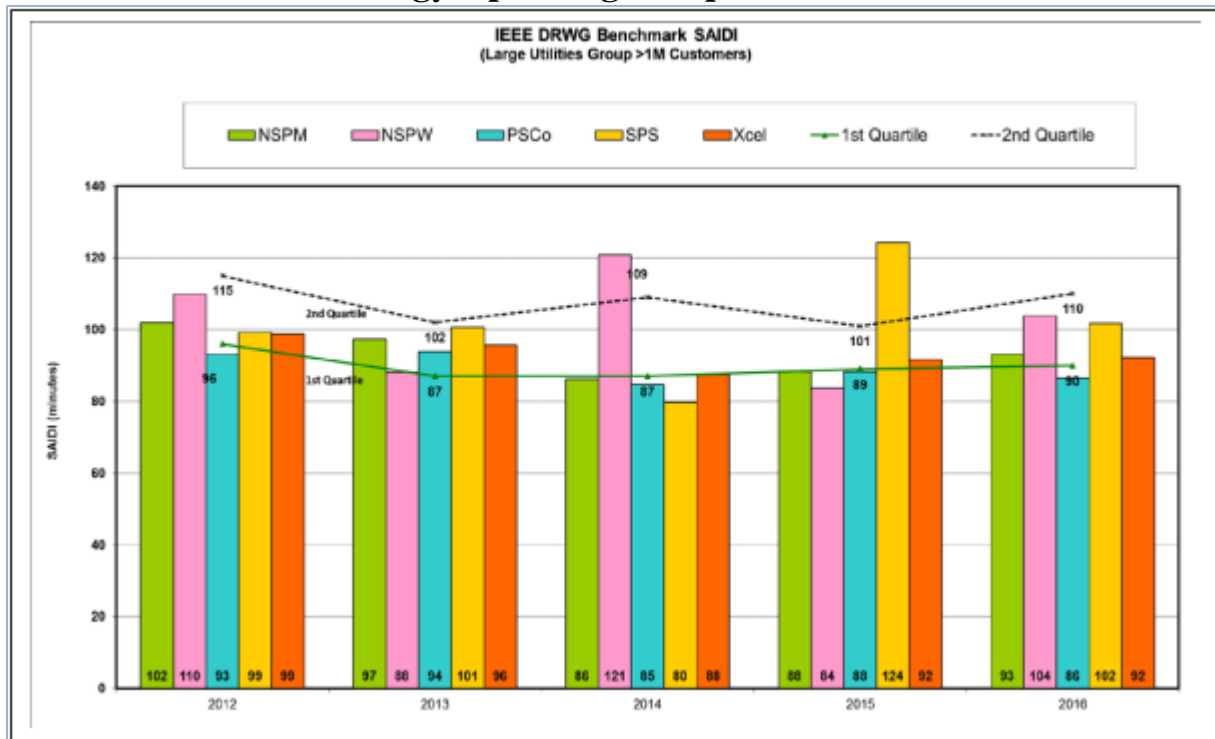
## Customers Experiencing Lengthy Interruptions (CELI)

The graph below illustrates the Company's CELI for customers that experienced outages exceeding 12 hours during a calendar year for 2013 to 2017 based on the IEEE normalization methodology. This graph provides a slightly different view than the CELI based outage credits in our QSP Tariff. The Tariff credits are for customers that experience an outage greater than 24 hours based on the IEEE normalization methodology. As with the other metrics, although the normalization method attempts to remove the year to year variability, variability still occurs, typically due to weather patterns.



During 2016, NSPM's SAIDI performance was at the 2nd quartile performance level:

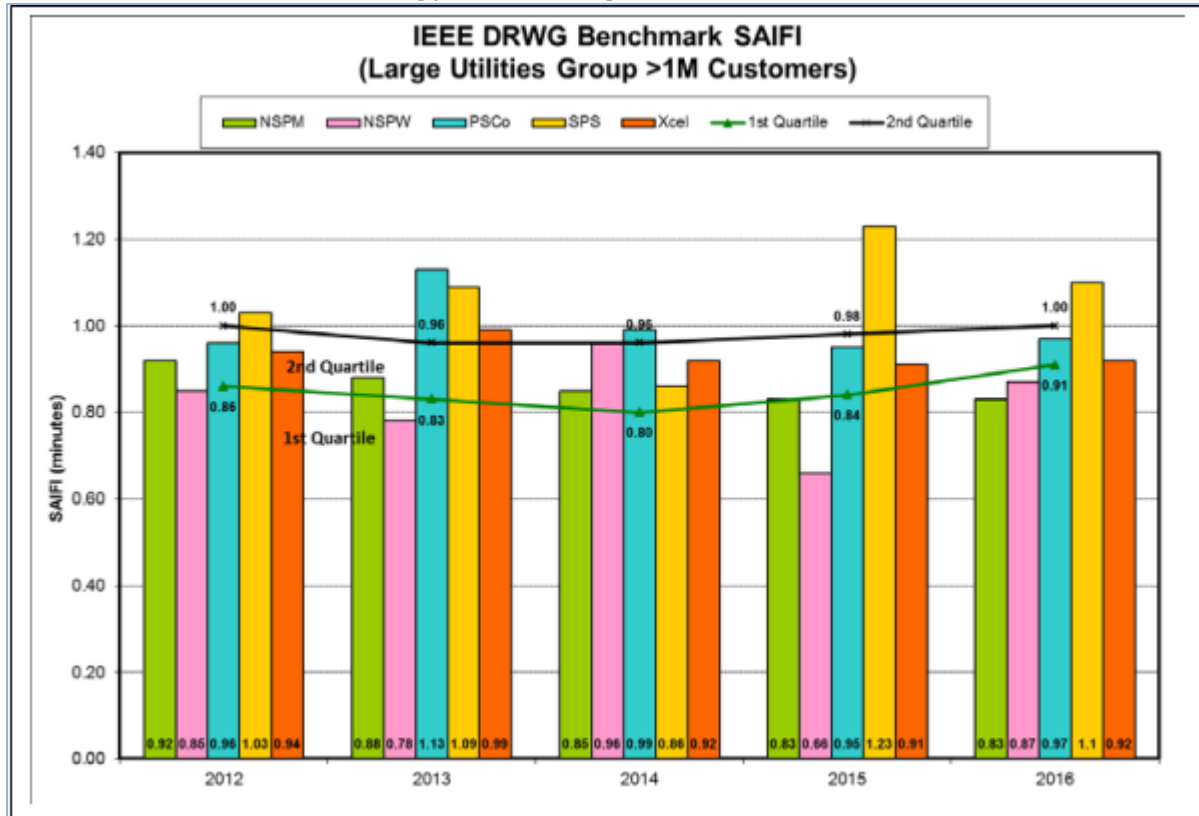
### 2016 SAIDI IEEE Benchmarking Performance Xcel Energy Operating Companies and Overall





During 2016, NSPM's SAIFI performance was at the 1<sup>st</sup> quartile performance level :

**2016 SAIFI IEEE Benchmarking Performance  
 Xcel Energy Operating Companies and Overall**



The Commission’s February 9, 2018 Order in Docket Nos. E002/M-16-281 and E002/M-17-249 requires that we provide information regarding the Company’s internal customer satisfaction goals, a comparison of its performance to those goals, and an explanation for the basis of the goals.

1. *2017 Customer Satisfaction Goals and Performance*

In addition to JD Power satisfaction studies for the utility industry, which focus on broad overall (relationship) satisfaction for the average utility customer, we also measure customer satisfaction when customers directly interact with the Company. The transaction surveys that we use to assess our performance internally are for customer interactions with our customer service representatives, our IVR system, and our website. Please see Table 1 summarizes our 2017 NSPM customer satisfaction goals and performance at the transaction level. All goals and results for the transactional surveys are residential and business customer satisfaction (combined).

**Table 1 NSPM Customer Satisfaction Goals and Performance – 2017**

**[BEGIN NON-PUBLIC**

| <b>Customer Channel</b>   | <b>Goal</b> | <b>Actual/Performance</b> |
|---|-------------|---------------------------|
| Transaction – Phone Agent & IVR combined (overall satisfaction) |             |                           |
| Transaction – Phone Agent (overall satisfaction)                |             |                           |
| Transaction – IVR (overall satisfaction)                        |             |                           |
| Transaction – Phone Agent (1 <sup>st</sup> call resolution)     |             |                           |
| Transaction – Web (overall satisfaction)                        |             |                           |

**END NON-PUBLIC**

Table 1 contains information that has been marked as Non-Public. These internal metrics has been designated as Trade Secret information as defined by Minn. Stat. § 13.37, subd. 1(b), in that this information has not been publicly released. It also derives independent economic value from not being generally known to, and not being readily ascertainable by proper means.

2. *Transaction Surveys – Background*

For phone and IVR transactions, customers are offered the opportunity to take the survey at the conclusion of their call/IVR use – or the option to get a follow-up call within 1 or 2 days after the transaction. For web transactions, customers are presented a pop-up window and offered the opportunity to participate in a survey. Customers are asked to provide feedback on the following scales:

- The *phone agent* metric represents the percentage of customers who score Xcel Energy 8, 9, or 10 (top 3 box) on a ten point scale regarding their satisfaction with the phone call.
- The IVR metric represents the percentage of customers who score Xcel Energy a 4 or 5 (top 2 box) on a five point scale regarding their satisfaction using our IVR system to complete their transaction.
- The Web metric represents the percentage of customers who score Xcel Energy a 4 or 5 (top 2 box) on a five point scale regarding their satisfaction with our website. Customers complete a web pop-up survey after visiting Xcel Energy’s website.

### 3. *Setting 2017 Goals*

*Phone Agents & IVR.* We changed our survey provider in late 2016, which also involved some changes to survey questions and how the customers were offered the surveys. Because of these changes in methodology, we decided to set our 2017 goals at the 2016 goal levels.

*Web.* We set our 2017 goal to improving our web satisfaction by 2.5 percent from year-end 2016 results. A statistically significant improvement in 2017 would have been [BEGIN NON-PUBLIC    percent, END NON-PUBLIC] which would have been [BEGIN NON-PUBLIC    END NON-PUBLIC] percent increase. However, our web team set a more challenging goal because of an aggressive action plan that they had put in place for 2017.

### 4. *J.D. Power Survey – Background*

J.D. Power independently measures relationship satisfaction and performs ongoing benchmarking studies that assess how utilities have performed in relation to one another. J.D. Power implements both a residential and business electric satisfaction study, measuring satisfaction with both customer segments across six categories or drivers of satisfaction – power quality and reliability, billing & payment, communications, corporate citizenship, customer service, and price. We subscribe to the J.D. Power survey because it provides a broad understanding of our customers

and can combine it with other customer data, such as our transactional surveys, to develop action plans to improve satisfaction.

For several years, the Company has subscribed with J.D. Power to access the utility benchmarking results to help various internal work groups identify and focus on improvements. This information was not used to set customer metrics or goals in 2017. Starting in 2018, we are using the J.D. Power residential study to set and measure metrics for (1) overall residential satisfaction; (2) satisfaction with total monthly cost of electric bill; (3) keeping customers informed about an outage; and (4) percentage of customers recalling Company communications over past three months.

Table 2 details residential customer satisfaction overall as well as by category/driver for NSPM in 2017. The percentile rank is NSPM's position within approximately 60 utilities in the J.D. Power study that the Company chooses to benchmark itself against. As an example, a peer rank of 54 percent would mean that NSPM has a higher score than 54 percent of the peer set.

**Table 2:  
[BEGIN NON-PUBLIC**

| <b>2017 Residential</b>             | <b>Index Score</b> | <b>Peer Percentile Rank</b> |
|-------------------------------------|--------------------|-----------------------------|
| Overall Customer Satisfaction Index | 723                |                             |
| Power Quality & Reliability         |                    |                             |
| Price                               |                    |                             |
| Billing & Payment                   |                    |                             |
| Corporate Citizenship               |                    |                             |
| Communications                      |                    |                             |
| Customer Service                    |                    |                             |

**END NON-PUBLIC]**

Table 3 details small/medium business customer satisfaction from the 2017 J.D. Power business study. The table is a combination of NSPM and NSPW customer feedback; however, the scores are predominantly based on NSP-MN customers (81 percent of responses)

**Table 3  
[BEGIN NON-PUBLIC**

| <b>2017 Small/Medium Business</b>   | <b>Index Score</b> | <b>Peer Percentile Rank</b> |
|-------------------------------------|--------------------|-----------------------------|
| Overall Customer Satisfaction Index | 773                |                             |
| Power Quality & Reliability         |                    |                             |
| Price                               |                    |                             |
| Billing & Payment                   |                    |                             |
| Corporate Citizenship               |                    |                             |
| Communications                      |                    |                             |
| Customer Service                    |                    |                             |

**END NON-PUBLIC]**

Tables 2 &3 have been marked NON-PUBLIC as defined by Minn. Stat. § 13.37, subd. 1(b). The information contained in these Schedules is from a subscription with JD Power. Because this information derives independent economic value from not being generally known to, and not being readily ascertainable by proper means by, other persons who can obtain economic value from its disclosure or use, Xcel Energy maintains this information as a trade secret pursuant to Minn. Rule 7829.0500, subp 3.

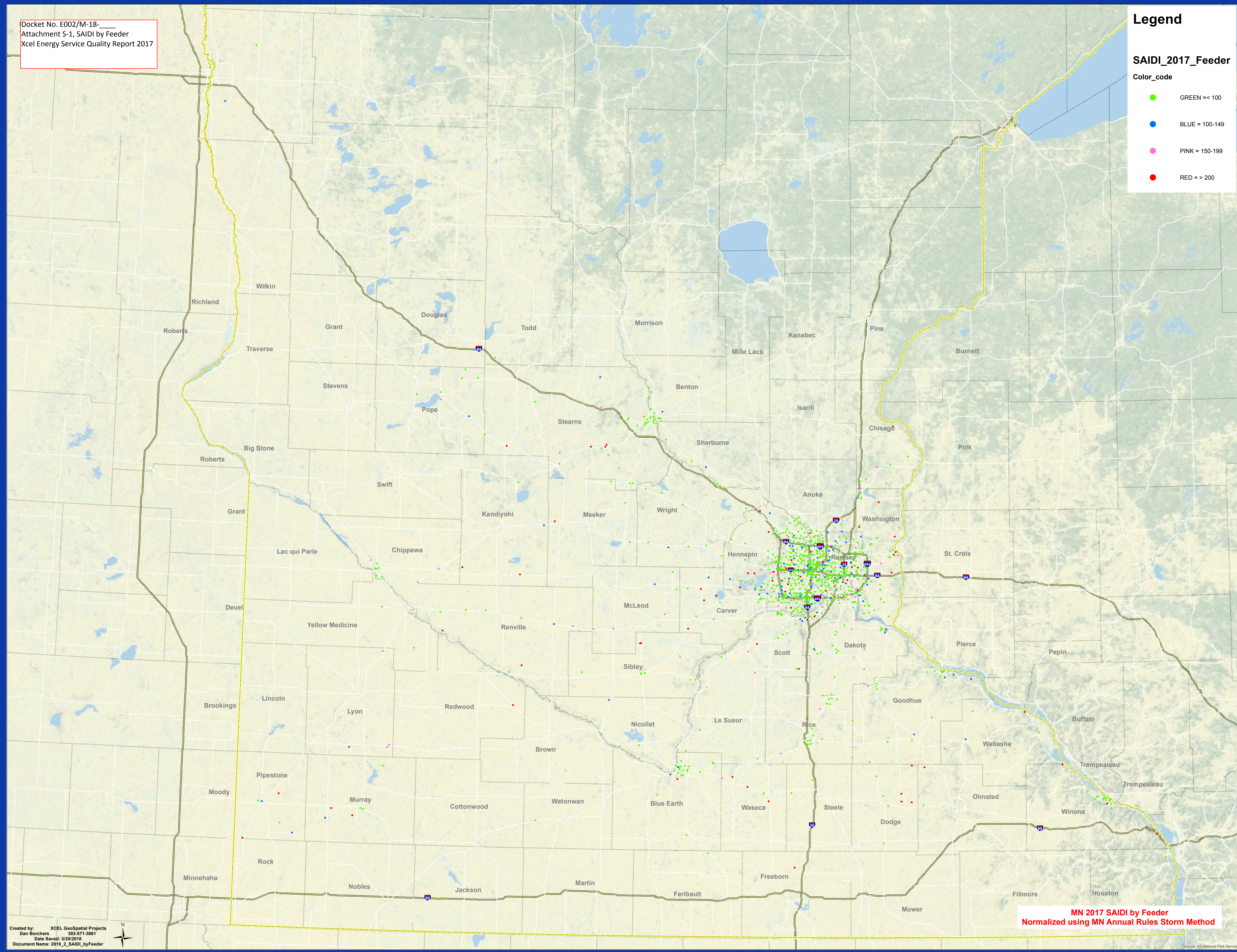
Docket No. E002/M-18-  
Attachment S-1, SAIDI by Feeder  
Xcel Energy Service Quality Report 2017

**Legend**

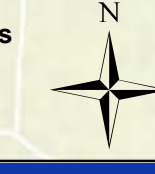
**SAIDI\_2017\_Feeder**

Color\_code

- GREEN = <= 100
- BLUE = 100-149
- PINK = 150-199
- RED = > 200



**MN 2017 SAIDI by Feeder**  
Normalized using MN Annual Rules Storm Method

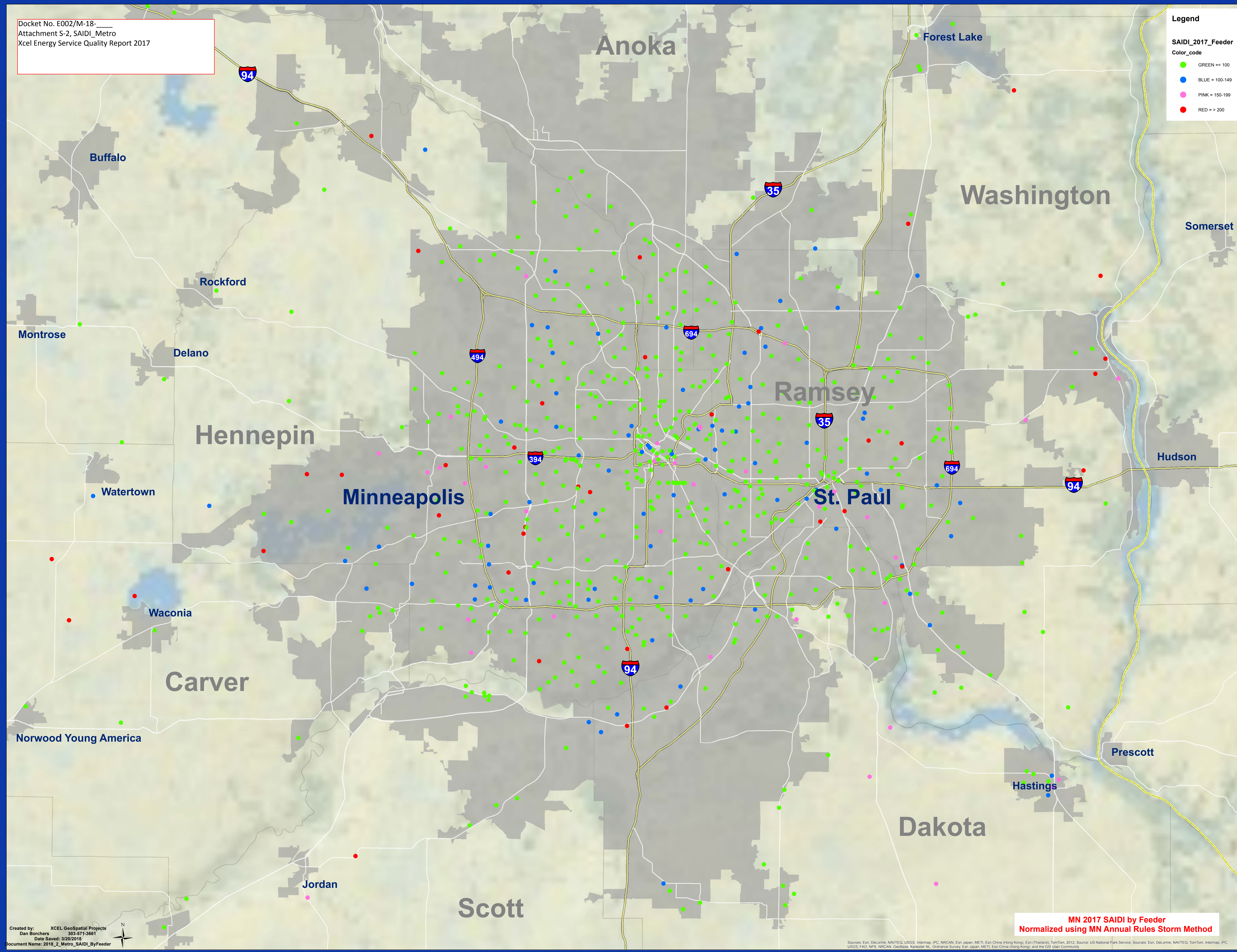


Docket No. E002/M-18-  
Attachment S-2, SAIDI\_Metro  
Xcel Energy Service Quality Report 2017

**Legend**

SAIDI\_2017\_Feeder  
Color\_code

- GREEN = <= 100
- BLUE = 100-149
- PINK = 150-199
- RED = > 200



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Dan Borchers 303-571-3661  
Date Saved: 3/20/2018  
Document Name: 2018\_2\_Metro\_SAIDI\_ByFeeder



**MN 2017 SAIDI by Feeder**  
Normalized using MN Annual Rules Storm Method

Sources: Esri, DeLorme, NAVTEQ, USGS, Intermap, iPC, NRCAN, Esri Japan, METI, Esri China (Hong Kong), Esri (Thailand), TomTom, 2012, Source: US National Park Service, Sources: Esri, DeLorme, NAVTEQ, TomTom, Intermap, iPC, USGS, FAO, NPS, NRCAN, Geobase, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), and the GIS User Community.

## CERTIFICATE OF SERVICE

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

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

xx by electronic filing.

**MPUC Docket No: E002/M-18-\_\_\_\_\_**  
**Miscellaneous Electric Service List**

Dated this 30th day of March 2018.

/s/

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Jim Erickson



| First Name     | Last Name          | Email                             | Company Name                       | Address  | Delivery Method    | View Trade Secret | Service List Name   |
|----------------|--------------------|-----------------------------------|------------------------------------|--|--------------------|-------------------|---|
| David          | Aafedt             | daafedt@winthrop.com              | Winthrop & Weinstine, P.A.         | Suite 3500, 225 South Sixth Street<br><br>Minneapolis, MN 554024629        | Electronic Service | No                | GEN_SL_Northern States Power Company dba Xcel Energy-Elec_Xcel Miscl Electric |
| Christopher    | Anderson           | canderson@allete.com              | Minnesota Power                    | 30 W Superior St<br><br>Duluth, MN 558022191                               | Electronic Service | No                | GEN_SL_Northern States Power Company dba Xcel Energy-Elec_Xcel Miscl Electric |
| Alison C       | Archer             | aarcher@misoenergy.org            | MISO                               | 2985 Ames Crossing Rd<br><br>Eagan, MN 55121                               | Electronic Service | No                | GEN_SL_Northern States Power Company dba Xcel Energy-Elec_Xcel Miscl Electric |
| Ryan           | Barlow             | Ryan.Barlow@ag.state.mn.us        | Office of the Attorney General-RUD | 445 Minnesota Street Bremer Tower, Suite 1400<br>St. Paul, Minnesota 55101 | Electronic Service | No                | GEN_SL_Northern States Power Company dba Xcel Energy-Elec_Xcel Miscl Electric |
| James J.       | Bertrand           | james.bertrand@stinson.com        | Stinson Leonard Street LLP         | 50 S 6th St Ste 2600<br><br>Minneapolis, MN 55402                          | Electronic Service | No                | GEN_SL_Northern States Power Company dba Xcel Energy-Elec_Xcel Miscl Electric |
| William A.     | Blazar             | bblazar@mnchamber.com             | Minnesota Chamber Of Commerce      | Suite 1500<br>400 Robert Street North<br>St. Paul, MN 55101                | Electronic Service | No                | GEN_SL_Northern States Power Company dba Xcel Energy-Elec_Xcel Miscl Electric |
| James          | Canaday            | james.canaday@ag.state.mn.us      | Office of the Attorney General-RUD | Suite 1400<br>445 Minnesota St.<br>St. Paul, MN 55101                      | Electronic Service | No                | GEN_SL_Northern States Power Company dba Xcel Energy-Elec_Xcel Miscl Electric |
| Jeanne         | Cochran            | Jeanne.Cochran@state.mn.us        | Office of Administrative Hearings  | P.O. Box 64620<br><br>St. Paul, MN 55164-0620                              | Electronic Service | No                | GEN_SL_Northern States Power Company dba Xcel Energy-Elec_Xcel Miscl Electric |
| John           | Coffman            | john@johncoffman.net              | AARP                               | 871 Tuxedo Blvd.<br><br>St. Louis, MO 63119-2044                           | Electronic Service | No                | GEN_SL_Northern States Power Company dba Xcel Energy-Elec_Xcel Miscl Electric |
| Generic Notice | Commerce Attorneys | commerce.attorneys@ag.state.mn.us | Office of the Attorney General-DOC | 445 Minnesota Street Suite 1800<br><br>St. Paul, MN 55101                  | Electronic Service | No                | GEN_SL_Northern States Power Company dba Xcel Energy-Elec_Xcel Miscl Electric |
|                |                    |                                   |                                    |  |                    |                   |   |

| First Name | Last Name | Email                                | Company Name                          | Address   | Delivery Method    | View Trade Secret | Service List Name  |
|------------|-----------|--------------------------------------|---------------------------------------|---|--------------------|-------------------|--|
| Riley      | Conlin    | riley.conlin@stoel.com               | Stoel Rives LLP                       | 33 S. 6th Street<br>Suite 4200<br>Minneapolis,<br>MN<br>55402                     | Electronic Service | No                | GEN_SL_Northern States<br>Power Company dba Xcel<br>Energy-Elec_Xcel Miscl<br>Electric |
| Corey      | Conover   | corey.conover@minneapolismn.gov      | Minneapolis City Attorney             | 350 S. Fifth Street<br>City Hall, Room 210<br>Minneapolis,<br>MN<br>554022453     | Electronic Service | No                | GEN_SL_Northern States<br>Power Company dba Xcel<br>Energy-Elec_Xcel Miscl<br>Electric |
| Carl       | Cronin    | Regulatory.records@xcelenergy.com    | Xcel Energy                           | 414 Nicollet Mall FL 7<br><br>Minneapolis,<br>MN<br>554011993                     | Electronic Service | No                | GEN_SL_Northern States<br>Power Company dba Xcel<br>Energy-Elec_Xcel Miscl<br>Electric |
| Joseph     | Dammel    | joseph.dammel@ag.state.mn.us         | Office of the Attorney<br>General-RUD | Bremer Tower, Suite 1400<br>445 Minnesota Street<br>St. Paul,<br>MN<br>55101-2131 | Electronic Service | No                | GEN_SL_Northern States<br>Power Company dba Xcel<br>Energy-Elec_Xcel Miscl<br>Electric |
| Ian        | Dobson    | residential.utilities@ag.state.mn.us | Office of the Attorney<br>General-RUD | 1400 BRM Tower<br>445 Minnesota St<br>St. Paul,<br>MN<br>551012130                | Electronic Service | No                | GEN_SL_Northern States<br>Power Company dba Xcel<br>Energy-Elec_Xcel Miscl<br>Electric |
| John       | Farrell   | jfarrell@ilsr.org                    | Institute for Local Self-<br>Reliance | 1313 5th St SE #303<br><br>Minneapolis,<br>MN<br>55414                            | Electronic Service | No                | GEN_SL_Northern States<br>Power Company dba Xcel<br>Energy-Elec_Xcel Miscl<br>Electric |
| Sharon     | Ferguson  | sharon.ferguson@state.mn.us          | Department of Commerce                | 85 7th Place E Ste 280<br><br>Saint Paul,<br>MN<br>551012198                      | Electronic Service | No                | GEN_SL_Northern States<br>Power Company dba Xcel<br>Energy-Elec_Xcel Miscl<br>Electric |
| Edward     | Garvey    | edward.garvey@AESLconsulting.com     | AESL Consulting                       | 32 Lawton St<br><br>Saint Paul,<br>MN<br>55102-2617                               | Electronic Service | No                | GEN_SL_Northern States<br>Power Company dba Xcel<br>Energy-Elec_Xcel Miscl<br>Electric |
| Janet      | Gonzalez  | Janet.gonzalez@state.mn.us           | Public Utilities Commission           | Suite 350<br>121 7th Place East<br>St. Paul,<br>MN<br>55101                       | Electronic Service | No                | GEN_SL_Northern States<br>Power Company dba Xcel<br>Energy-Elec_Xcel Miscl<br>Electric |
| Kimberly   | Hellwig   | kimberly.hellwig@stoel.com           | Stoel Rives LLP                       | 33 South Sixth Street<br>Suite 4200<br>Minneapolis,<br>MN<br>55402                | Electronic Service | No                | GEN_SL_Northern States<br>Power Company dba Xcel<br>Energy-Elec_Xcel Miscl<br>Electric |

| First Name | Last Name        | Email                               | Company Name                        | Address  | Delivery Method    | View Trade Secret | Service List Name  |
|------------|------------------|-------------------------------------|-------------------------------------|--|--------------------|-------------------|--|
| Michael    | Hoppe            | il23@mtn.org                        | Local Union 23, I.B.E.W.            | 932 Payne Avenue<br><br>St. Paul,<br>MN<br>55130                           | Electronic Service | No                | GEN_SL_Northern States<br>Power Company dba Xcel<br>Energy-Elec_Xcel Miscl<br>Electric |
| Julia      | Jazynka          | jjazynka@energyfreedomcoalition.com | Energy Freedom Coalition of America | 101 Constitution Ave NW<br>Ste 525 East<br><br>Washington,<br>DC<br>20001  | Electronic Service | No                | GEN_SL_Northern States<br>Power Company dba Xcel<br>Energy-Elec_Xcel Miscl<br>Electric |
| Alan       | Jenkins          | aj@jenkinsatlaw.com                 | Jenkins at Law                      | 2265 Roswell Road<br>Suite 100<br>Marietta,<br>GA<br>30062                 | Electronic Service | No                | GEN_SL_Northern States<br>Power Company dba Xcel<br>Energy-Elec_Xcel Miscl<br>Electric |
| Linda      | Jensen           | linda.s.jensen@ag.state.mn.us       | Office of the Attorney General-DOC  | 1800 BRM Tower 445<br>Minnesota Street<br><br>St. Paul,<br>MN<br>551012134 | Electronic Service | No                | GEN_SL_Northern States<br>Power Company dba Xcel<br>Energy-Elec_Xcel Miscl<br>Electric |
| Richard    | Johnson          | Rick.Johnson@lawmoss.com            | Moss & Barnett                      | 150 S. 5th Street<br>Suite 1200<br>Minneapolis,<br>MN<br>55402             | Electronic Service | No                | GEN_SL_Northern States<br>Power Company dba Xcel<br>Energy-Elec_Xcel Miscl<br>Electric |
| Sarah      | Johnson Phillips | sarah.phillips@stoel.com            | Stoel Rives LLP                     | 33 South Sixth Street<br>Suite 4200<br>Minneapolis,<br>MN<br>55402         | Electronic Service | No                | GEN_SL_Northern States<br>Power Company dba Xcel<br>Energy-Elec_Xcel Miscl<br>Electric |
| Mark J.    | Kaufman          | mkaufman@ibewlocal949.org           | IBEW Local Union 949                | 12908 Nicollet Avenue<br>South<br><br>Burnsville,<br>MN<br>55337           | Electronic Service | No                | GEN_SL_Northern States<br>Power Company dba Xcel<br>Energy-Elec_Xcel Miscl<br>Electric |
| Thomas     | Koehler          | TGK@IBEW160.org                     | Local Union #160, IBEW              | 2909 Anthony Ln<br><br>St Anthony Village,<br>MN<br>55418-3238             | Electronic Service | No                | GEN_SL_Northern States<br>Power Company dba Xcel<br>Energy-Elec_Xcel Miscl<br>Electric |
| Michael    | Krikava          | mkrikava@briggs.com                 | Briggs And Morgan, P.A.             | 2200 IDS Center<br>80 S 8th St<br>Minneapolis,<br>MN<br>55402              | Electronic Service | No                | GEN_SL_Northern States<br>Power Company dba Xcel<br>Energy-Elec_Xcel Miscl<br>Electric |

| First Name | Last Name | Email                        | Company Name                         | Address   | Delivery Method    | View Trade Secret | Service List Name   |
|------------|-----------|------------------------------|--------------------------------------|---|--------------------|-------------------|---|
| Peder      | Larson    | plarson@larkinhoffman.com    | Larkin Hoffman Daly & Lindgren, Ltd. | 8300 Norman Center Drive<br>Suite 1000<br>Bloomington,<br>MN<br>55437               | Electronic Service | No                | GEN_SL_Northern States Power Company dba Xcel Energy-Elec_Xcel Miscl Electric |
| Douglas    | Larson    | dlarson@dakotaelectric.com   | Dakota Electric Association          | 4300 220th St W<br><br>Farmington,<br>MN<br>55024                                   | Electronic Service | No                | GEN_SL_Northern States Power Company dba Xcel Energy-Elec_Xcel Miscl Electric |
| Paula      | Maccabee  | Pmaccabee@justchangela.w.com | Just Change Law Offices              | 1961 Selby Ave<br><br>Saint Paul,<br>MN<br>55104                                    | Electronic Service | No                | GEN_SL_Northern States Power Company dba Xcel Energy-Elec_Xcel Miscl Electric |
| Peter      | Madsen    | peter.madsen@ag.state.mn.us  | Office of the Attorney General-DOC   | Bremer Tower, Suite 1800<br>445 Minnesota Street<br>St. Paul,<br>Minnesota<br>55101 | Electronic Service | No                | GEN_SL_Northern States Power Company dba Xcel Energy-Elec_Xcel Miscl Electric |
| Kavita     | Maini     | kmairi@wi.rr.com             | KM Energy Consulting LLC             | 961 N Lost Woods Rd<br><br>Oconomowoc,<br>WI<br>53066                               | Electronic Service | No                | GEN_SL_Northern States Power Company dba Xcel Energy-Elec_Xcel Miscl Electric |
| Pam        | Marshall  | pam@energycents.org          | Energy CENTS Coalition               | 823 7th St E<br><br>St. Paul,<br>MN<br>55106  | Electronic Service | No                | GEN_SL_Northern States Power Company dba Xcel Energy-Elec_Xcel Miscl Electric |
| Joseph     | Meyer     | joseph.meyer@ag.state.mn.us  | Office of the Attorney General-RUD   | Bremer Tower, Suite 1400<br>445 Minnesota Street<br>St Paul,<br>MN<br>55101-2131    | Electronic Service | No                | GEN_SL_Northern States Power Company dba Xcel Energy-Elec_Xcel Miscl Electric |
| David      | Moeller   | dmoeller@allete.com          | Minnesota Power                      | 30 W Superior St<br><br>Duluth,<br>MN<br>558022093                                  | Electronic Service | No                | GEN_SL_Northern States Power Company dba Xcel Energy-Elec_Xcel Miscl Electric |
| Andrew     | Moratzka  | andrew.moratzka@stoel.com    | Stoel Rives LLP                      | 33 South Sixth St Ste 4200<br><br>Minneapolis,<br>MN<br>55402                       | Electronic Service | No                | GEN_SL_Northern States Power Company dba Xcel Energy-Elec_Xcel Miscl Electric |
| David      | Niles     | david.niles@avantenergy.com  | Minnesota Municipal Power Agency     | 220 South Sixth Street<br>Suite 1300<br>Minneapolis,<br>Minnesota<br>55402          | Electronic Service | No                | GEN_SL_Northern States Power Company dba Xcel Energy-Elec_Xcel Miscl Electric |

| First Name | Last Name | Email                        | Company Name                         | Address  | Delivery Method    | View Trade Secret | Service List Name   |
|------------|-----------|------------------------------|--------------------------------------|--|--------------------|-------------------|---|
| Carol A.   | Overland  | overland@legalectric.org     | Legaelectric - Overland Law Office   | 1110 West Avenue<br>Red Wing,<br>MN<br>55066                                 | Electronic Service | No                | GEN_SL_Northern States Power Company dba Xcel Energy-Elec_Xcel Miscl Electric |
| Jeff       | Oxley     | jeff.oxley@state.mn.us       | Office of Administrative Hearings    | 600 North Robert Street<br>St. Paul,<br>MN<br>55101                          | Electronic Service | No                | GEN_SL_Northern States Power Company dba Xcel Energy-Elec_Xcel Miscl Electric |
| Kevin      | Reuther   | kreuther@mncenter.org        | MN Center for Environmental Advocacy | 26 E Exchange St, Ste 206<br>St. Paul,<br>MN<br>551011667                    | Electronic Service | No                | GEN_SL_Northern States Power Company dba Xcel Energy-Elec_Xcel Miscl Electric |
| Richard    | Savelkoul | rsavelkoul@martinsquires.com | Martin & Squires, P.A.               | 332 Minnesota Street Ste W2750<br>St. Paul,<br>MN<br>55101                   | Electronic Service | No                | GEN_SL_Northern States Power Company dba Xcel Energy-Elec_Xcel Miscl Electric |
| Inga       | Schuchard | ischuchard@larkinhoffman.com | Larkin Hoffman                       | 8300 Norman Center Drive Suite 1000<br>Minneapolis,<br>MN<br>55437           | Electronic Service | No                | GEN_SL_Northern States Power Company dba Xcel Energy-Elec_Xcel Miscl Electric |
| Zeviel     | Simpser   | zsimpser@briggs.com          | Briggs and Morgan PA                 | 2200 IDS Center80 South Eighth Street<br>Minneapolis,<br>MN<br>554022157     | Electronic Service | No                | GEN_SL_Northern States Power Company dba Xcel Energy-Elec_Xcel Miscl Electric |
| Ken        | Smith     | ken.smith@districtenergy.com | District Energy St. Paul Inc.        | 76 W Kellogg Blvd<br>St. Paul,<br>MN<br>55102                                | Electronic Service | No                | GEN_SL_Northern States Power Company dba Xcel Energy-Elec_Xcel Miscl Electric |
| Byron E.   | Starns    | byron.starns@stinson.com     | Stinson Leonard Street LLP           | 50 S 6th St Ste 2600<br>Minneapolis,<br>MN<br>55402                          | Electronic Service | No                | GEN_SL_Northern States Power Company dba Xcel Energy-Elec_Xcel Miscl Electric |
| James M.   | Strommen  | jstrommen@kennedy-graven.com | Kennedy & Graven, Chartered          | 470 U.S. Bank Plaza<br>200 South Sixth Street<br>Minneapolis,<br>MN<br>55402 | Electronic Service | No                | GEN_SL_Northern States Power Company dba Xcel Energy-Elec_Xcel Miscl Electric |

| First Name | Last Name | Email                      | Company Name                                 | Address  | Delivery Method    | View Trade Secret | Service List Name  |
|------------|-----------|----------------------------|--|--|--------------------|-------------------|--|
| Eric       | Swanson   | eswanson@winthrop.com      | Winthrop & Weinstine                         | 225 S 6th St Ste 3500<br>Capella Tower<br>Minneapolis,<br>MN<br>554024629            | Electronic Service | No                | GEN_SL_Northern States<br>Power Company dba Xcel<br>Energy-Elec_Xcel Miscl<br>Electric |
| Lisa       | Veith     | lisa.veith@ci.stpaul.mn.us | City of St. Paul                             | 400 City Hall and<br>Courthouse<br>15 West Kellogg Blvd.<br>St. Paul,<br>MN<br>55102 | Electronic Service | No                | GEN_SL_Northern States<br>Power Company dba Xcel<br>Energy-Elec_Xcel Miscl<br>Electric |
| Joseph     | Windler   | jwindler@winthrop.com      | Winthrop & Weinstine                         | 225 South Sixth Street,<br>Suite 3500<br><br>Minneapolis,<br>MN<br>55402             | Electronic Service | No                | GEN_SL_Northern States<br>Power Company dba Xcel<br>Energy-Elec_Xcel Miscl<br>Electric |
| Cam        | Winton    | cwinton@mnchamber.com      | Minnesota Chamber of<br>Commerce             | 400 Robert Street North<br>Suite 1500<br>St. Paul,<br>Minnesota<br>55101             | Electronic Service | No                | GEN_SL_Northern States<br>Power Company dba Xcel<br>Energy-Elec_Xcel Miscl<br>Electric |
| Daniel P   | Wolf      | dan.wolf@state.mn.us       | Public Utilities Commission                  | 121 7th Place East<br>Suite 350<br>St. Paul,<br>MN<br>551012147                      | Electronic Service | No                | GEN_SL_Northern States<br>Power Company dba Xcel<br>Energy-Elec_Xcel Miscl<br>Electric |
| Patrick    | Zomer     | Patrick.Zomer@lawmoss.com  | Moss & Barnett a<br>Professional Association | 150 S. 5th Street, #1200<br><br>Minneapolis,<br>MN<br>55402                          | Electronic Service | No                | GEN_SL_Northern States<br>Power Company dba Xcel<br>Energy-Elec_Xcel Miscl<br>Electric |