414 Nicollet Mall
Minneapolis, MN 55401

PUBLIC DOCUMENT: NOT PUBLIC DATA HAS BEEN EXCISED

March 31, 2017

—VIA ELECTRONIC FILING—

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

RE: ANNUAL REPORT AND PETITION
SERVICE QUALITY PERFORMANCE AND PROPOSED RELIABILITY MEASURES
DOCKET NO. E002/M-17-___

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 2016 report and approve our proposed reliability standards for 2017.

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.

Finally, 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.

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 or (612) 330-5953 or me at 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 2016; AND PETITION FOR APPROVAL OF ELECTRIC RELIABILITY STANDARDS FOR 2017	DOCKET NO. E002/M-17-___ **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 2016. 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 2017, 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 2016 and approve our proposed reliability standards for 2017.

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 8th Floor
Minneapolis, MN 55401
(612) 215-4605

C. Date of Filing and Date Standards Take Effect

The date of this filing is March 31, 2017. Xcel Energy requests that the Commission accept this annual report on the Company's performance for 2016. Additionally, we request that our proposed reliability standards be approved for the year 2017. Our report on reliability performance for 2017, subject to the standards approved by the Commission, will be filed on or before April 1, 2018, as required under Minn. R. 7826.0500, subp. 1, for the January 1 through December 31, 2017 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 7th 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 2016
- Reliability Performance for 2016
- Service Quality Performance for 2016
- Additional Reporting Requirements
- Proposed Electric Reliability Standards for 2017

On April 1, 2016, the Company filed proposed reliability standards for 2017 in Docket No. E002/M-16-281. The docket is still pending before the Commission. This filing contains information on our proposed reliability standards for 2017, as well as information on our performance for 2016 under the proposed standards. The standards we propose for 2017 are calculated using the same methodology as proposed for our 2016 reliability standards.

SAFETY PERFORMANCE FOR 2016

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 2016, 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 2016. 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 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 2016, the Company made no payments in compensation for injuries requiring medical attention resulting from downed wires or other electrical system failures.

RELIABILITY PERFORMANCE FOR 2016

The Commission's December 12, 2014 Order in Docket No. E002/M-14-131 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.*

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

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.*

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

Below we outline, by Order point, where in this Annual Report we have provided the required information:

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

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

Order Point 6: We provide this information in the Section, "Proposed Electric Reliability Standards for 2017."

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

On April 1, 2016, as required by Minn. R. 7826.0600, we proposed reliability standards for 2016 for each of our four Minnesota work centers.[1] The table below presents our 2016 reliability performance results compared to the proposed standards which are still pending a Commission decision in Docket No. E002/M-16-281. We note that 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.

[1] The four Minnesota work centers include Metro East, Metro West, Northwest, and Southeast.

- 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.[2] Any day that meets or exceeds the threshold is considered a storm day for the qualifying region. 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 2016, 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.

2016 RELIABILITY PERFORMANCE RESULTS

		2016 Performance Results	2016 Proposed Standard
Minnesota	SAIDI	89.43	NA
	SAIFI	0.82	NA
	CAIDI	108.92	NA
Metro East	SAIDI	84.89	86.13
	SAIFI	0.82	0.86
	CAIDI	**102.91**	100.01
Metro West	SAIDI	83.64	92.35
	SAIFI	0.82	0.89
	CAIDI	101.43	103.33
Northwest	SAIDI	**119.36**	92.66
	SAIFI	0.80	0.82
	CAIDI	**149.53**	113.15
Southeast	SAIDI	**103.28**	94.14
	SAIFI	**0.81**	0.72
	CAIDI	126.85	130.78

[2] A "sustained outage" is an outage with duration greater than five minutes.

As shown above, in 2016 we met seven of twelve standards, bolding those standards we did not meet.[3] We provide in the following section a summary as to why we did not meet the established standards in these areas.

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 was the case in certain instances below.

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

While our SAIDI and SAIFI results in the Metro East work center were both within the standard for the year, we just missed the CAIDI threshold by 2.9 minutes. The three highest CAIDI days (June 13, September 13 and November 23) had the greatest impact on the CAIDI metric in this work center. Combined, these three event days had a 3.3 minute impact, enough to push the work center just over the threshold. One of the three events was a single feeder outage involving a polymer insulator that had a full one-minute impact.

2. Metro West

We met our SAIDI, SAIFI, and CAIDI standards for the Metro West work center in 2016.

[3] 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, 2017.

3. Northwest

The Northwest work center region did not meet its SAIDI and CAIDI thresholds by several minutes, 26.7 and 36.37 respectively. The largest SAIDI and CAIDI event in this work center was also the largest event in NSP Minnesota with a normalized 12.6 SAIDI and 14.0 CAIDI impact, respectively. This high impact event was the result of a substation transformer failure in Cokato, MN. The Northwest work center also responded to an above average year of elevated and escalated events. As a result, the top 10 high impact days in this work center had more than a 60 minute SAIDI impact and a 42 minute CAIDI impact. The top two incident days alone had more than a 27 minute SAIDI impact and a 25 minute CAIDI impact.

4. Southeast

The Southeast work center fell short of its SAIDI and SAIFI metrics by 9.14 and 0.09 respectively. The top two individual events that contributed to these missed metrics were animal contacts that combined impacted SAIDI by 8.88 minutes and SAIFI by 0.05, which amounts to almost all of the SAIDI and more than half of the SAIFI gaps. Of these two animal contacts, the event with the largest SAIDI impact alone was 5.35 minutes, which also was the largest single outage in this work center. Finally, like all other work centers, the greatest impact on reliability in 2016 was the intensity and frequency of the above-average weather events affecting this region.

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 2016, 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.

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 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 2016, there were 310 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 qualifying outages.

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.

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 2016, we did not send an email notice to the CAO for 12 of 310 major service interruptions. Seven of the 12 email notices not sent were for events during a single heavy storm from July 5-7.

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 2016, 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.[4] 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 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 2015 to August 2016 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

[4] SAIFI- 1.96 outages for 2016 in Minnesota. SAIDI – 709.1 minutes for 2016 in Minnesota

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 for 2016, by work center, in two sections.

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.

We note that there was one feeder on Attachment E (Metro West) list in both 2015 and 2016 which has been footnoted in the attachment.

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 below table, 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 2016, the Company conducted 360 voltage investigations. These investigations resulted in a diagnosis of a specific voltage problem in 79 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 *
2016 Work Center Staffing Level Totals	129	202	32	50	55
2015 Work Center Staffing Level Totals (as amended)	132	201	35	55	54
2015 Work Center Staffing Level Totals (as reported)	132	199	35	55	54

* 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.

We note that there was an omission of two troubleman reported in our 2015 report at the Metro West location. This oversight was a result of a job title change and has been reflected in the above table. With this correction, the overall staffing level decrease in 2016 as compared to 2015 as amended, equates to 9 FTE (1.5 percent) below our four-year average. The main driver of this decrease was the result of an increased number of retirements during 2016 that will not impact day-to-day operations. We currently have several openings posted which will close the gap to bring the staffing level in line with the 4-year average.

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 2016

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 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.

We note that in December 2016 there were system data issues processing the readings between our meter reading system (MRAS) and the Company's billing system (CRS). The meters were read in December but were not processed into CRS until January, 2017. The issue has since been resolved and all accounts are current.

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

The following data for 2016 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-16	Feb-16	Mar-16	Apr-16	May-16	Jun-16	Jul-16	Aug-16	Sep-16	Oct-16	Nov-16	Dec-16
Metro East	4	4	4	4	4	4	4	4	4	4	4	4
Metro West	3	3	3	3	3	3	3	3	3	3	3	3
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

Overall meter reading staffing levels have remained relatively stable compared to last year given continued reliable performance of the automated meter reading system.

> *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 310,001 customers requested service at a location previously served by the Company in 2016. 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. However, to be consistent with past reporting practices and for ease of comparison with our historical data, we also provide the data for this metric excluding credit calls.

- Our call center service level *including* credit calls is 82.5 percent of calls answered in 20 seconds or less; and
- Our call center service level *excluding* credit calls is 80.4 percent of calls answered in 20 seconds or less.

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 are our "business hours." So, 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.

> *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.

> *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 2016, we requested a total of 362 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.

Pages 1-4 of Attachment J contain information on customer complaints handled by the Company's Customer Advocate group. Pages 5-16 contain information on complaints handled upon initial inquiry in the Call Centers.

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 2,815 electric and 3,966 natural gas orders with an average response time of 3.35 and 3.36 days, respectively. We additionally completed 157 electric and 399 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, we provide additional reporting of currently available MAIFI (Momentary Average Interruption Frequency Index) data as Attachment N1 to this filing.

C. New Service Quality and Grid Modernization Metrics

The Commission's October 23, 2015 Order in Docket No. E002/M-15-324 required the Company to convene a group of stakeholders to discuss new or additional metrics and standards to assess service quality. We provided the results of those discussions in our last service quality Rules Annual Report (Docket No. E002/M-16-281) and are awaiting Commission action.

PROPOSED ELECTRIC RELIABILITY STANDARDS FOR 2017

As discussed above, we submitted proposed reliability standards for 2016 on April 1, 2016. The Commission has not yet issued an order approving 2016 standards.

We calculated the standards that we propose for 2017 using the same methodology approved for our 2016 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 2016 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 2017.

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:

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

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

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

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:

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

Our electric reliability standards pending before the Commission for 2016 were based on the average of our 5-year reliability performance (2011-2015). Consistent with that

methodology, we provide as **Attachment L** to this Annual Report, our historical reliability performance for the 2012-2016 period to support our proposed 2017 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 2017 that are consistent with those approved for 2016.

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 2017

As required by Minn. R. 7826.0600, subp. 1, we propose the following 2017 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 2017 Reliability Standards

		Proposed Standard
Metro East	SAIDI	89.13
	SAIFI	0.87
	CAIDI	102.42
Metro West	SAIDI	92.06
	SAIFI	0.89
	CAIDI	103.98
Northwest	SAIDI	95.88
	SAIFI	0.81
	CAIDI	118.45
Southeast	SAIDI	99.16
	SAIFI	0.74
	CAIDI	134.40

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 2017 as detailed in this Petition.

Dated: March 31, 2017

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 2016; AND PETITION FOR APPROVAL OF ELECTRIC RELIABILITY STANDARDS FOR 2017	DOCKET NO. E002/M-17-___ **ANNUAL REPORT AND PETITION**

SUMMARY OF FILING

Please take notice that on March 31, 2017, 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 2017 as required under Minn. R. 7826.0600. In addition, this Annual Report contains a review and report on items relating to our Meter Equipment Malfunctions tariff in compliance with the Commission's November 30, 2010 Order in Docket Nos. G002/CI-08-871 and E,G002/M-09-224.

ANNUAL REPORT ON SAFETY, RELIABILITY, AND SERVICE QUALITY FOR 2016 AND PETITION FOR APPROVAL OF ELECTRIC RELIABILITY STANDARDS FOR 2017

Attachment Table of Contents

U.S. Department of Labor- Bureau of Labor Statistics
Survey of Occupational Injuries & Illnesses 2016
Xcel Energy - Minnesota

Data from 2016 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
High Bridge Plant	36	70,772	0	0	0	0	0	0	0	0	0	0	0	0
La Crescent Office	1	1,998	0	0	0	0	0	0	0	0	0	0	0	0
Monticello Nuclear Plant	513	964,171	0	0	0	2	0	0	2	0	0	0	0	0
Prairie Island Nuclear Plant	737	1,510,142	0	1	0	3	49	84	4	0	0	0	0	0
Rice Street Service Center	366	706,918	0	0	2	0	0	51	2	0	0	0	0	0
Sherco Generating Plant	329	674,935	0	2	1	1	46	175	2	0	0	0	1	1
Waconia Service Center	12	23,862	0	0	0	0	0	0	0	0	0	0	0	0
Summary	1,994	3,952,798	0	3	3	6	95	310	10	0	0	0	1	1

Event Number	Event Date	Event Cause Code	Event Cause Description	Paid Sum	Bodily Injury
EV2016128284	1/5/2016	1121	Other not listed	$0.00	$0.00
EV2016127329	1/12/2016	1128	Transformer Overhead	$3,366.96	$0.00
EV2016127544	1/12/2016	1134	Work Performed Electrical	$1,800.00	$0.00
EV2016127853	1/12/2016	1101	Abnormal Voltage	$834.74	$0.00
EV2016127934	1/15/2016	1101	Abnormal Voltage	$0.00	$0.00
EV2016127536	1/19/2016	1136	Outage	$0.00	$0.00
EV2016127592	1/20/2016	1136	Outage	$0.00	$0.00
EV2016127638	1/21/2016	1101	Abnormal Voltage	$7,384.00	$0.00
EV2016128082	1/29/2016	1134	Work Performed Electrical	$0.00	$0.00
EV2016128709	1/29/2016	1121	Other not listed	$0.00	$0.00
EV2016127561	1/30/2016	1107	Conductors - Underground	$268.00	$0.00
EV2016128058	2/2/2016	1106	Conductors - Overhead	$642.07	$0.00
EV2016127822	2/4/2016	1136	Outage	$130.00	$0.00
EV2015127630	2/22/2016	1101	Abnormal Voltage	$0.00	$0.00
EV2016127681	2/22/2016	1136	Outage	$0.00	$0.00
EV2016127722	2/27/2016	1136	Outage	$0.00	$0.00
EV2016129249	2/27/2016	1128	Transformer Overhead	$0.00	$0.00
EV2016127818	3/7/2016	1127	Tools-Machines-Equip-Contain-non-electric	$236.02	$0.00
EV2016127827	3/7/2016	1136	Outage	$265.00	$0.00
EV2016128083	3/15/2016	1136	Outage	$1,134.49	$0.00
EV2016127925	3/16/2016	1101	Abnormal Voltage	$67.63	$0.00
EV2016128087	3/16/2016	1136	Outage	$0.00	$0.00
EV2016128405	3/16/2016	1101	Abnormal Voltage	$5,200.00	$0.00
EV2016128308	3/30/2016	1136	Outage	$0.00	$0.00
EV2016128070	4/2/2016	1136	Outage	$0.00	$0.00
EV2016127960	4/5/2016	1136	Outage	$125.00	$0.00
EV2016128038	4/8/2016	1101	Abnormal Voltage	$0.00	$0.00
EV2016128387	4/11/2016	1134	Work Performed Electrical	$265.00	$0.00
EV2016128209	4/13/2016	1107	Conductors - Underground	$300.00	$0.00
EV2016127936	4/17/2016	1136	Outage	$2,000.00	$0.00
EV2016128190	4/22/2016	1107	Conductors - Underground	$3,868.58	$0.00
EV2016128438	4/27/2016	1101	Abnormal Voltage	$1,839.00	$0.00
EV2016128258	5/3/2016	1136	Outage	$0.00	$0.00
EV2016128489	5/3/2016	1136	Outage	$0.00	$0.00
EV2016128025	5/4/2016	1131	Vegetation	$0.00	$0.00
EV2016128650	5/4/2016	1129	Transformer Under Ground	$370.00	$0.00
EV2016128144	5/5/2016	1134	Work Performed Electrical	$11,950.00	$0.00
EV2016128151	5/6/2016	1136	Outage	$0.00	$0.00
EV2016129129	5/6/2016	1134	Work Performed Electrical	$0.00	$0.00
EV2016128325	5/9/2016	1101	Abnormal Voltage	$215.34	$0.00
EV2016128196	5/17/2016	1134	Work Performed Electrical	$9,800.00	$0.00
EV2016128385	5/20/2016	1134	Work Performed Electrical	$6,622.35	$0.00
EV2016128266	5/23/2016	1122	Poles & Towers	$263.00	$0.00
EV2016128426	5/23/2016	1101	Abnormal Voltage	$612.51	$0.00
EV2016128472	5/25/2016	1101	Abnormal Voltage	$0.00	$0.00

Event Number	Event Date	Event Cause Code	Event Cause Description	Paid Sum	Bodily Injury
EV2016128283	5/29/2016	1136	Outage	$0.00	$0.00
EV2016128651	6/2/2016	1122	Poles & Towers	$106.50	$0.00
EV2016128880	6/9/2016	1101	Abnormal Voltage	$753.56	$0.00
EV2016128307	6/16/2016	1134	Work Performed Electrical	$714.40	$0.00
EV2016128381	6/16/2016	1134	Work Performed Electrical	$860.00	$0.00
EV2016128810	6/22/2016	1101	Abnormal Voltage	$0.00	$0.00
EV2016128382	6/24/2016	1134	Work Performed Electrical	$9,697.59	$0.00
EV2016128559	6/24/2016	1134	Work Performed Electrical	$0.00	$0.00
EV2016128658	6/25/2016	1136	Outage	$0.00	$0.00
EV2016128349	7/5/2016	1133	Weather- Damage from	$2,566.73	$0.00
EV2016128469	7/5/2016	1136	Outage	$0.00	$0.00
EV2016128607	7/6/2016	1130	Tree Trimming	$0.00	$0.00
EV2016128702	7/6/2016	1136	Outage	$0.00	$0.00
EV2016128575	7/7/2016	1121	Other not listed	$0.00	$0.00
EV2016129169	7/7/2016	1121	Other not listed	$12,894.52	$0.00
EV2016128695	7/8/2016	1134	Work Performed Electrical	$19.82	$0.00
EV2016128586	7/12/2016	1136	Outage	$0.00	$0.00
EV2016128604	7/14/2016	1134	Work Performed Electrical	$0.00	$0.00
EV2016128821	7/18/2016	1136	Outage	$0.00	$0.00
EV2016128797	7/21/2016	1134	Work Performed Electrical	$120.00	$0.00
EV2016128671	7/22/2016	1136	Outage	$0.00	$0.00
EV2016129150	7/25/2016	1110	Equipment Failure	$0.00	$0.00
EV2016128994	8/3/2016	1101	Abnormal Voltage	$0.00	$0.00
EV2016128553	8/5/2016	1106	Conductors - Overhead	$0.00	$0.00
EV2016129152	8/5/2016	1110	Equipment Failure	$0.00	$0.00
EV2016128802	8/8/2016	1134	Work Performed Electrical	$361.00	$0.00
EV2016128743	8/16/2016	1106	Conductors - Overhead	$17,572.10	$0.00
EV2016129151	8/19/2016	1110	Equipment Failure	$0.00	$0.00
EV2016128844	8/23/2016	1134	Work Performed Electrical	$252.50	$0.00
EV2016128990	8/24/2016	1136	Outage	$0.00	$0.00
EV2016129060	9/1/2016	1136	Outage	$0.00	$0.00
EV2016129107	9/4/2016	1134	Work Performed Electrical	$247.00	$0.00
EV2016129065	9/9/2016	1136	Outage	$0.00	$0.00
EV2016128939	9/13/2016	1131	Vegetation	$0.00	$0.00
EV2016128963	9/15/2016	1107	Conductors - Underground	$225.00	$0.00
EV2016128957	9/21/2016	1101	Abnormal Voltage	$160.00	$0.00
EV2016129070	9/30/2016	1136	Outage	$0.00	$0.00
EV2016129187	10/3/2016	1106	Conductors - Overhead	$1,025.55	$0.00
EV2016129164	10/5/2016	1110	Equipment Failure	$526.00	$0.00
EV2016129202	10/9/2016	1122	Poles & Towers	$200.00	$0.00
EV2016129247	10/10/2016	1127	Tools-Machines-Equip-Contain-non-electric	$1,067.02	$0.00
EV2016129333	10/10/2016	1122	Poles & Towers	$0.00	$0.00
EV2016129123	10/12/2016	1136	Outage	$1,085.00	$0.00
EV2016129144	10/14/2016	1130	Tree Trimming	$0.00	$0.00
EV2016129108	10/24/2016	1121	Other not listed	$0.00	$0.00

Event Number	Event Date	Event Cause Code	Event Cause Description	Paid Sum	Bodily Injury
EV2016129220	10/27/2016	1134	Work Performed Electrical	$0.00	$0.00
EV2016129451	11/2/2016	1107	Conductors - Underground	$1,276.00	$0.00
EV2016129320	11/10/2016	1121	Other not listed	$0.00	$0.00
EV2016129232	11/15/2016	1121	Other not listed	$100.00	$0.00
EV2016129277	11/15/2016	1101	Abnormal Voltage	$0.00	$0.00
EV2016129350	12/5/2016	1121	Other not listed	$0.00	$0.00

PUBLIC DOCUMENT
NOT PUBLIC DATA HAS BEEN EXCISED

Line	Begin Date	Begin Time	Duration Hrs	Duration Mins	Cause	Comments	Remedial Action
[Protected Data Begins						**[Protected Data Begins**	
	1/20/2016	14:51	1	25	Public Damage Broken Pole		Field switched transmission line, Repaired down structure
	3/16/2016	17:26	0	53	Insulator Polymer Line		Field switched transmission line, Repaired damage insulator
	5/26/2016	15:16	0	14	Crossarm Arm Broken		Field switched transmission line, Replaced broken crossarm
			0	37			
	7/5/2016	17:07	2	45	Pole Broken / Good condition		Field switched transmission line, Replaced downed structures
	7/5/2016	19:33	2	46	Unknown. Cause Not Determined		Patrolled Line, Line came back on when feeder was turned on
			3	27			
	7/5/2016	20:17	25	49	Veg - Tree Inside Maint Corridor		Patrolled line, found broken pole, broken insulator-repair insulator, and 2 trees on line, cut off trees.
	7/5/2016	20:29	2	20	Cable Failure Primary jacketed cable		Opened Switch at 22:46 and Closed switch at 22:49. Repairs made.
	7/9/2016	20:33	0	17	Pole Broken / Good condition		Field switched transmission line, Replaced downed structures
			2	14			
	7/11/2016	17:56	2	0	Pole Broken / Good condition		Field switched transmission line, Replaced downed structures and Conductor
			5	39			
	7/16/2016	19:47	4	48	Pole Broken / Good condition		Field switched transmission line, Repaired down structures
Protected Data Ends]						**Protected Data Ends]**	

Line	Begin Date	Begin Time	Duration Hrs	Duration Mins	Cause	Comments	Remedial Action
[Protected Data Begins						**[Protected Data Begins**	
	7/16/2016	20:10	3	9	Pole Broken / Good condition		Field switched transmission line, Repaired down structures
			5	10			
	7/17/2016	0:01	0	25	Intentional Clear for Trouble/Emergency		Field switched transmission line, Bypassed Switch, and Replaced Switch
	7/23/2016	17:14	0	28	Unknown. Cause Not Determined		Line Patrolled and Nothing Found
	8/4/2016	6:00	1	39	Pole Rotten		Field switched transmission line, Repaired down structures
	8/27/2016	18:40	0	8	Unknown. Cause Not Determined		Line Patrolled and Nothing Found
	9/5/2016	1:55	1	17	Lightning Strike		Patrol of the line found no outstanding problems.
	9/21/2016	19:16	1	37	Unknown. Cause Not Determined		Lightning strike on the line caused a fault. Breaker failed to reclose.
	9/24/2016	11:55	0	23	Unknown. Cause Not Determined		Misoperation; Tech found stuck contact, and replaced
	10/4/2016	14:47	0	11	Crossarm fell onto structure.		Field switched transmission line, Repaired Damaged Insulator
	11/18/2016	12:54	0	31	Unknown. Cause Not Determined		Isolated Location and Restored Power
			0	55			
	11/18/2016	14:34	1	23	Unknown. Cause Not Determined		Isolated Location and Restored Power
	11/18/2016	15:16	11	48	Public Damage Padmount vs Vehicle		Switched Damaged Section of Line Out on Transmission Work Request
Protected Data Ends]						**Protected Data Ends]**	

Line	Begin Date	Begin Time	Duration Hrs	Duration Mins	Cause	Comments	Remedial Action
[Protected Data Begins						**[Protected Data Begins**	
	11/18/2016	18:18	1	54	Unknown. Cause Not Determined		Test line zone 2 relays at sub and change 62BU2 backup timer
	11/18/2016	22:42	4	22	Public Damage Broken Pole		Switched Damaged Section of Line Out on Transmission Work Request
	11/23/2016	21:09	3	19	Unknown. Cause Not Determined		Switched Damaged Section of Line Out on Transmission Work Request
	12/10/2016	15:24	1	14	Public Damage Broken Pole		Switched Damaged Section of Line Out on Transmission Work Request
	12/18/2016	6:23	1	59	Connector Failure Auto Splice		Switched Damaged Section of Line Out on Transmission Work Request
			2	17			
	12/18/2016	17:58	0	7	Transformer Sub Load Tap Changer		Switched Damaged Section of Line Out on Transmission Work Request
	12/26/2016	1:13	0	7	Unknown Cause Not Determined		Isolated Location and Restored Power
			0	11			
Protected Data Ends]						**Protected Data Ends]**	

January

2016 MN Feeder Level Outages

7 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
1		1257836	01/01/16 02:22	01/01/16 03:22	60	1,952	Metro East	X	X	X		
2		1255622	01/15/16 23:14	01/16/16 00:29	75	2,072	Metro West	X	X	X	X	
3		1255755	01/17/16 06:36	01/17/16 07:59	83	538	Northwest	X	X	X	X	
4		1256192	01/19/16 11:44	01/19/16 13:40	116	1,017	Metro East	X	X	X		
5		1256477	01/20/16 14:51	01/20/16 16:16	85	692	Northwest	X	X	X		
6		1256474	01/20/16 14:51	01/20/16 16:16	85	539	Northwest	X	X	X		
7		1258150	01/31/16 18:51	01/31/16 20:37	106	916	Metro West	X	X	X	X	

SECURITY DATA ENDS]

February

2016 MN Feeder Level Outages

3 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
1		1258269	02/01/16 08:10	02/01/16 09:14	64	5,360	Northwest	X	X	X	X	
2		1259109	02/05/16 22:47	02/06/16 00:26	99	1,202	Southeast	X	X	X	X	X
3		1261071	02/19/16 13:25	02/19/16 15:43	138	935	Metro East	X	X	X		

SECURITY DATA ENDS]

March

2016 MN Feeder Level Outages

6 Total qualifying events **1 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
1		1263321	03/03/16 17:03	03/03/16 18:28	85	900	Metro West	X	X	X	X	
2		1265012	03/14/16 19:48	03/14/16 22:48	180	1,373	Metro West	X	X	X	X	X
3		1265018	03/14/16 19:48	03/14/16 22:41	173	1,184	Metro West	X	X	X	X	
4		1265414	03/16/16 03:15	03/16/16 04:16	61	4,039	Metro East	X	X	X		
5		1267986	03/30/16 07:05	03/30/16 08:21	76	897	Metro East					
6		1268254	03/31/16 07:01	03/31/16 08:03	62	2,003	Metro West	X	X	X		

SECURITY DATA ENDS]

April

2016 MN Feeder Level Outages

15 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
1		1271355	04/14/16 15:32	04/14/16 17:42	130	943	Southeast	X	X	X			
2		1271545	04/15/16 15:52	04/15/16 19:52	240	1,221	Metro West	X	X	X	X	X	
3		1271679	04/16/16 03:19	04/16/16 04:27	68	587	Metro West	X	X	X	X	X	
4		1272267	04/17/16 22:57	04/17/16 23:59	62	2,639	Metro East	X	X	X			
5		1272315	04/17/16 23:19	04/18/16 00:41	82	1,501	Metro East	X	X	X			
6		1273774	04/18/16 10:20	04/18/16 13:04	164	2,639	Metro West	X	X	X	X	X	
7		1272709	04/18/16 22:18	04/19/16 01:05	167	955	Metro West	X	X	X	X		
8		1275343	04/19/16 16:47	04/19/16 18:04	77	534	Metro East	X	X	X			
9		1273217	04/20/16 14:24	04/20/16 21:46	442	1,966	Metro West	X	X	X	X	X	
10		1276371	04/20/16 21:07	04/21/16 05:01	474	960	Metro East	X	X	X			
11		1273576	04/21/16 17:04	04/21/16 18:10	66	2,571	Metro West	X	X	X			
12		1274465	04/24/16 19:39	04/24/16 23:23	224	1,850	Metro East	X	X	X	X	X	X
13		1275331	04/27/16 09:21	04/27/16 13:51	270	3,346	Metro East	X	X	X			
14		1275368	04/27/16 09:49	04/27/16 12:10	141	4,064	Metro East	X	X	X			
15		1276347	04/29/16 08:42	04/29/16 09:55	73	1,788	Metro West	X	X	X	X		

SECURITY DATA ENDS]

May

2016 MN Feeder Level Outages

16 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	Email 6
1		1276988	05/01/16 23:45	05/02/16 01:05	80	942	Metro East	X	X	X	X	X		
2		1277380	05/03/16 10:01	05/03/16 11:49	108	828	Metro West	X	X	X				
3		1277617	05/03/16 18:01	05/03/16 20:27	146	4,233	Metro East	X	X	X	X			
4		1277800	05/04/16 10:09	05/04/16 14:27	258	4,111	Metro West	X	X	X	X			
5		1278952	05/07/16 04:12	05/07/16 05:19	67	3,027	Metro East	X	X	X	X			
6		1279603	05/09/16 14:21	05/09/16 16:54	153	4,174	Northwest	X	X	X	X			
7		1279709	05/09/16 20:47	05/09/16 21:50	63	1,785	Metro West	X	X	X				
8		1280450	05/10/16 12:27	05/10/16 14:25	118	2,351	Metro East	X	X	X				
9		1281330	05/17/16 07:48	05/17/16 08:59	71	1,001	Metro East	X	X	X	X			
10		1281563	05/18/16 01:48	05/18/16 08:38	410	1,779	Metro East	X	X	X	X	X	X	
11		1281864	05/19/16 04:19	05/19/16 05:19	60	2,348	Metro West	X	X	X				
12		1282061	05/19/16 14:46	05/20/16 10:05	1,159	1,311	Northwest	X	X	X	X	X	X	X
13		1282309	05/21/16 00:45	05/21/16 04:13	208	1,603	Southeast	X	X	X	X	X		
14		1282317	05/21/16 02:40	05/21/16 04:30	110	909	Metro East	X	X	X				
15		1284243	05/26/16 02:52	05/26/16 05:23	151	1,655	Metro West	X	X	X	X	X	X	
16		1285662	05/29/16 20:39	05/30/16 01:37	298	1,043	Northwest	X	X	X	X	X	X	

SECURITY DATA ENDS]

June

2016 MN Feeder Level Outages

41 Total qualifying events **2 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		1287748	06/06/16 02:38	06/06/16 04:04	86	688	Metro East	X	X	X		
2		1287749	06/06/16 02:38	06/06/16 04:04	86	1,929	Metro East	X	X	X		
3		1288179	06/06/16 16:27	06/06/16 18:45	138	561	Southeast	X	X	X	X	X
4		1289010	06/09/16 05:14	06/09/16 06:51	97	2,314	Metro West	X	X	X	X	X
5		1289035	06/09/16 05:46	06/09/16 07:08	82	2,769	Metro West	X	X	X		
6		1289881	06/10/16 08:38	06/10/16 12:25	227	857	Northwest	X	X	X	X	
7		1290260	06/10/16 15:38	06/10/16 18:25	167	1,989	Southeast	X	X	X	X	
8		1290278	06/10/16 15:40	06/10/16 18:55	195	1,620	Southeast	X	X	X		
9		1295119	06/10/16 15:44	06/10/16 21:10	326	3,810	Southeast	X	X	X		
10		1292179	06/12/16 03:50	06/12/16 05:11	81	1,987	Southeast	X	X	X	X	
11		1303554	06/13/16 02:38	06/13/16 05:45	187	2,293	Metro East	X	X	X	X	
12		1299400	06/14/16 08:00	06/14/16 11:38	218	2,117	Northwest	X	X	X		
13		1293715	06/14/16 16:28	06/14/16 19:17	169	501	Southeast	X	X	X	X	
14		1293742	06/14/16 17:01	06/14/16 21:44	283	1,654	Southeast	X	X	X		
15		1293771	06/14/16 17:47	06/14/16 19:19	92	809	Southeast	X	X	X		
16		1303477	06/17/16 13:28	06/17/16 14:28	60	1,700	Metro East					
17		1296024	06/18/16 05:33	06/18/16 06:39	66	2,489	Metro East	X	X	X		
18		1296390	06/19/16 03:22	06/19/16 06:14	172	1,305	Northwest	X	X	X		
19		1296391	06/19/16 03:22	06/19/16 06:31	189	3,451	Northwest	X	X	X		
20		1296396	06/19/16 03:22	06/19/16 06:09	167	1,423	Northwest	X	X	X		
21		1299304	06/19/16 05:56	06/19/16 15:59	603	3,159	Metro West	X	X	X	X	
22		1296438	06/19/16 06:03	06/19/16 07:33	90	1,618	Southeast	X	X	X		
23		1303134	06/19/16 17:16	06/20/16 06:21	785	2,207	Metro East	X	X	X		
24		1321558	06/19/16 22:50	06/20/16 01:35	165	1,368	Metro West	X	X	X	X	X
25		1297182	06/19/16 23:14	06/20/16 00:42	88	941	Metro West	X	X	X	X	
26		1321561	06/20/16 01:38	06/20/16 03:54	136	2,563	Metro West					
27		1297296	06/20/16 01:54	06/20/16 04:58	184	3,279	Metro West	X	X	X		
28		1297406	06/20/16 05:40	06/20/16 07:03	83	911	Metro West	X	X	X		
29		1297953	06/21/16 06:02	06/21/16 07:02	60	2,396	Metro East	X	X	X		
30		1298324	06/21/16 17:36	06/21/16 18:58	82	501	Metro East	X	X	X	X	
31		1303039	06/25/16 05:11	06/25/16 09:29	258	2,293	Metro East	X	X	X	X	X
32		1300050	06/25/16 16:20	06/25/16 17:33	73	2,000	Metro West	X	X	X	X	
33		1300343	06/25/16 17:48	06/25/16 19:32	104	691	Northwest	X	X	X		

June

2016 MN Feeder Level Outages

41 Total qualifying events **2 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
34		1302746	06/25/16 22:10	06/25/16 23:28	78	6,381	Metro East	X	X	X		
35		1301251	06/26/16 06:49	06/26/16 07:53	64	2,410	Metro East	X	X	X		
36		1301253	06/26/16 06:49	06/26/16 07:53	64	1,711	Metro East	X	X	X		
37		1302594	06/28/16 00:36	06/28/16 02:11	95	571	Metro West	X	X	X	X	
38		1302620	06/28/16 04:01	06/28/16 05:27	86	577	Metro East	X	X	X		
39		1303283	06/30/16 05:45	06/30/16 07:01	76	2,116	Metro West	X	X	X	X	
40		1303332	06/30/16 05:45	06/30/16 06:57	72	1,085	Southeast	X	X	X	X	
41		1305323	06/30/16 12:01	06/30/16 13:01	60	2,466	Metro East	X	X	X		

SECURITY DATA ENDS]

July

2016 MN Feeder Level Outages

106 Total qualifying events **7 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		1304304	07/02/16 07:35	07/02/16 09:28	113	1,661	Metro West	X	X	X		
2		1305499	07/05/16 16:07	07/05/16 20:35	268	2,569	Northwest	X	X	X	X	
3		1305495	07/05/16 16:09	07/05/16 18:59	170	653	Northwest	X	X	X		
4		1305508	07/05/16 16:28	07/05/16 20:02	214	692	Northwest	X	X	X		
5		1306688	07/05/16 17:01	07/06/16 01:53	532	4,023	Metro West	X	X	X		
6		1305582	07/05/16 17:07	07/05/16 19:52	165	589	Northwest	X	X	X		
7		1305574	07/05/16 17:07	07/05/16 19:52	165	863	Northwest	X	X	X		
8		1305580	07/05/16 17:12	07/05/16 20:58	226	4,185	Northwest	X	X	X		
9		1305660	07/05/16 17:28	07/05/16 18:55	87	3,028	Metro West	X	X	X		
10		1305739	07/05/16 17:37	07/06/16 05:11	694	2,559	Metro West	X	X	X		
11		1306664	07/05/16 17:39	07/06/16 10:37	1,018	1,303	Metro West	X	X	X	X	X
12		1331573	07/05/16 17:46	07/05/16 19:53	127	1,658	Metro West					
13		1331584	07/05/16 17:46	07/05/16 19:53	127	1,850	Metro West					
14		1306132	07/05/16 17:50	07/06/16 00:52	422	2,151	Metro West	X	X	X		
15		1306121	07/05/16 17:50	07/06/16 01:46	476	2,507	Metro West	X	X	X		
16		1306090	07/05/16 17:50	07/06/16 03:39	589	3,050	Metro West	X	X	X		
17		1306280	07/05/16 17:52	07/06/16 00:11	379	2,127	Metro West	X	X	X		
18		1306263	07/05/16 17:53	07/06/16 00:49	416	1,597	Metro West	X	X	X		
19		1306194	07/05/16 17:53	07/05/16 23:57	364	2,779	Metro West	X	X	X		
20		1306364	07/05/16 17:56	07/06/16 05:33	697	1,527	Metro West	X	X	X		
21		1306444	07/05/16 17:58	07/06/16 03:15	557	2,009	Metro West	X	X	X		
22		1308599	07/05/16 18:00	07/06/16 07:50	830	1,100	Metro West	X	X	X		
23		1306593	07/05/16 18:02	07/06/16 01:25	443	1,205	Metro West	X	X	X		
24		1307716	07/05/16 18:04	07/06/16 03:23	559	1,556	Metro East	X	X	X		
25		1306628	07/05/16 18:05	07/06/16 03:04	539	1,793	Metro East	X	X			
26		1307014	07/05/16 18:05	07/06/16 00:13	368	1,001	Metro East	X	X	X		
27		1306809	07/05/16 18:06	07/06/16 03:27	561	652	Metro East	X	X	X		
28		1306803	07/05/16 18:09	07/06/16 00:42	393	1,390	Metro East	X	X	X		
29		1306723	07/05/16 18:10	07/05/16 20:56	166	1,552	Metro East	X	X	X		
30		1306810	07/05/16 18:13	07/05/16 20:45	152	1,382	Metro East	X	X	X		
31		1306769	07/05/16 18:13	07/06/16 03:56	583	3,244	Metro East	X	X	X		
32		1306908	07/05/16 18:14	07/05/16 19:49	95	1,021	Metro East	X	X	X		
33		1307194	07/05/16 18:15	07/06/16 02:26	491	1,179	Metro East	X	X	X		

July

2016 MN Feeder Level Outages

106 Total qualifying events **7 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
34		1306781	07/05/16 18:15	07/06/16 00:56	401	2,339	Metro East	X	X	X		
35		1307131	07/05/16 18:19	07/06/16 03:40	561	1,090	Metro East	X	X	X		
36		1306911	07/05/16 18:20	07/05/16 21:52	212	2,368	Metro East	X	X	X		
37		1307046	07/05/16 18:20	07/06/16 01:13	413	2,881	Metro East	X	X	X		
38		1307254	07/05/16 18:21	07/06/16 06:07	706	2,282	Metro East	X	X	X		
39		1307112	07/05/16 18:22	07/05/16 23:36	314	1,318	Metro East	X	X	X		
40		1307219	07/05/16 18:25	07/06/16 06:20	715	3,385	Metro East					
41		1307179	07/05/16 18:26	07/06/16 02:36	490	2,771	Metro East	X	X	X		
42		1307499	07/05/16 18:48	07/05/16 23:51	303	2,725	Metro East	X	X	X		
43		1307909	07/05/16 19:04	07/06/16 13:15	1,091	1,805	Metro East					
44		1358459	07/05/16 19:20	07/06/16 20:37	1,517	2,401	Metro West	X	X	X		
45		1308357	07/05/16 19:25	07/06/16 02:01	396	2,743	Metro West	X	X	X		
46		1308580	07/05/16 19:33	07/05/16 22:19	166	561	Southeast					
47		1308477	07/05/16 19:33	07/05/16 23:00	207	2,304	Southeast	X	X	X		
48		1308543	07/05/16 19:39	07/06/16 00:23	284	1,448	Southeast	X	X			
49		1308855	07/05/16 19:40	07/06/16 00:31	291	1,076	Southeast	X	X			
50		1308915	07/05/16 19:42	07/05/16 22:59	197	2,420	Southeast	X	X	X		
51		1308713	07/05/16 19:42	07/06/16 02:14	392	1,802	Southeast	X	X	X		
52		1308622	07/05/16 19:44	07/06/16 02:16	392	2,085	Metro East	X	X	X		
53		1308684	07/05/16 19:49	07/06/16 15:18	1,169	1,611	Southeast	X	X	X	X	
54		1308946	07/05/16 20:01	07/06/16 04:39	518	1,928	Metro West	X	X	X		
55		1309319	07/05/16 20:17	07/06/16 22:06	1,549	579	Southeast	X	X	X		
56		1309809	07/05/16 20:20	07/05/16 23:13	173	2,304	Southeast	X	X	X		
57		1309365	07/05/16 20:24	07/06/16 01:08	284	2,110	Southeast	X	X	X	X	
58		1309448	07/05/16 20:29	07/06/16 00:55	266	1,025	Southeast	X	X	X	X	
59		1309497	07/05/16 20:29	07/05/16 22:49	140	966	Southeast	X	X	X	X	
60		1309471	07/05/16 20:51	07/06/16 05:31	520	500	Metro East	X	X			
61		1321128	07/05/16 20:53	07/06/16 13:00	967	656	Southeast					
62		1311265	07/06/16 01:28	07/06/16 06:01	273	842	Metro West	X	X	X		
63		1314573	07/06/16 18:01	07/06/16 19:24	83	1,209	Metro East	X	X	X		
64		1332816	07/06/16 18:48	07/07/16 11:14	986	6,085	Metro East					
65		1315199	07/07/16 08:30	07/07/16 09:55	85	609	Southeast	X	X	X		
66		1315457	07/07/16 08:30	07/07/16 09:55	85	536	Southeast	X	X	X		

July

2016 MN Feeder Level Outages

106 Total qualifying events **7 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
67		1315642	07/07/16 08:35	07/07/16 10:52	137	1,306	Northwest	X	X	X	X	
68		1317122	07/07/16 23:40	07/08/16 01:46	126	1,090	Metro West	X	X	X		
69		1318291	07/10/16 02:42	07/10/16 08:16	334	1,851	Northwest	X	X	X	X	X
70		1318737	07/11/16 05:52	07/11/16 06:52	60	1,922	Metro East	X	X	X		
71		1319124	07/11/16 16:17	07/11/16 18:50	153	1,109	Metro East	X	X	X		
72		1319870	07/12/16 08:21	07/12/16 09:51	90	2,777	Metro East	X	X			
73		1320052	07/12/16 11:42	07/12/16 12:53	71	934	Metro West	X	X	X		
74		1322221	07/16/16 20:10	07/16/16 23:19	189	798	Northwest	X	X	X		
75		1322214	07/16/16 20:10	07/16/16 23:19	189	912	Northwest	X	X	X		
76		1322199	07/16/16 20:10	07/17/16 00:35	265	953	Northwest	X	X	X		
77		1322217	07/16/16 20:10	07/17/16 01:20	310	862	Northwest	X	X	X		
78		1322225	07/16/16 20:14	07/17/16 06:33	619	600	Northwest	X	X	X		
79		1322660	07/17/16 03:44	07/17/16 04:55	71	3,453	Metro West	X	X	X		
80		1323788	07/19/16 05:52	07/19/16 07:44	112	1,658	Metro West	X	X	X		
81		1323787	07/19/16 05:52	07/19/16 07:44	112	1,849	Metro West	X	X	X		
82		1328302	07/20/16 05:26	07/20/16 06:27	61	2,379	Metro East	X	X	X		
83		1324865	07/21/16 04:03	07/21/16 06:20	137	688	Metro West	X		X		
84		1328275	07/21/16 04:09	07/21/16 06:25	136	2,314	Metro East	X	X	X	X	
85		1324961	07/21/16 04:15	07/21/16 06:50	155	1,917	Metro West	X	X	X		
86		1325193	07/21/16 04:31	07/21/16 05:37	66	1,443	Metro West	X	X	X		
87		1325290	07/21/16 04:38	07/21/16 07:48	190	1,160	Metro West	X	X	X		
88		1325266	07/21/16 04:38	07/21/16 07:15	157	2,208	Metro West	X	X	X		
89		1325250	07/21/16 04:38	07/21/16 07:08	150	1,992	Metro West	X	X	X		
90		1325243	07/21/16 04:38	07/21/16 07:09	151	1,860	Metro West	X	X	X		
91		1325753	07/21/16 05:46	07/21/16 06:47	61	3,369	Metro East	X	X	X		
92		1328673	07/22/16 19:59	07/22/16 22:45	166	2,280	Metro East	X	X	X	X	
93		1328781	07/22/16 21:30	07/22/16 22:49	79	1,300	Metro West	X	X	X		
94		1329094	07/23/16 10:28	07/23/16 16:30	362	1,991	Southeast	X	X	X	X	X
95		1329127	07/23/16 10:53	07/23/16 12:13	80	2,831	Metro West	X	X	X	X	X
96		1329392	07/23/16 13:23	07/23/16 15:40	137	2,774	Metro West	X	X	X	X	
97		1330237	07/23/16 18:18	07/23/16 22:40	262	1,692	Metro West	X	X	X	X	X
98		1330458	07/24/16 02:38	07/24/16 05:00	142	2,605	Metro West	X	X	X	X	X
99		1331882	07/27/16 01:53	07/27/16 04:23	150	654	Northwest	X	X	X		

July

2016 MN Feeder Level Outages

106 Total qualifying events **7 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
100		1332090	07/27/16 13:51	07/27/16 14:55	64	975	Metro East	X	X	X		
101		1332137	07/27/16 14:18	07/27/16 18:41	263	2,934	Metro East	X	X	X	X	X
102		1332235	07/27/16 15:47	07/27/16 18:15	148	1,999	Metro West	X	X	X	X	
103		1332943	07/28/16 19:18	07/28/16 21:07	109	1,482	Southeast	X	X	X	X	
104		1332941	07/28/16 19:18	07/28/16 21:18	120	1,997	Southeast	X	X	X	X	
105		1333545	07/30/16 11:00	07/30/16 12:02	62	918	Metro West	X	X	X		
106		1333751	07/31/16 09:33	07/31/16 14:36	303	619	Metro West	X	X	X	X	X

SECURITY DATA ENDS]

August

2016 MN Feeder Level Outages

43 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	Email 5
1		1334095	08/01/16 11:45	08/01/16 13:12	87	603	Metro East	X	X	X			
2		1335086	08/04/16 06:00	08/04/16 07:39	99	861	Northwest	X	X	X			
3		1335145	08/04/16 07:17	08/04/16 09:06	109	1,123	Metro East	X	X	X	X		
4		1335188	08/04/16 07:37	08/04/16 10:21	164	1,133	Metro West	X	X	X			
5		1337236	08/09/16 04:30	08/09/16 05:42	72	2,485	Metro East	X	X	X		X	
6		1337437	08/09/16 14:32	08/09/16 15:39	67	3,233	Metro East	X	X	X	X		
7		1337624	08/10/16 06:04	08/10/16 08:25	141	862	Northwest	X	X	X			
8		1337653	08/10/16 06:48	08/10/16 09:15	147	688	Metro West	X	X	X	X		
9		1337801	08/10/16 11:48	08/10/16 12:55	67	1,684	Metro West	X	X	X			
10		1337828	08/10/16 12:21	08/10/16 14:16	115	2,484	Metro East	X	X	X	X		
11		1338014	08/10/16 16:36	08/10/16 17:59	83	1,623	Metro East	X	X	X	X		
12		1338183	08/10/16 18:59	08/10/16 20:38	99	785	Northwest	X	X	X			
13		1338604	08/10/16 20:50	08/11/16 03:37	407	6,285	Metro East	X	X	X	X		
14		1338707	08/10/16 21:52	08/11/16 02:09	257	2,020	Metro West	X	X	X	X		
15		1339092	08/11/16 02:18	08/11/16 04:56	158	2,987	Metro West	X	X	X	X		
16		1356185	08/11/16 02:31	08/11/16 08:11	340	3,070	Metro West	X	X	X	X		
17		1339744	08/11/16 09:18	08/11/16 10:24	66	1,743	Metro West	X	X	X			
18		1343645	08/16/16 08:45	08/16/16 09:50	65	1,676	Metro East	X	X	X			
19		1342605	08/16/16 19:50	08/16/16 21:50	120	1,071	Metro West	X	X	X			
20		1342602	08/16/16 19:50	08/16/16 21:41	111	1,047	Metro West	X	X	X		X	
21		1343630	08/17/16 05:33	08/17/16 07:39	126	4,122	Metro East	X	X	X			
22		1343667	08/18/16 11:56	08/18/16 14:08	132	1,099	Southeast	X	X	X			
23		1343666	08/18/16 11:56	08/18/16 14:08	132	1,130	Southeast	X	X	X			
24		1344031	08/18/16 23:34	08/19/16 01:13	99	1,896	Metro West	X	X	X	X		
25		1344078	08/19/16 02:36	08/19/16 03:54	78	1,902	Metro West	X	X	X	X		
26		1344091	08/19/16 02:40	08/19/16 04:51	131	1,237	Metro West	X	X	X	X		
27		1344109	08/19/16 02:48	08/19/16 04:57	129	3,052	Metro West	X	X	X	X		
28		1344125	08/19/16 02:53	08/19/16 04:20	87	2,569	Metro East	X	X	X	X		
29		1344349	08/19/16 05:11	08/19/16 07:52	75	1,206	Metro West	X	X	X	X		
30		1345729	08/22/16 14:44	08/22/16 17:25	161	1,836	Southeast	X	X	X	X		
31		1346883	08/23/16 17:07	08/23/16 20:05	178	1,622	Metro East	X	X	X	X		
32		1346607	08/23/16 23:15	08/24/16 01:18	123	606	Metro West	X	X	X	X		
33		1346870	08/24/16 12:47	08/24/16 14:11	84	2,447	Metro East	X	X	X	X		

August

2016 MN Feeder Level Outages

43 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	Email 5
34		1346892	08/24/16 13:00	08/24/16 19:51	411	1,135	Metro East	X	X	X	X		
35		1347098	08/25/16 06:56	08/25/16 08:03	67	2,287	Metro East	X	X	X			
36		1347552	08/26/16 09:33	08/26/16 10:54	81	747	Metro East	X	X	X			
37		1347599	08/26/16 10:13	08/26/16 11:18	65	2,082	Metro East	X	X	X			
38		1348038	08/28/16 03:20	08/28/16 05:14	114	2,018	Metro West	X	X	X			
39		1349534	08/29/16 16:27	08/29/16 17:30	63	1,109	Metro East	X	X	X			
40		1349646	08/29/16 18:44	08/29/16 19:52	67	808	Metro East	X	X	X	X		
41		1349655	08/29/16 18:59	08/29/16 21:25	146	2,684	Metro West	X	X	X	X		
42		1349793	08/29/16 21:45	08/29/16 23:06	81	2,917	Metro East	X	X	X			
43		1350351	08/30/16 22:01	08/30/16 23:59	118	1,581	Metro West	X	X	X	X	X	X

SECURITY DATA ENDS]

September

2016 MN Feeder Level Outages

26 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	Email 5
1		1351282	09/04/16 05:23	09/04/16 07:22	119	3,112	Metro West	x	X	X	X	X	
2		1351535	09/05/16 01:06	09/05/16 02:23	77	1,813	Metro West	x	X	X	X		
3		1351717	09/05/16 05:01	09/05/16 07:40	159	1,833	Southeast	x	X	X	X		
4		1351757	09/05/16 05:09	09/05/16 06:58	109	673	Metro East	x	X	X	X	X	
5		1352313	09/06/16 04:35	09/06/16 05:50	75	1,434	Metro West	x	X	X			
6		1352364	09/06/16 05:03	09/06/16 06:16	73	1,417	Metro West	x	X	X			
7		1354368	09/11/16 02:20	09/11/16 05:34	194	2,023	Southeast	x	X				
8		1355391	09/13/16 07:15	09/13/16 09:27	132	4,039	Metro East	x	X	X	X	X	
9		1356451	09/15/16 18:14	09/15/16 19:22	68	1,901	Metro West	x	X	X			
10		1357237	09/18/16 13:35	09/18/16 17:59	264	540	Metro East	x	X	X	X	X	
11		1358061	09/21/16 08:11	09/21/16 10:24	133	2,038	Metro East	x	X	X	X		
12		1358491	09/21/16 19:16	09/21/16 20:53	97	2,275	Northwest	x	X	X	X	X	
13		1358511	09/21/16 19:19	09/21/16 20:45	86	1,293	Metro West	x	X	X			
14		1358596	09/21/16 19:51	09/21/16 22:03	132	1,984	Metro West	x	X	X	X		
15		1358643	09/21/16 20:16	09/21/16 22:55	159	659	Metro West	x	X	X	X		
16		1358644	09/21/16 20:17	09/21/16 22:43	146	1,435	Metro West	x	X	X	X		
17		1361490	09/22/16 01:32	09/22/16 02:32	60	1,435	Metro West	x	X	X			
18		1360184	09/24/16 21:16	09/25/16 00:58	222	1,620	Southeast	x	X	X	X	X	X
19		1361572	09/29/16 15:03	09/29/16 16:22	79	557	Metro East	x	X	X			
20		1361830	09/30/16 13:15	09/30/16 14:20	65	733	Metro West	x	X	X	X		
21		1361827	09/30/16 13:15	09/30/16 14:20	65	2,262	Metro West	x	X	X	X		
22		1361838	09/30/16 13:15	09/30/16 14:20	65	948	Metro West	x	X	X	X		
23		1361837	09/30/16 13:15	09/30/16 14:20	65	2,507	Metro West	x	X	X	X		
24		1361826	09/30/16 13:15	09/30/16 14:20	65	1,446	Metro West	x	X	X	X		
25		1361824	09/30/16 13:15	09/30/16 14:20	65	1,263	Metro West	x	X	X	X		

SECURITY DATA ENDS]

October

2016 MN Feeder Level Outages

4 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
1		1362520	10/03/16 09:11	10/03/16 10:26	75	1,448	Metro West	X	X	X	X	
2		1363354	10/05/16 04:41	10/05/16 05:53	72	2,881	Metro West	X	X	X	X	
3		1364841	10/11/16 07:13	10/11/16 09:14	121	2,558	Metro East	X	X	X	X	
4		1368522	10/30/16 11:48	10/30/16 13:07	79	1,030	Metro West	X	X	X	X	X

SECURITY DATA ENDS]

November

2016 MN Feeder Level Outages

25 Total qualifying event 2 t 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
1		1369558	11/04/16 12:46	11/04/16 13:56	70	2,892	Metro East	x	X	X				
2		1370649	11/10/16 11:32	11/10/16 13:48	136	1,251	Southeast	x	X	X	X			
3		1371414	11/14/16 11:37	11/14/16 12:38	61	561	Southeast	x	X	x	X	X		
4		1372627	11/18/16 09:07	11/18/16 22:41	814	547	Northwest	x						
5		1372770	11/18/16 10:18	11/18/16 19:52	574	907	Northwest	x	X	X				
6		1372775	11/18/16 10:18	11/18/16 11:19	61	621	Northwest	x	X	X				
7		1372806	11/18/16 10:25	11/18/16 22:41	736	862	Northwest	x	X					
8		1372890	11/18/16 10:47	11/19/16 08:52	1,325	529	Northwest							
9		1373013	11/18/16 11:26	11/18/16 13:51	145	699	Northwest	x	X	X				
10		1373315	11/18/16 14:34	11/18/16 15:57	83	1,374	Metro West	x	X	X	X			
11		1373328	11/18/16 14:34	11/18/16 15:57	83	1,186	Metro West	x	X	X	X			
12		1373564	11/18/16 15:23	11/18/16 17:26	123	1,102	Metro West	x	X	X				
13		1373706	11/18/16 15:46	11/18/16 17:57	131	1,836	Metro West	x	X	X	X			
14		1373754	11/18/16 15:50	11/18/16 17:18	88	1,239	Metro West	x	X	X				
15		1373951	11/18/16 16:27	11/18/16 19:01	154	1,318	Metro East	x	X	X	X			
16		1374084	11/18/16 16:53	11/18/16 19:23	150	2,616	Metro East	x	X	X				
17		1374355	11/18/16 18:18	11/18/16 20:12	114	595	Northwest	x	X	X				
18		1374508	11/18/16 19:54	11/18/16 20:55	61	1,836	Metro West	x	X	X				
19		1374741	11/18/16 22:34	11/19/16 00:12	98	2,038	Metro East	x	X	X				
20		1374750	11/18/16 22:42	11/19/16 03:04	262	678	Northwest	x	X	X				
21		1375825	11/22/16 11:02	11/22/16 12:44	102	907	Northwest	x	X	X				
22		1376137	11/23/16 02:16	11/23/16 13:32	676	1,863	Metro East	x	X	X	X	X	X	X
23		1376105	11/23/16 04:27	11/23/16 07:11	164	1,640	Metro West	x	X	X	X	X		
24		1377436	11/24/16 18:07	11/24/16 19:34	87	2,798	Metro East	x	X	X	X			
25		1377388	11/26/16 11:07	11/26/16 17:15	333	538	Metro East							

December

2016 MN Feeder Level Outages

18 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
1		1380300	12/03/16 00:05	12/03/16 01:42	97	557	Metro East	X	X	X		
2		1378503	12/03/16 09:56	12/03/16 13:46	230	2,130	Southeast	X	X	X		
3		1378506	12/03/16 09:56	12/03/16 13:46	230	1,092	Southeast	X	X	X		
4		1380513	12/10/16 15:24	12/10/16 20:05	281	705	Metro West	X	X	X	X	
5		1380508	12/10/16 15:24	12/10/16 16:38	74	1,096	Metro West	X	X	X	X	
6		1381217	12/14/16 05:49	12/14/16 07:44	115	1,032	Northwest	X	X	X		
7		1382061	12/18/16 04:30	12/18/16 05:31	61	1,387	Metro West	X	X	X	X	
8		1382091	12/18/16 06:23	12/18/16 08:22	119	1,310	Northwest	X	X	X	X	
9		1382088	12/18/16 06:23	12/18/16 08:22	119	779	Northwest	X	X	X	X	
10		1382087	12/18/16 06:23	12/18/16 08:40	137	1,134	Metro West	X	X	X		
11		1385180	12/25/16 16:27	12/25/16 18:39	132	2,265	Metro West	X	X	X	X	X
12		1384117	12/26/16 01:59	12/26/16 08:41	402	666	Metro East	X	X	X	X	X
13		1384172	12/26/16 02:36	12/26/16 04:21	105	2,429	Southeast	X	X	X		
14		1384216	12/26/16 03:07	12/26/16 04:50	103	1,819	Metro East	X	X	X	X	
15		1384610	12/26/16 10:44	12/26/16 11:55	71	814	Southeast	X	X	X		
16		1384612	12/26/16 10:44	12/26/16 12:18	94	1,630	Southeast	X	X	X	X	
17		1384611	12/26/16 10:44	12/26/16 11:56	72	762	Southeast	X	X	X	X	
18		1385169	12/28/16 04:51	12/28/16 05:54	63	1,900	Metro West	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.

PUBLIC DOCUMENT
NOT PUBLIC DATA HAS BEEN EXCISED

					All levels, All Causes included			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		
Metro East				**Total**			**Bulk Power Supply**			**Unplanned**			**Planned**		
	Feeder ID	SAIFI	SAIDI	CAIDI	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		6.35	762.85	120.08	64	14,599	1,753,041	0	0	0	53	14,570	1,749,500	11	29	3,541
2		4.49	534.47	119.02	2	238	28,327	0	0	0	2	238	28,327	0	0	0
3		2.42	530.77	219.73	72	4,394	965,479	0	0	0	67	4,349	958,543	5	45	6,936
4		0.86	423.55	494.14	3	6	2,965	0	0	0	3	6	2,965	0	0	0
5		1.35	391.04	289.59	143	4,155	1,203,234	0	0	0	132	4,076	1,199,309	11	79	3,925
6		2.01	370.53	184.71	115	5,671	1,047,488	0	0	0	100	4,711	911,619	15	960	135,869
7		1.93	330.46	171.60	41	3,322	570,052	0	0	0	28	2,041	537,978	13	1,281	32,074
8		4.33	279.40	64.47	33	11,060	713,030	0	0	0	27	10,985	708,956	6	75	4,074
9		1.16	276.92	238.63	11	1,309	312,368	0	0	0	9	1,286	310,323	2	23	2,045
10		0.84	275.96	328.15	59	1,840	603,794	0	0	0	54	1,704	559,557	5	136	44,237
11		3.21	272.90	85.14	42	7,920	674,341	0	0	0	25	7,815	666,725	17	105	7,616
12		1.97	259.49	131.59	18	3,859	507,819	0	0	0	15	3,854	507,137	3	5	682
13		1.63	237.91	146.07	22	1,961	286,445	0	0	0	22	1,440	263,000	0	521	23,445
14		4.37	232.19	53.09	27	18,495	981,920	0	0	0	23	17,589	954,301	4	906	27,619
15		1.46	230.15	157.47	11	247	38,896	0	0	0	11	247	38,896	0	0	0
16		1.79	224.32	125.20	5	258	32,302	0	0	0	5	258	32,302	0	0	0
17		0.78	212.23	271.46	2	258	70,037	0	0	0	2	258	70,037	0	0	0
18		2.26	210.66	93.19	36	9,399	875,914	0	0	0	26	6,007	831,168	10	3,392	44,746
19		1.45	209.27	144.16	32	1,202	173,275	0	0	0	23	1,012	170,357	9	190	2,917
20		1.89	209.17	110.54	8	1,281	141,606	1	680	58,480	6	1,241	140,506	2	40	1,100
21		1.25	208.32	166.42	162	7,378	1,227,835	0	0	0	149	6,738	1,200,571	13	640	27,264
22		1.72	206.78	120.30	31	2,011	241,932	0	0	0	26	1,884	150,862	5	127	91,070
23		2.41	206.52	85.67	4	135	11,565	0	0	0	4	135	11,565	0	0	0
24		1.00	204.00	204.00	0	1	204	0	0	0	0	1	204	0	0	0
25		2.10	203.11	96.60	70	8,448	816,081	0	0	0	63	8,126	779,236	7	322	36,845

(1) Based on Jan 1-Dec 31, 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 (2)
Based on performance Sept 2015 to Aug 2016

Feeder ID	SAIFI	SAIDI	CAIDI	Reasons for Poor Performance	Operational Changes Made, Considering or Planned
	2.77	696.49	251.43	Mainline lockout during July storm. Possible tree contact.	Replace 9 spans of conductors, 2 X-arms, 1 pole. Add 6 cutouts.
	4.39	651.26	148.28	Mainline cable failure and Tree Contact events.	Patrolled and infrared. Replace 11 Auto's, split X-arm, and 6 arresters.
	3.29	280.07	85.24	Primary Cold Shrink Failures 8/9/16 & 8/10/16.	All Cold Shrink Failures replaced with new style Bolted Connector. Complete 7/2017.
	1.45	199.34	137.32	Pole Fire 4/27/16.	Pole replaced, install Clamp Star over Auto various locations, replace 4 X-arms and install gang switch, complete 9/2017.
	1.49	163.24	109.39	Tree contact events during August storms.	Patrolled. Replaced 36 X-arms, 3 poles, and 147 insulators

Security Data Ends]

(2) Distribution outages only, storms are included

					All levels, All Causes included			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		
Metro West					**Total**			**Bulk Power Supply**			**Unplanned**			**Planned**		
	Feeder ID	SAIFI	SAIDI	CAIDI	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		4.24	727.57	171.57	14	2,854	489,655	0	0	0	12	2,844	488,839	2	10	816
2		7.33	702.81	95.93	11	2,381	228,412	0	0	0	10	2,378	227,992	1	3	420
3		1.46	561.38	383.69	17	1,605	615,829	0	0	0	17	1,605	615,829	0	0	0
4		4.35	482.93	110.90	6	479	53,122	1	111	26,418	5	476	52,357	1	3	765
5		3.14	432.60	137.87	25	4,239	584,437	1	1,355	243,900	24	4,238	584,402	1	1	35
6		1.74	413.59	237.21	4	68	16,130	0	0	0	3	67	15,881	1	1	249
7		2.40	396.67	165.10	34	2,679	442,292	1	1,113	152,481	30	2,573	429,971	4	106	12,321
8		3.43	382.99	111.69	29	4,924	549,975	0	0	0	26	3,477	462,966	3	1,447	87,009
9		3.05	382.01	125.40	75	7,774	974,878	0	0	0	54	5,106	904,524	21	2,668	70,354
10		1.44	357.26	248.04	28	1,750	434,066	0	0	0	23	1,736	431,736	5	14	2,330
11		3.07	347.71	113.16	26	6,087	688,822	0	0	0	22	6,067	688,094	4	20	728
12		2.26	323.13	142.94	55	4,415	631,066	0	0	0	41	4,322	625,034	14	93	6,032
13		2.23	322.18	144.23	27	6,592	950,758	0	0	0	22	6,448	938,392	5	144	12,366
14		4.96	314.25	63.32	49	11,574	732,821	0	0	0	41	10,224	664,887	8	1,350	67,934
15		0.50	310.00	620.00	1	1	620	0	0	0	1	1	620	0	0	0
16		0.92	305.11	332.03	4	34	11,289	0	0	0	4	34	11,289	0	0	0
17		2.59	304.21	117.51	53	7,101	834,437	0	0	0	34	6,887	810,479	19	214	23,958
18		1.52	301.97	198.86	52	1,883	374,447	0	0	0	29	1,185	334,209	23	698	40,238
19		1.82	296.53	163.02	7	824	134,328	0	0	0	4	717	131,513	3	107	2,815
20		1.11	287.08	259.67	20	754	195,790	0	0	0	18	743	194,884	2	11	906
21		2.68	279.61	104.47	20	4,475	467,509	0	0	0	17	4,377	459,755	3	98	7,754
22		1.38	278.38	201.48	50	1,600	322,360	1	1,156	199,988	46	1,540	317,821	4	60	4,539
23		2.30	271.09	118.03	9	4,109	484,986	0	0	0	9	4,109	484,986	0	0	0
24		0.81	261.23	322.79	7	1,116	360,231	0	0	0	7	1,116	360,231	0	0	0
25		2.47	257.36	103.99	13	1,480	153,904	0	0	0	10	1,451	152,425	3	29	1,479

(1) Based on Jan 1-Dec 31, 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 2015 to Aug 2016

Feeder ID	SAIFI	SAIDI	CAIDI	Reasons for Poor Performance	Operational Changes Made, Considering or Planned
	6.21	920.07	148.05	Mainline pole failure.	Decayed poles replaced.
	1.06	870.98	818.01	Tree outages on 7/5/2016, tap cable failures.	Breaking up long UG loop that crosses Hwy 7 in 2017, Feeder trim completed 11/2015.
	2.79	841.91	302.11	Tap cable failures, one occurred during N-1 resulting in long outage.	Tap cable has been replaced on this loop in 2016.
	1.99	686.28	344.55	Mainline lockout during July storm. Unknown cause.	Seven tap loops identified for cable replacement.
Security Data Ends]					

*The feeder issue in 2015 has been corrected. However, in 2016, made the list due to three cable failures on which was being served by due to cable failures on . The entire area had the tap cable replaced.

(2) Distribution outages only, storms are included

					All levels, All Causes included			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		
Northwest					**Total**			**Bulk Power Supply**			**Unplanned**			**Planned**		
	Feeder ID	SAIFI	SAIDI	CAIDI	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		2.04	1,284.08	628.64	13	2,635	1,656,457	2	2,583	1,651,057	13	2,635	1,656,457	0	0	0
2		5.09	1,205.46	236.82	18	2,372	561,743	2	930	190,185	18	2,372	561,743	0	0	0
3		5.13	916.45	178.51	19	2,264	404,153	4	1,640	161,742	17	1,814	392,894	2	450	11,259
4		1.81	854.43	472.72	22	1,061	501,552	0	0	0	22	1,061	501,552	0	0	0
5		4.10	733.52	179.07	19	3,404	609,558	2	1,661	339,780	18	3,398	609,498	1	6	60
6		3.59	587.82	163.89	40	3,124	511,988	1	874	165,186	38	2,807	505,781	2	317	6,207
7		2.00	500.88	250.44	9	80	20,035	0	0	0	9	80	20,035	0	0	0
8		1.39	479.06	344.17	9	380	130,784	1	274	23,290	9	380	130,784	0	0	0
9		3.04	379.90	124.81	11	1,391	173,613	2	914	99,169	10	935	102,933	1	456	70,680
10		2.37	362.71	153.01	17	2,150	328,981	1	906	6,342	16	2,142	328,645	1	8	336
11		1.24	339.86	274.19	16	1,154	316,414	1	940	258,500	16	1,154	316,414	0	0	0
12		1.54	325.19	211.70	15	404	85,526	1	260	49,140	15	404	85,526	0	0	0
13		1.52	306.92	202.42	18	514	104,045	0	0	0	18	514	104,045	0	0	0
14		2.40	305.73	127.47	28	1,192	151,949	1	507	43,095	28	1,192	151,949	0	0	0
15		1.04	299.81	288.10	3	384	110,630	1	381	109,728	3	384	110,630	0	0	0
16		2.07	295.97	142.65	18	1,581	225,531	1	778	147,042	18	1,581	225,531	0	0	0
17		1.24	288.84	232.26	20	439	101,962	1	356	30,260	20	439	101,962	0	0	0
18		1.26	261.02	206.58	19	2,378	491,237	0	0	0	18	2,089	485,168	1	289	6,069
19		1.10	260.57	236.09	11	330	77,911	0	0	0	11	330	77,911	0	0	0
20		0.69	258.32	375.65	40	742	278,729	0	0	0	39	735	278,652	1	7	77
21		1.59	252.02	158.79	14	1,211	192,291	2	1,127	163,153	14	1,211	192,291	0	0	0
22		2.44	246.53	101.12	24	6,083	615,104	0	0	0	23	6,077	613,760	1	6	1,344
23		2.19	246.31	112.34	7	296	33,252	2	270	29,295	7	296	33,252	0	0	0
24		2.14	240.74	112.40	4	287	32,259	2	267	28,981	4	287	32,259	0	0	0
25		1.71	228.38	133.43	9	2,083	277,937	1	1,297	218,369	9	2,083	277,937	0	0	0

(1) Based on Jan 1-Dec 31, year-end storm normalized data (IEEE Op Co Level)
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"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 2015 to Aug 2016

Feeder ID	SAIFI	SAIDI	CAIDI	Reasons for Poor Performance	Operational Changes Made, Considering or Planned
	2.08	1,098.23	526.74	Lengthy Pole failures during July storms.	Permanent repairs made on storm-related outages. Conductor replaced.
	2.07	516.67	250.13	Tree contact events during July storms. Mainline pole fires.	Permanent repairs made on storm-related outages. Poles replaced.
	2.09	450.27	215.81	Lightning Strike broke insulator and bad hot line clamp.	Rebuilding both Feeders scheduled 9.5mi in 2018, 7mi in 2019, 13mi in 2020.
	2.08	313.02	150.17	Conductor Fatigue Aluminum.	Rebuilding both Feeders scheduled 9.5mi in 2018, 7mi in 2019, 13mi in 2020.

Security Data Ends]

(2) Distribution outages only, storms are included

					All levels, All Causes included			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		
Southeast					**Total**			**Bulk Power Supply**			**Unplanned**			**Planned**		
	Feeder ID	SAIFI	SAIDI	CAIDI	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		5.02	825.18	164.31	10	226	37,133	0	46	7,820	10	226	37,133	0	0	0
2		5.18	680.50	131.25	17	8,451	1,109,221	1	1,630	96,170	15	8,430	1,107,733	2	21	1,488
3		1.37	619.88	452.16	16	547	247,331	0	0	0	16	547	247,331	0	0	0
4		0.89	554.81	622.89	19	163	101,531	0	0	0	19	163	101,531	0	0	0
5		4.15	469.00	113.10	27	8,202	927,682	1	1,988	238,560	25	8,172	921,742	2	30	5,940
6		2.27	442.31	195.12	41	1,580	308,288	1	697	19,516	40	1,577	308,078	1	3	210
7		2.01	437.89	217.79	82	3,227	702,819	0	0	0	75	2,939	687,479	7	288	15,340
8		1.31	437.17	333.37	3	438	146,015	0	0	0	3	438	146,015	0	0	0
9		0.52	425.11	812.00	23	356	289,073	0	0	0	22	337	288,636	1	19	437
10		3.04	414.32	136.27	7	678	92,393	0	0	0	7	678	92,393	0	0	0
11		2.22	406.68	183.13	15	2,405	440,433	2	2,157	326,260	14	2,403	440,241	1	2	192
12		1.74	402.41	230.90	15	4,228	976,238	0	0	0	13	4,149	974,235	2	79	2,003
13		2.08	359.18	172.60	13	924	159,478	0	0	0	13	924	159,478	0	0	0
14		2.62	353.27	134.73	25	4,767	642,243	0	0	0	25	4,767	642,243	0	0	0
15		2.17	346.00	159.77	41	2,328	371,947	0	0	0	26	2,220	355,665	15	108	16,282
16		2.36	328.64	139.15	22	1,547	215,261	1	660	112,200	22	1,547	215,261	0	0	0
17		2.05	301.87	147.45	30	4,289	632,410	2	4,179	616,634	28	4,286	631,915	2	3	495
18		3.24	283.92	87.60	10	1,572	137,703	1	489	29,340	10	1,572	137,703	0	0	0
19		1.63	283.80	173.82	34	2,583	448,978	0	0	0	33	2,551	446,194	1	32	2,784
20		3.57	264.43	74.13	20	956	70,868	1	268	19,028	18	951	70,606	2	5	262
21		0.68	262.45	386.44	29	599	231,477	0	0	0	29	599	231,477	0	0	0
22		1.28	256.96	201.47	93	2,922	588,696	0	0	0	91	1,855	471,830	2	1,067	116,866
23		1.75	252.85	144.33	36	4,187	604,311	0	0	0	32	3,887	602,119	4	300	2,192
24		2.93	248.03	84.68	25	1,608	136,169	1	549	33,489	23	1,583	135,295	2	25	874
25		0.64	242.53	376.25	24	867	326,209	0	0	0	18	837	323,640	6	30	2,569

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Southeast Poor Performing Feeders (2)
Based on performance Sept 2015 to Aug 2016

Feeder ID	SAIFI	SAIDI	CAIDI	Reasons for Poor Performance	Operational Changes Made, Considering or Planned
	1.68	849.34	506.40	Single Phase line next to bluff, trees falling into line.	Moving 1P OH line to other side of road, scheduled to be completed 7/2017
	2.09	671.92	322.09	Tree contact events during July storms.	Patrolled. Replace old switch, 6 X-arms, & 2 poles. Install 34 ClampStars & 5 fault
	1.97	516.76	262.72	Pole fire and Veg Tree.	Engineering patrolled tree ok, adding 4 sets of remote fault indicators, replace dozen X-arms and 1 Gang switch to be completed 7/2017
	2.52	245.58	97.51	Conductor down across mainline caused lockout.	Patrolled. Replace 5 X-arms. Install 17 ClapStar and 3 pole wraps at gang switches.
Security Data Ends]					

(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 Total	B Total Number of Meters Installed	A÷B Percent Read by Utility (Company)	
JANUARY	1,561,369	156,872	11,413	4,233	1,733,887	1,736,047	99.88%	
FEBRUARY	1,427,906	141,382	10,366	3,808	1,583,462	1,737,038	91.16%	*
MARCH	1,563,610	156,955	11,406	4,218	1,736,189	1,737,527	99.92%	
APRIL	1,491,347	152,220	11,225	4,056	1,658,848	1,738,260	95.43%	
MAY	1,565,234	157,001	11,432	4,220	1,737,887	1,739,527	99.91%	
JUNE	1,566,507	157,026	11,344	4,193	1,739,070	1,740,848	99.90%	
JULY	1,510,305	153,073	11,276	4,122	1,678,776	1,741,711	96.39%	
AUGUST	1,568,883	157,147	11,380	4,203	1,741,613	1,743,199	99.91%	
SEPTEMBER	1,498,647	149,355	10,834	3,991	1,662,827	1,744,468	95.32%	
OCTOBER	1,571,405	157,612	1,1463	4,197	1,744,677	1,746,267	99.91%	
NOVEMBER	1,504,896	152,241	11,050	4,015	1,672,202	1,747,655	95.68%	*
DECEMBER	1,352,989	133,758	9,852	3,631	1,500,230	1,749,220	85.77%	*

*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, November, and December when excluding multiple meter reads on a single meter from the data. Also, during December, there were system data issues processing the readings between our meter reading system (MRAS) and the Company's billing system (CRS). The meters were read in December but were not processed into CRS until January, 2017. The issue has since been resolved and all accounts are current.

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

	Residential	Commercial	Industrial	Other	A Total	B Total Number of Meters Installed	A÷B Percent Read by Customer
JANUARY	18				18	1,736,047	0.0010%
FEBRUARY	11				11	1,737,038	0.0006%
MARCH	9				9	1,737,527	0.0005%
APRIL	14				14	1,738,260	0.0008%
MAY	9				9	1,739,527	0.0005%
JUNE	18				18	1,740,848	0.0010%
JULY	28				28	1,741,711	0.0016%
AUGUST	21				21	1,743,199	0.0012%
SEPTEMBER	10				10	1,744,468	0.0006%
OCTOBER	15				15	1,746,267	0.0009%
NOVEMBER	9	1			10	1,747,655	0.0006%
DECEMBER	11				11	1,749,220	0.0006%

C-1. 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.

Account Class: Residential

Message	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total	Percent
NO ANSWER	42	41	41	44	56	58	38	34	29	31	41	52	507	22.35%
NO READING RETURNED	119	98	78	27	18	20	24	45	57	74	60	55	675	29.76%
DOOR LOCKED	15	10	12	11	13	13	12	6	13	24	18	13	160	7.05%
OC Meter Maint	19	19	16	7	4	2	7	12	15	12	10	16	139	6.13%
NEED KEY OR CODE	7	12	10	10	12	7	6	13	12	11	20	28	148	6.53%
BAD KEY OR CODE	8	7	6	4	4	6	7	8	8	7	15	8	88	3.88%
METER OFF	10	10	10	7	12	11	13	11	10	20	17	19	150	6.61%
SERVICE CUT AT POLE	5	5	4	6	2	3	4	6	7	6	4	2	54	2.38%
DEAD REGISTER	2	3	0	5	2	5	4	5	9	10	5	4	54	2.38%
VACANT	3	7	6	5	6	6	8	8	7	3	8	10	77	3.40%
KEY NOT AVAILABLE	0	0	2	3	2	0	2	1	0	0	1	0	11	0.49%
METER REMOVED	1	3	1	10	4	3	3	5	3	3	4	6	46	2.03%
GATE PROBLEM	2	8	2	2	0	4	1	1	3	2	0	2	27	1.19%
DOG	3	2	2	5	3	1	0	1	2	1	4	1	25	1.10%
METER BLOCKED	0	1	2	1	1	2	2	0	0	0	1	1	11	0.49%
UNSAFE CONDITION	2	2	3	1	0	3	2	2	3	2	2	2	24	1.06%
CUSTOMER READING	1	1	1	1	0	1	1	1	1	1	0	0	9	0.40%
WRONG ROUTE	0	0	0	0	1	0	0	0	5	0	8	0	14	0.62%
HANDHELD ESTIMATE	0	1	0	0	0	0	0	0	0	0	0	0	1	0.04%
CUST REQUESTS SKIP	0	0	2	0	0	0	1	1	0	1	0	1	6	0.26%
BAD ROAD	0	1	2	0	2	1	0	0	0	0	0	2	8	0.35%
NO ACCESS BACK YARD	0	0	0	0	0	0	0	0	0	0	1	0	1	0.04%
GARAGE LOCKED	0	0	0	2	2	0	0	0	0	0	1	0	5	0.22%
SEASONAL	0	0	0	0	0	0	0	0	0	0	0	1	1	0.04%
CANNOT LOCATE	1	1	0	1	1	0	0	1	0	1	0	0	6	0.26%
REFUSED ADMITTANCE	0	3	0	2	2	2	0	0	1	0	0	1	11	0.49%
ABS MCC Calc Reading	0	0	1	0	0	0	0	0	0	0	0	1	2	0.09%
ABS Stale Reads - MCC	0	0	0	0	0	0	0	0	0	0	1	0	1	0.04%
BUSINESS CLOSED	0	0	0	1	0	0	0	0	0	0	0	0	1	0.04%
INCLEMENT WEATHER	0	0	0	1	0	0	0	0	0	0	0	0	1	0.04%
NO WINDOW CARD	0	0	0	1	0	0	0	0	0	0	0	0	1	0.04%
SNOW/MUD	0	1	0	0	0	0	0	0	0	1	0	0	2	0.09%
DOG NEXT DOOR	0	0	0	0	0	0	0	1	0	0	1	0	2	0.09%
TOTAL	240	236	201	157	147	148	135	162	185	210	222	225	2268	100%

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	32	24	34	17	12	6	6	10	11	15	10	17	194	25.13%
METER OFF	9	14	12	17	12	14	10	7	10	9	10	14	138	17.88%
DEAD REGISTER	6	4	5	4	3	2	1	1	1	1	1	3	32	4.15%
NO ANSWER	6	9	4	7	4	2	4	3	6	5	8	8	66	8.55%
METER REMOVED	1	1	3	1	2	1	2	4	7	5	5	10	42	5.44%
DOOR LOCKED	3	6	0	1	2	2	2	19	2	2	3	6	48	6.22%
VACANT	3	3	2	3	1	1	2	4	21	21	31	2	94	12.18%
SEASONAL	4	3	4	5	2	2	4	4	1	2	4	0	35	4.53%
CANNOT LOCATE	2	5	1	1	3	2	1	0	0	1	5	1	22	2.85%
BAD KEY OR CODE	1	2	2	1	0	0	0	0	0	0	1	0	7	0.91%
GATE PROBLEM	1	2	1	0	1	1	0	0	0	1	0	0	7	0.91%
NEED KEY OR CODE	1	3	1	1	0	1	1	1	3	1	2	4	19	2.46%
OC Meter Maint	2	4	3	1	1	0	0	0	0	1	2	1	15	1.94%
KEY NOT AVAILABLE	0	1	0	0	0	0	0	0	0	1	0	0	2	0.26%
UNSAFE CONDITION	0	1	1	2	1	2	1	2	2	2	1	1	16	2.07%
SERVICE CUT AT POLE	0	1	1	0	0	0	0	2	2	1	3	0	10	1.30%
BAD ROAD	0	0	0	0	1	0	0	0	0	0	0	0	1	0.13%
CUST REQUESTS SKIP	0	0	0	0	1	0	0	0	0	0	0	1	2	0.26%
REFUSED ADMITTANCE	0	0	0	0	1	1	0	0	0	0	0	0	2	0.26%
WRONG ROUTE	0	0	0	0	1	0	0	0	0	0	0	0	1	0.13%
SNOW/MUD	0	1	0	0	0	0	0	0	0	0	0	0	1	0.13%
METER BLOCKED	0	0	0	0	1	1	0	1	0	0	0	0	3	0.39%
ABS MCC Calc Reading	0	0	0	0	0	1	1	0	1	0	0	0	3	0.39%
BUSINESS CLOSED	0	1	1	0	0	0	2	0	0	0	3	2	9	1.17%
CUST MISSED APPOINTMENT	1	0	0	0	0	0	0	0	0	0	0	0	1	0.13%
DOG	0	0	0	0	1	0	0	0	1	0	0	0	2	0.26%
TOTAL	72	85	75	61	50	39	37	58	68	68	89	70	772	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

Message	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total	Percent
NO READING RETURNED	21	11	16	14	17	8	9	5	5	5	5	6	122	73.05%
METER OFF	1	1	0	0	1	1	1	1	1	0	2	0	9	5.39%
METER REMOVED	1	1	1	2	1	1	1	1	1	1	1	1	13	7.78%
CANNOT LOCATE	0	0	0	1	0	0	0	0	0	0	0	0	1	0.60%
DEAD REGISTER	0	0	0	1	0	1	0	0	0	1	0	1	4	2.40%
SEASONAL	0	0	0	1	0	1	0	0	0	0	0	0	2	1.20%
SERVICE CUT AT POLE	1	1	1	1	2	1	1	1	1	0	0	0	10	5.99%
NO ANSWER	0	0	0	0	1	0	0	0	0	0	0	0	1	0.60%
VACANT	0	4	0	0	0	0	0	0	0	0	1	0	5	2.99%
TOTAL	24	18	18	20	22	13	12	8	8	7	9	8	167	100%

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

Message	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total	Percent
NO READING RETURNED	9	9	4	3	4	3	4	3	5	3	4	4	55	73.33%
CUSTOMER READING	2	2	1	2	1	1	1	2	0	2	1	1	16	21.33%
CUST. REQUESTS SKIP	0	0	1	0	0	1	0	0	0	0	0	0	2	2.67%
NO ANSWER	0	1	0	1	0	0	0	0	0	0	0	0	2	2.67%
TOTAL	11	12	6	6	5	5	5	5	5	5	5	5	75	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 ANSWER	16	16	11	16	21	16	18	14	11	17	11	14	181	32.85%
NO READING RETURNED	9	14	10	6	9	3	1	7	12	17	13	13	114	20.69%
METER OFF	5	5	5	4	5	2	3	2	3	3	3	4	44	7.99%
SERVICE CUT AT POLE	3	4	3	3	2	3	3	5	4	2	1	0	33	5.99%
OC Meter Maint	6	3	5	3	1	0	1	1	3	3	2	4	32	5.81%
DOOR LOCKED	4	3	2	0	2	3	2	2	3	3	1	1	26	4.72%
NEED KEY OR CODE	1	1	3	1	1	4	1	4	3	1	5	1	26	4.72%
VACANT	2	3	3	2	0	1	4	1	0	2	2	4	24	4.36%
UNSAFE CONDITION	0	0	3	1	0	2	2	2	2	2	2	2	18	3.27%
DOG	1	0	0	1	2	0	0	0	1	0	3	0	8	1.45%
METER BLOCKED	0	1	0	1	1	2	1	0	0	0	1	1	8	1.45%
BAD KEY OR CODE	1	0	1	0	0	0	0	1	0	0	3	0	6	1.09%
METER REMOVED	0	1	0	1	0	2	0	2	0	0	0	0	6	1.09%
KEY NOT AVAILABLE	0	0	2	1	2	0	0	0	0	0	0	0	5	0.91%
CUST REQUESTS SKIP	0	0	2	0	0	0	0	1	0	1	0	0	4	0.73%
DEAD REGISTER	0	0	0	1	0	0	0	1	1	0	0	0	3	0.54%
REFUSED ADMITTANCE	0	0	0	0	0	1	0	0	1	0	0	1	3	0.54%
BAD ROAD	0	0	0	0	0	0	0	0	0	0	0	2	2	0.36%
DOG NEXT DOOR	0	0	0	0	0	0	0	1	0	0	1	0	2	0.36%
GATE PROBLEM	0	1	0	0	0	0	0	0	1	0	0	0	2	0.36%
CANNOT LOCATE	0	0	0	0	0	0	0	0	0	1	0	0	1	0.18%
CUSTOMER READING	0	0	0	1	0	0	0	0	0	0	0	0	1	0.18%
SNOW/MUD	0	0	0	0	0	0	0	0	0	1	0	0	1	0.18%
WRONG ROUTE	0	0	0	0	0	0	0	0	0	0	1	0	1	0.18%
TOTAL	48	52	50	42	46	39	36	44	45	53	49	47	551	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	9	6	7	6	7	4	5	3	8	4	2	6	67	27.92%
METER OFF	4	8	5	6	4	5	6	5	4	3	4	4	58	24.17%
SEASONAL	3	3	3	4	2	2	4	4	1	2	4	0	32	13.33%
NO ANSWER	2	2	2	1	1	1	2	1	1	4	3	4	24	10%
DEAD REGISTER	3	2	2	2	1	0	0	1	0	0	0	1	12	5%
UNSAFE CONDITION	0	0	0	0	1	2	1	1	1	1	1	0	8	3.33%
VACANT	1	1	0	1	0	1	0	1	0	1	1	0	7	2.92%
SERVICE CUT AT POLE	0	0	1	0	0	0	0	1	2	1	1	0	6	2.50%
ABS MCC Calc Reading	0	0	0	0	0	1	1	0	1	0	0	0	3	1.25%
CANNOT LOCATE	1	0	0	0	0	0	0	0	0	1	1	0	3	1.25%
DOOR LOCKED	0	0	0	0	1	1	0	0	0	0	0	1	3	1.25%
GATE PROBLEM	0	0	0	0	1	1	0	0	0	1	0	0	3	1.25%
METER BLOCKED	0	0	0	0	1	1	0	1	0	0	0	0	3	1.25%
OC Meter Maint	0	1	0	1	0	0	0	0	0	0	1	0	3	1.25%
METER REMOVED	0	0	0	0	0	0	0	1	1	0	0	0	2	0.83%
NEED KEY OR CODE	0	1	0	0	0	0	0	0	0	0	0	1	2	0.83%
BAD KEY OR CODE	0	0	0	0	0	0	0	0	0	0	1	0	1	0.42%
BAD ROAD	0	0	0	0	1	0	0	0	0	0	0	0	1	0.42%
CUST MISSED APPOINTMENT	1	0	0	0	0	0	0	0	0	0	0	0	1	0.42%
CUST REQUESTS SKIP	0	0	0	0	1	0	0	0	0	0	0	0	1	0.42%
TOTAL	24	24	20	21	21	19	19	19	19	18	19	17	240	100%

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	12	3	12	11	11	8	7	3	3	3	3	3	79	72.48%
METER REMOVED	1	1	1	1	1	1	1	1	1	1	1	1	12	11.01%
SERVICE CUT AT POLE	0	0	0	1	1	1	1	1	1	0	0	0	6	5.50%
METER OFF	1	1	0	0	0	1	0	0	0	0	1	0	4	3.67%
VACANT	0	4	0	0	0	0	0	0	0	0	0	0	4	3.67%
DEAD REGISTER	0	0	0	0	0	0	0	0	0	1	0	1	2	1.83%
CANNOT LOCATE	0	0	0	1	0	0	0	0	0	0	0	0	1	0.92%
NO ANSWER	0	0	0	0	1	0	0	0	0	0	0	0	1	0.92%
TOTAL	14	9	13	14	14	11	9	5	5	5	5	5	109	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 RETURNED	4	5	3	3	4	3	4	3	5	3	4	4	45	71.43%
CUSTOMER READING	2	2	1	2	1	1	1	2	0	2	1	1	16	25.40%
CUST REQUESTS SKIP	0	0	1	0	0	1	0	0	0	0	0	0	2	3.17%
TOTAL	6	7	5	5	5	5	5	5	5	5	5	5	63	100%

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

	Residential	**Commercial**	**Industrial**	**Other**	**Total**
JANUARY	1,562,704	157,323	11,465	4,555	1,736,047
FEBRUARY	1,563,668	157,356	11,465	4,549	1,737,038
MARCH	1,564,253	157,270	11,460	4,544	1,737,527
APRIL	1,564,992	157,261	11,463	4,544	1,738,260
MAY	1,566,196	157,312	11,476	4,543	1,739,527
JUNE	1,567,446	157,388	11,483	4,531	1,740,848
JULY	1,568,235	157,449	11,499	4,528	1,741,711
AUGUST	1,569,659	157,507	11,508	4,525	1,743,199
SEPTEMBER	1,570,768	157,662	11514	4,524	1,744,468
OCTOBER	1,572,300	157,935	11,509	4,523	1,746,267
NOVEMBER	1,573,479	158,148	11,505	4,523	1,747,655
DECEMBER	1,574,734	158,462	11,501	4,523	1,749,220

**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-16		Feb-16		Mar-16		Apr-16		May-16		Jun-16		Jul-16		Aug-16		Sep-16		Oct-16		Nov-16		Dec-16		Total 2016	
	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
Number of customers who received disconnect notices [1]	65,630	3,694	73,866	4,364	91,529	5,136	77,830	4,855	57,916	4,689	55,348	4,546	55,678	4,073	80,871	4,946	90,067	4,572	84,157	4,682	67,703	4,232	70,070	4,437	870,665	54,226
									Disconnection notice threshold changed from $100 to $120 past due in May																	
Number of customers who sought cold weather rule protection [1, 2]																										
Sought	15,813	0	12,554	0	15,839	0	32,288	0	0	0	0	0	0	0	0	0	0	0	19,576	0	18,070	0	15,912	0	130,052	0
Granted	15,813	0	12,554	0	15,839	0	32,288	0	0	0	0	0	0	0	0	0	0	0	19,576	0	18,070	0	15,912	0	130,052	0
Number of customers locked for nonpayment	709	26	1,023	44	831	36	2,014	82	3,678	76	3,371	65	1,825	54	3,150	63	2,051	43	499	35	893	26	530	11	20,574	561
Number of total customers restored to service within 24 hours	379	8	608	5	398	3	628	10	1,160	26	1,187	3	621	1	1,030	81	816	2	192	2	396	5	283	2	7,698	148
Number of customers restored to service with pay arrangements	34	0	44	0	32	0	158	2	274	16	270	1	131	0	263	9	181	1	31	2	55	0	39	0	1,512	0
Number of customers requesting emergency medical account status																										
Requested	132		140		208		354		381		383		416		499		369		250		157		138		3,427	
Denied [3]	21		21		40		72		122		73		67		112		88		42		32		24		714	

Number of bankruptcies: 362

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 Due to changes in state law, cold weather rule protection specific to low-income is not tracked by the system. The Company recognizes as a matter of policy customers that entered into payment arrangements with the company as being protected under the cold weather rule.

3 Reasons for denial of emergency medical account status:
Customer did not return form.
Doctor refused to certify as Medical/Life Support.

Residential

	Jan-16	Feb-16	Mar-16	Apr-16	May-03	Jun-16	Jul-16	Aug-16	Sep-16	Oct-16	Nov-16	Dec-16	**Total 2016**
# Service Installations	315	308	302	268	315	406	341	485	442	439	300	162	**4083**
Avg days to complete from customer and site ready	4.9	2.2	1.4	1.3	1.2	1.7	1.6	1.7	1.7	3.4	2.6	4.6	**2.4**

Commercial

	Jan-16	Feb-16	Mar-16	Apr-16	May-03	Jun-16	Jul-16	Aug-16	Sep-16	Oct-16	Nov-16	Dec-16	**Total 2016**
# Service Installations	26	12	19	10	20	17	17	27	31	47	42	49	**317**
Avg days to complete from customer and site ready	10.2	6.5	1.4	7.0	9.1	3.9	7.7	8.2	7.3	5.5	10.2	8.5	**7.1**

		January	February	March	April	May	June	July	August	September	October	November	December	2016
1	All **Residential** Calls offered to Agents	89,215	88,038	94,032	102,049	109,807	130,659	158,132	130,931	115,974	104,972	94,566	86,384	1,304,759
2	All **BSC** Calls Offered to Agents	4,079	3,962	3,947	3,593	4,441	5,942	5,814	6,716	5,319	5,233	4,757	4,700	58,503
3	All **Credit** Calls Offered to Agents	13,334	15,570	21,969	32,547	24,446	19,875	17,058	26,520	27,357	20,326	15,733	12,722	247,457
4	All **PAR** Calls Offered to Agents	2,617	2,710	3,298	5,771	5,407	5,176	4,207	5,067	4,463	3,705	2,971	2,535	47,927
5	All Calls Offered to Agents	109,245	110,280	123,246	143,960	144,101	161,652	185,211	169,234	153,113	134,236	118,027	106,341	1,658,646
6	All Calls Excluding Credit and PAR	93,294	92,000	97,979	105,642	114,248	136,601	163,946	137,647	121,293	110,205	99,323	91,084	1,363,262
7	All **Residential** Calls Answered by Agents within 20 seconds	70,379	71,287	76,403	78,445	84,828	96,279	87,975	100,513	86,812	78,570	75,764	65,646	972,901
8	All **BSC** Calls Answered by Agents within 20 seconds	3,135	2,872	3,011	2,790	3,133	4,342	4,301	5,491	4,019	3,736	3,711	3,394	43,935
9	All **Credit** Calls Answered by Agents within 20 seconds	12,286	13,242	17,990	27,422	21,426	16,599	13,112	19,709	19,277	15,124	13,584	11,172	200,943
10	All **PAR** Calls Answered by Agents within 20 seconds	2,350	2,467	2,962	5,022	4,555	4,503	3,456	4,106	3,504	3,024	2,471	2,177	40,597
11	All Calls Answered by Agents within 20 seconds	88,150	89,868	100,366	113,679	113,942	121,723	108,844	129,819	113,612	100,454	95,530	82,389	1,258,376
12	All Calls Answered by Agents within 20 seconds Excluding Credit and PAR	73,514	74,159	79,414	81,235	87,961	100,621	92,276	106,004	90,831	82,306	79,475	69,040	1,016,836
13	Non-Billing and Outage Calls Completed in IVR	21,506	27,972	27,266	24,878	25,529	35,892	69,345	42,983	37,349	28,577	26,148	23,933	391,378
14	Billing Calls Handled by IVR	129,573	126,697	138,310	136,964	128,409	124,839	121,829	132,650	128,298	122,108	112,986	112,302	1,514,965
15	Outage Calls Handled by IVR	11,626	8,749	12,645	17,392	20,175	49,605	151,483	42,020	26,500	15,013	30,776	19,443	405,427
16	Outage Calls Offered to Agents	4,586	3,833	5,071	6,181	10,001	24,366	49,358	20,960	15,456	11,787	14,970	13,301	179,870
17	Total Outage Calls	16,212	12,582	17,716	23,573	30,176	73,971	200,841	62,980	41,956	26,800	45,746	32,744	585,297
18	All Calls Offered to Agents + Outage Calls Handled by IVR	120,871	119,029	135,891	161,352	164,276	211,257	336,694	211,254	179,613	149,249	148,803	125,784	2,064,073
19	All Calls Answered by Agents within 20 seconds + Outage Calls Handled by IVR	99,776	98,617	113,011	131,071	134,117	171,328	260,327	171,839	140,112	115,467	126,306	101,832	1,663,803
20	Res and BSC Calls Offered to Agents + Outage Calls Handled by IVR	104,920	100,749	110,624	123,034	134,423	186,206	315,429	179,667	147,793	125,218	130,099	110,527	1,768,689
21	Res and BSC Calls Answered by Agents within 20 seconds + Outage Calls Handled by IVR	85,140	82,908	92,059	98,627	108,136	150,226	243,759	148,024	117,331	97,319	110,251	88,483	1,422,263
22	All Calls Offered to Agents + Outage Calls Handled by IVR + Billing Calls Handled by IVR	250,444	245,726	274,201	298,316	292,685	336,096	458,523	343,904	307,911	271,357	261,789	238,086	3,579,038
23	All Calls Answered by Agents within 20 seconds + Outage Calls Handled by IVR + Billing Calls Handled by IVR	229,349	225,314	251,321	268,035	262,526	296,167	382,156	304,489	268,410	237,575	239,292	214,134	3,178,768

		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	234,493	227,446	248,934	259,998	262,832	311,045	437,258	312,317	276,091	247,326	243,085	222,829	3,283,654
25	Res and BSC Calls Answered by Agents within 20 seconds + Outage Calls Handled by IVR + Billing Calls Handled by IVR	214,713	209,605	230,369	235,591	236,545	275,065	365,588	280,674	245,629	219,427	223,237	200,785	2,937,228
26	Service Level All Calls (including calls handled by IVR)	**92.2%**	**92.5%**	**92.4%**	**90.6%**	**90.5%**	**89.3%**	**85.5%**	**89.8%**	**88.6%**	**88.7%**	**92.2%**	**90.9%**	**89.9%**
27	Service Level All Calls, including credit calls (not including billing calls handled by IVR)	**82.5%**	**82.9%**	**83.2%**	**81.2%**	**81.6%**	**81.1%**	**77.3%**	**81.3%**	**78.0%**	**77.4%**	**84.9%**	**81.0%**	**80.6%**
28	Service Level Res and BSC Calls (including outage and billing calls handled by IVR)	**91.6%**	**92.2%**	**92.5%**	**90.6%**	**90.0%**	**88.4%**	**83.6%**	**89.9%**	**89.0%**	**88.7%**	**91.8%**	**90.1%**	**89.4%**
29	Service Level Res and BSC Calls, excluding credit calls (not including billing calls handled by IVR)	**81.1%**	**82.3%**	**83.2%**	**80.2%**	**80.4%**	**80.7%**	**77.3%**	**82.4%**	**79.4%**	**77.7%**	**84.7%**	**80.1%**	**80.4%**
30	Service Level (agent only)	**80.7%**	**81.5%**	**81.4%**	**79.0%**	**79.1%**	**75.3%**	**58.8%**	**76.7%**	**74.2%**	**74.8%**	**80.9%**	**77.5%**	**75.9%**
31	ASA (Agent only Residential, BSC, Credit and PAR)	14	12	14	15	15	21	55	16	17	23	13	19	21
	ASA Residential	16	13	14	17	16	23	65	17	17	25	14	19	23
	ASA BSC	26	30	26	23	35	30	23	14	24	28	19	28	25
	ASA Credit	6	6	14	9	7	9	8	10	13	12	8	12	10
	ASA PAR	9	8	10	11	13	10	17	16	21	16	14	11	13

Notes:

29	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)
26	The service level formula is: (All Calls Answered by Agents within 20 seconds + Outage Calls Handled by IVR + Billing Calls Handled by IVR) + (Res and BSC Calls Answered by Agents within 20 seconds + Outage Calls Handled by IVR) / (All Calls Offered to Agents + Outage Calls Handled by IVR + Billing Calls Handled by IVR) + (Res and BSC Calls Answered by Agents within 20 seconds + 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, at the Credit call centers at Amarillo and Centre
	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, 2016 to December 31, 2016

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

		Month												
CustomerType	Source	Jan-16	Feb-16	Mar-16	Apr-16	May-16	Jun-16	Jul-16	Aug-16	Sep-16	Oct-16	Nov-16	Dec-16	2016
Commercial	BBB	0	0	0	0	0	0	0	0	0	1	0	0	1
	Commission	1	1	1	0	2	0	1	1	0	1	0	1	9
	Commission/OAG	0	0	0	0	0	1	0	0	0	0	0	0	1
	Informational	0	0	0	0	0	0	0	2	0	0	0	0	2
	Internal	0	0	0	1	0	0	0	2	1	1	0	0	5
	OAG	0	0	0	1	1	0	1	1	2	0	1	0	7
	Officer	0	0	0	0	0	1	0	0	0	0	0	0	1
	Referral	0	0	0	0	0	0	1	0	0	0	0	0	1
Commercial Total		1	1	1	2	3	2	3	6	3	3	1	1	27
Industrial	OAG	0	0	0	0	0	0	0	0	0	1	0	0	1
Industrial Total		0	0	0	0	0	0	0	0	0	1	0	0	1
Residential	BBB	2	1	4	6	6	3	1	5	9	1	2	1	41
	Commission	3	4	10	4	10	5	7	18	8	5	4	3	81
	Commission/Internal	0	0	0	1	1	0	1	0	0	0	0	0	3
	Commission/OAG	0	0	0	1	1	0	2	0	0	2	0	0	6
	Informational	0	0	1	1	0	0	0	0	0	0	0	0	2
	Internal	9	9	19	17	13	12	9	12	8	9	5	3	125
	OAG	12	11	12	23	33	16	21	32	19	18	11	4	212
	OAG/Officer	0	0	1	0	0	0	0	1	0	0	0	0	2
	Officer	2	2	3	1	1	6	0	1	4	2	1	2	25
	Referral	2	1	2	5	3	0	0	1	0	1	2	1	18
	Commission/BBB	0	0	0	1	0	1	0	0	0	0	0	0	2
	Officer/BBB	0	0	0	0	1	0	0	0	0	0	0	0	1
	Government	0	0	0	0	0	0	0	0	0	0	0	1	1
Residential Total		30	28	52	60	69	43	41	70	48	38	25	15	519
Grand Total		**31**	**29**	**53**	**62**	**72**	**45**	**44**	**76**	**51**	**42**	**26**	**16**	**547**

Minnesota Public Utilities Commission
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7826.2000 REPORTING CUSTOMER COMPLAINTS
For the period of January 01, 2016 to December 31, 2016

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												
CustomerType	MPUC	Jan-16	Feb-16	Mar-16	Apr-16	May-16	Jun-16	Jul-16	Aug-16	Sep-16	Oct-16	Nov-16	Dec-16	2016
Commercial	Billing Error	0	0	0	1	2	1	0	2	1	0	0	0	7
	High Bill	0	0	0	0	0	0	0	1	1	0	0	0	2
	Inadequate Service	1	1	0	1	1	0	1	3	0	1	1	0	10
	Serv Rest Interval	0	0	1	0	0	0	0	0	0	0	0	0	1
	Service Ext Interval	0	0	0	0	0	0	1	0	0	1	0	1	3
	Wrongful Disconnect	0	0	0	0	0	1	1	0	1	1	0	0	4
Commercial Total		1	1	1	2	3	2	3	6	3	3	1	1	27
Industrial	Inadequate Service	0	0	0	0	0	0	0	0	0	1	0	0	1
Industrial Total		0	0	0	0	0	0	0	0	0	1	0	0	1
Residential	Billing Error	3	4	10	8	7	4	3	10	7	6	7	4	73
	High Bill	2	0	1	2	2	2	1	3	1	0	2	1	17
	Inaccurate Metering	3	3	4	3	2	1	1	3	3	0	1	1	25
	Inadequate Service	15	17	32	31	39	19	22	29	31	23	11	5	274
	Serv Rest Interval	1	0	1	0	2	4	7	5	1	2	0	1	24
	Service Ext Interval	0	1	2	1	0	0	0	0	0	1	1	0	6
	Wrongful Disconnect	6	3	2	15	17	13	7	20	5	6	3	3	100
Residential Total		30	28	52	60	69	43	41	70	48	38	25	15	519
Government Total		0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	Billing Error	3	4	10	9	9	5	3	12	8	6	7	4	80
	High Bill	2	0	1	2	2	2	1	4	2	0	2	1	19
	Inaccurate Metering	3	3	4	3	2	1	1	3	3	0	1	1	25
	Inadequate Service	16	18	32	32	40	19	23	32	31	25	12	5	285
	Serv Rest Interval	1	0	2	0	2	4	7	5	1	2	0	1	25
	Service Ext Interval	0	1	2	1	0	0	1	0	0	2	1	1	9
	Wrongful Disconnect	6	3	2	15	17	14	8	20	6	7	3	3	104
Grand Total		**31**	**29**	**53**	**62**	**72**	**45**	**44**	**76**	**51**	**42**	**26**	**16**	**547**

Percentage

CustomerType	Complaint Type	Jan-16	Feb-16	Mar-16	Apr-16	May-16	Jun-16	Jul-16	Aug-16	Sep-16	Oct-16	Nov-16	Dec-16	2016
Commercial	Billing Error	0.0%	0.0%	0.0%	50.0%	66.7%	50.0%	0.0%	33.3%	33.3%	0.0%	0.0%	0.0%	25.9%
		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	16.7%	33.3%	0.0%	0.0%	0.0%	7.4%
	Inadequate Service	100.0%	100.0%	0.0%	50.0%	33.3%	0.0%	33.3%	50.0%	0.0%	33.3%	100.0%	0.0%	37.0%
	Serv Rest Interval	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.7%
	Service Ext Interval	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	33.3%	0.0%	0.0%	33.3%	0.0%	100.0%	11.1%
	Wrongful Disconnect	0.0%	0.0%	0.0%	0.0%	0.0%	50.0%	33.3%	0.0%	33.3%	33.3%	0.0%	0.0%	14.8%
Industrial	Inadequate Service	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	100.0%
Residential	Billing Error	10.0%	14.3%	19.2%	13.3%	10.1%	9.3%	7.3%	14.3%	14.6%	15.8%	28.0%	26.7%	14.1%
	High Bill	6.7%	0.0%	1.9%	3.3%	2.9%	4.7%	2.4%	4.3%	2.1%	0.0%	8.0%	6.7%	3.3%
	Inaccurate Metering	10.0%	10.7%	7.7%	5.0%	2.9%	2.3%	2.4%	4.3%	6.3%	0.0%	4.0%	6.7%	4.8%
	Inadequate Service	50.0%	60.7%	61.5%	51.7%	56.5%	44.2%	53.7%	41.4%	64.6%	60.5%	44.0%	33.3%	52.8%
	Serv Rest Interval	3.3%	0.0%	1.9%	0.0%	2.9%	9.3%	17.1%	7.1%	2.1%	5.3%	0.0%	6.7%	4.6%
	Service Ext Interval	0.0%	3.6%	3.8%	1.7%	0.0%	0.0%	0.0%	0.0%	0.0%	2.6%	4.0%	0.0%	1.2%
	Wrongful Disconnect	20.0%	10.7%	3.8%	25.0%	24.6%	30.2%	17.1%	28.6%	10.4%	15.8%	12.0%	20.0%	19.3%
Total	Billing Error	9.7%	13.8%	18.9%	14.5%	12.5%	11.1%	6.8%	15.8%	15.7%	14.3%	26.9%	25.0%	14.6%
	High Bill	6.5%	0.0%	1.9%	3.2%	2.8%	4.4%	2.3%	5.3%	3.9%	0.0%	7.7%	6.3%	3.5%
	Inaccurate Metering	9.7%	10.3%	7.5%	4.8%	2.8%	2.2%	2.3%	3.9%	5.9%	0.0%	3.8%	6.3%	4.6%
	Inadequate Service	51.6%	62.1%	60.4%	51.6%	55.6%	42.2%	52.3%	42.1%	60.8%	59.5%	46.2%	31.3%	52.1%
	Serv Rest Interval	3.2%	0.0%	3.8%	0.0%	2.8%	8.9%	15.9%	6.6%	2.0%	4.8%	0.0%	6.3%	4.6%
	Service Ext Interval	0.0%	3.4%	3.8%	1.6%	0.0%	0.0%	2.3%	0.0%	0.0%	4.8%	3.8%	6.3%	1.6%
	Wrongful Disconnect	19.4%	10.3%	3.8%	24.2%	23.6%	31.1%	18.2%	26.3%	11.8%	16.7%	11.5%	18.8%	19.0%

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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:

		Month												
CustomerType	DTR Status	Jan-16	Feb-16	Mar-16	Apr-16	May-16	Jun-16	Jul-16	Aug-16	Sep-16	Oct-16	Nov-16	Dec-16	2015
Commercial	Immediate	0	0	0	0	0	1	0	2	1	0	0	0	4
	10 Days or Less	0	1	1	2	3	1	3	4	2	3	1	1	22
	Greater Than 10 Days	1	0	0	0	0	0	0	0	0	0	0	0	1
Commercial Total		1	1	1	2	3	2	3	6	3	3	1	1	27
Industrial	10 Days or Less	0	0	0	0	0	0	0	0	0	1	0	0	1
Industrial Total		0	0	0	0	0	0	0	0	0	1	0	0	1
Residential	Immediate	3	5	8	11	9	9	8	6	8	10	5	3	85
	10 Days or Less	27	23	44	48	60	34	32	64	40	27	20	12	431
	Greater Than 10 Days	0	0	0	1	0	0	1	0	0	1	0	0	3
Residential Total		30	28	52	60	69	43	41	70	48	38	25	15	519
Government	10 Days or Less	0	0	0	0	0	0	0	0	0	0	0	0	0
Government Total		0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	Immediate	3	5	8	11	9	10	8	8	9	10	5	3	89
	10 Days or Less	27	24	45	50	63	35	35	68	42	31	21	13	454
	Greater Than 10 Days	1	0	0	1	0	0	1	0	0	1	0	0	4
Grand Total		**31**	**29**	**53**	**62**	**72**	**45**	**44**	**76**	**51**	**42**	**26**	**16**	**547**
Commercial	Immediate	0.0%	0.0%	0.0%	0.0%	0.0%	50.0%	0.0%	33.3%	33.3%	0.0%	0.0%	0.0%	14.8%
	10 Days or Less	0.0%	100.0%	100.0%	100.0%	100.0%	50.0%	100.0%	66.7%	66.7%	100.0%	100.0%	100.0%	81.5%
	Greater Than 10 Days	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.7%
Industrial	10 Days or Less	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	100.0%
Residential	Immediate	10.0%	17.9%	15.4%	18.3%	13.0%	20.9%	19.5%	8.6%	16.7%	26.3%	20.0%	20.0%	16.4%
	10 Days or Less	90.0%	82.1%	84.6%	80.0%	87.0%	79.1%	78.0%	91.4%	83.3%	71.1%	80.0%	80.0%	83.0%
	Greater Than 10 Days	0.0%	0.0%	0.0%	1.7%	0.0%	0.0%	2.4%	0.0%	0.0%	2.6%	0.0%	0.0%	0.6%
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%
Grand Total	Immediate	9.7%	17.2%	15.1%	17.7%	12.5%	22.2%	18.2%	10.5%	17.6%	23.8%	19.2%	18.8%	16.3%
		87.1%	82.8%	84.9%	80.6%	87.5%	77.8%	79.5%	89.5%	82.4%	73.8%	80.8%	81.3%	83.0%
	Greater Than 10 Days	3.2%	0.0%	0.0%	1.6%	0.0%	0.0%	2.3%	0.0%	0.0%	2.4%	0.0%	0.0%	0.7%

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

		Month												
CustomerType	MN_Action	Jan-16	Feb-16	Mar-16	Apr-16	May-16	Jun-16	Jul-16	Aug-16	Sep-16	Oct-16	Nov-16	Dec-16	2016
Commercial	Action not in Control of Utility	1	0	0	0	0	0	1	0	0	1	0	1	4
	Refuse Action Cust Requested	0	1	0	0	0	1	0	3	2	0	0	0	7
	Take Action Cust and Utility Agree Upo	0	0	1	1	3	1	0	2	0	1	1	0	10
	Take Action Cust Request	0	0	0	1	0	0	2	1	1	1	0	0	6
Commercial Total		1	1	1	2	3	2	3	6	3	3	1	1	27
Industrial	Take Action Cust and Utility Agree Upo	0	0	0	0	0	0	0	0	0	1	0	0	1
Industrial Total		0	0	0	0	0	0	0	0	0	1	0	0	1
Residential	Action not in Control of Utility	4	2	3	4	5	1	2	7	4	4	6	1	43
	Refuse Action Cust Requested	7	5	12	11	9	10	7	11	8	7	2	0	89
	Take Action Cust and Utility Agree Upo	11	11	17	31	31	23	23	26	17	15	8	1	214
	Take Action Cust Request	8	10	20	14	24	9	9	26	19	12	9	13	173
Residential Total		30	28	52	60	69	43	41	70	48	38	25	15	519
Government	Take Action Cust and Utility Agree Upo	0	0	0	0	0	0	0	0	0	0	0	0	0
Government Total		0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	Action not in Control of Utility	5	2	3	4	5	1	3	7	4	5	6	2	47
	Refuse Action Cust Requested	7	6	12	11	9	11	7	14	10	7	2	0	96
	Take Action Cust and Utility Agree Upo	11	11	18	32	34	24	23	28	17	17	9	1	225
	Take Action Cust Request	8	10	20	15	24	9	11	27	20	13	9	13	179
Grand Total		**31**	**29**	**53**	**62**	**72**	**45**	**44**	**76**	**51**	**42**	**26**	**16**	**547**

		Month												
CustomerType	MN_Action	Jan-16	Feb-16	Mar-16	Apr-16	May-16	Jun-16	Jul-16	Aug-16	Sep-16	Oct-16	Nov-16	Dec-16	2016
Commercial	Action not in Control of Utility	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	33.3%	0.0%	0.0%	33.3%	0.0%	100.0%	14.8%
	Refuse Action Cust Requested	0.0%	100.0%	0.0%	0.0%	0.0%	50.0%	0.0%	50.0%	66.7%	0.0%	0.0%	0.0%	25.9%
	Take Action Cust and Utility Agree Upo	0.0%	0.0%	100.0%	50.0%	100.0%	50.0%	0.0%	33.3%	0.0%	33.3%	100.0%	0.0%	37.0%
	Take Action Cust Request	0.0%	0.0%	0.0%	50.0%	0.0%	0.0%	66.7%	16.7%	33.3%	33.3%	0.0%	0.0%	22.2%
Industrial	Take Action Cust and Utility Agree Upo	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	100.0%
Residential	Action not in Control of Utility	13.3%	7.1%	5.8%	6.7%	7.2%	2.3%	4.9%	10.0%	8.3%	10.5%	24.0%	6.7%	8.3%
	Refuse Action Cust Requested	23.3%	17.9%	23.1%	18.3%	13.0%	23.3%	17.1%	15.7%	16.7%	18.4%	8.0%	0.0%	17.1%
	Take Action Cust and Utility Agree Upo	36.7%	39.3%	32.7%	51.7%	44.9%	53.5%	56.1%	37.1%	35.4%	39.5%	32.0%	6.7%	41.2%
	Take Action Cust Request	26.7%	35.7%	38.5%	23.3%	34.8%	20.9%	22.0%	37.1%	39.6%	31.6%	36.0%	86.7%	33.3%
Government	Take Action Cust and Utility Agree Upo	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%
Total	Action not in Control of Utility	16.1%	6.9%	5.7%	6.5%	6.9%	2.2%	6.8%	9.2%	7.8%	11.9%	23.1%	12.5%	8.6%
	Refuse Action Cust Requested	22.6%	20.7%	22.6%	17.7%	12.5%	24.4%	15.9%	18.4%	19.6%	16.7%	7.7%	0.0%	17.6%
	Take Action Cust and Utility Agree Upo	35.5%	37.9%	34.0%	51.6%	47.2%	53.3%	52.3%	36.8%	33.3%	40.5%	34.6%	6.3%	41.1%
	Take Action Cust Request	25.8%	34.5%	37.7%	24.2%	33.3%	20.0%	25.0%	35.5%	39.2%	31.0%	34.6%	81.3%	32.7%

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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 fowarded to the Utility by the Commission's Consumer Affairs Office for Further Investigation and Action

		Month												
CustomerType	Source	Jan-16	Feb-16	Mar-16	Apr-16	May-16	Jun-16	Jul-16	Aug-16	Sep-16	Oct-16	Nov-16	Dec-16	2016
Commercial	Commission	1	1	1	0	2	0	1	1	0	1	0	1	9
	Commission/OAG	0	0	0	0	0	1	0	0	0	0	0	0	1
Commercial Total		**1**	**1**	**1**	**0**	**2**	**1**	**1**	**1**	**0**	**1**	**0**	**1**	**10**
Industrial Total		**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Residential	Commission	3	4	10	4	10	5	7	18	8	5	4	3	81
	Commission/Internal	0	0	0	1	1	0	1	0	0	0	0	0	3
	Commission/OAG	0	0	0	1	1	0	2	0	0	2	0	0	6
	Commission/BBB	0	0	0	1	0	1	0	0	0	0	0	0	2
Residential Total		**3**	**4**	**10**	**7**	**12**	**6**	**10**	**18**	**8**	**7**	**4**	**3**	**92**
Government Total		**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Grand Total		**4**	**5**	**11**	**7**	**14**	**7**	**11**	**19**	**8**	**8**	**4**	**4**	**102**

Xcel Energy
Customer Complaint Report
January, 2016

	Agree	Compromise	Demonstrate	Refuse	Total	%	Turnaround Days for Closing a Complaint: Initial Inquiry	within 10 days	Longer than 10 days
Commercial									
Billing errors	2,220	19	6	1	2,246	78.92%	2,240	6	0
Inaccurate Metering	3	0	0	0	3	0.11%	3	0	0
Wrongful Disconnect	122	3	5	0	130	4.57%	130	0	0
High Bill	20	0	0	0	20	0.70%	20	0	0
Inadequate Service	284	1	0	0	285	10.01%	285	0	0
Service Extension	1	0	2	0	3	0.11%	3	0	0
Service Restoration	152	2	5	0	159	5.59%	159	0	0
Total Commercial	2,802	25	18	1	2,846		2,840	6	0
Total Commercial Percentage	98.45%	0.88%	0.63%	0.04%					
Industrial									
Billing errors	458	1	1	0	460	79.45%	455	5	0
Inaccurate Metering	1	0	0	0	1	0.17%	1	0	0
Wrongful Disconnect	6	0	0	0	6	1.04%	6	0	0
High Bill	4	0	0	0	4	0.69%	4	0	0
Inadequate Service	60	0	1	0	61	10.54%	61	0	0
Service Extension	0	0	0	0	0	0.00%	0	0	0
Service Restoration	46	1	0	0	47	8.12%	47	0	0
Total Industrial	575	2	2	0	579		574	5	0
Total Industrial Percentage	99.31%	0.35%	0.35%	0.00%					
Residential									
Billing errors	27,386	336	476	15	28,213	52.54%	28,195	17	1
Inaccurate Metering	28	0	1	0	29	0.05%	28	1	0
Wrongful Disconnect	3,281	193	135	5	3,614	6.73%	3,614	0	0
High Bill	714	8	29	1	752	1.40%	752	0	0
Inadequate Service	19,510	415	308	15	20,248	37.71%	20,239	9	0
Service Extension	3	0	1	0	4	0.01%	4	0	0
Service Restoration	806	11	18	0	835	1.56%	833	1	1
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
Total Residential	51,730	963	968	36	53,697		53,665	30	2
Total Residential Percentage	96.34%	1.79%	1.80%	0.07%					
Total State of Minnesota	**55,107**	**990**	**988**	**37**	**57,122**		**57,079**	**41**	**2**
Total ST of MN Percentage	**96.47%**	**1.73%**	**1.73%**	**0.06%**					

Xcel Energy
Customer Complaint Report
February, 2016

	Agree	Compromise	Demonstrate	Refuse	Total	%	Turnaround Days for Closing a Complaint: Initial Inquiry	within 10 days	Longer than 10 days
Commercial									
Billing errors	2,159	11	7	1	2,178	77.29%	2,172	6	0
Inaccurate Metering	3	0	0	0	3	0.11%	2	1	0
Wrongful Disconnect	137	0	3	0	140	4.97%	140	0	0
High Bill	60	1	0	0	61	2.16%	60	1	0
Inadequate Service	326	4	2	0	332	11.78%	332	0	0
Service Extension	0	0	0	0	0	0.00%	0	0	0
Service Restoration	103	0	1	0	104	3.69%	104	0	0
Total Commercial	2,788	16	13	1	2,818		2,810	8	0
Total Commercial Percentage	98.94%	0.57%	0.46%	0.04%					
Industrial									
Billing errors	318	3	1	0	322	70.31%	320	2	0
Inaccurate Metering	1	0	0	0	1	0.22%	1	0	0
Wrongful Disconnect	22	0	0	0	22	4.80%	22	0	0
High Bill	4	0	0	0	4	0.87%	4	0	0
Inadequate Service	77	0	0	0	77	16.81%	77	0	0
Service Extension	1	0	0	0	1	0.22%	1	0	0
Service Restoration	30	0	1	0	31	6.77%	31	0	0
Total Industrial	453	3	2	0	458		456	2	0
Total Industrial Percentage	98.91%	0.66%	0.44%	0.00%					
Residential									
Billing errors	24,913	309	412	14	25,648	51.63%	25,628	18	2
Inaccurate Metering	24	1	2	0	27	0.05%	26	1	0
Wrongful Disconnect	3,581	199	149	4	3,933	7.92%	3,932	1	0
High Bill	1,083	19	49	1	1,152	2.32%	1,152	0	0
Inadequate Service	17,560	364	312	10	18,246	36.73%	18,242	4	0
Service Extension	2	0	2	0	4	0.01%	4	0	0
Service Restoration	636	8	16	1	661	1.33%	661	0	0
MR-Special Call Cntr	2	0	0	0	2	0.00%	2	1	0
Complaint	0	0	0	0	0	0.00%	0	0	0
Total Residential	47,801	900	942	30	49,673		49,647	25	2
Total Residential Percentage	96.23%	1.81%	1.90%	0.06%					
Total State of Minnesota	**51,042**	**919**	**957**	**31**	**52,949**		**52,913**	**35**	**2**
Total ST of MN Percentage	**96.40%**	**1.74%**	**1.81%**	**0.06%**					

Xcel Energy
Customer Complaint Report
March, 2016

	Agree	Compromise	Demonstrate	Refuse	Total	%	Turnaround Days for Closing a Complaint: Initial Inquiry	within 10 days	Longer than 10 days
Commercial									
Billing errors	2,002	6	7	0	2,015	74.14%	2,005	9	1
Inaccurate Metering	1	0	0	0	1	0.04%	1	0	0
Wrongful Disconnect	173	3	1	0	177	6.51%	176	1	0
High Bill	50	0	1	0	51	1.88%	51	0	0
Inadequate Service	298	2	5	0	305	11.22%	305	0	0
Service Extension	0	0	1	0	1	0.04%	1	0	0
Service Restoration	164	1	3	0	168	6.18%	168	0	0
Total Commercial	2,688	12	18	0	2,718		2,707	10	1
Total Commercial Percentage	98.90%	0.44%	0.66%	0.00%					
Industrial									
Billing errors	283	2	0	0	285	68.35%	285	0	0
Inaccurate Metering	0	0	0	0	0	0.00%	0	0	0
Wrongful Disconnect	12	0	0	0	12	2.88%	12	0	0
High Bill	1	0	0	0	1	0.24%	1	0	0
Inadequate Service	67	0	1	0	68	16.31%	68	0	0
Service Extension	0	0	0	0	0	0.00%	0	0	0
Service Restoration	49	1	1	0	51	12.23%	51	0	0
Total Industrial	412	3	2	0	417		417	0	0
Total Industrial Percentage	98.80%	0.72%	0.48%	0.00%					
Residential									
Billing errors	25,221	395	414	16	26,046	46.90%	26,026	20	0
Inaccurate Metering	12	0	0	0	12	0.02%	12	0	0
Wrongful Disconnect	4,925	313	221	7	5,466	9.84%	5,460	6	0
High Bill	680	10	36	1	727	1.31%	725	2	0
Inadequate Service	21,504	358	346	23	22,231	40.03%	22,223	8	0
Service Extension	1	0	0	0	1	0.00%	1	0	0
Service Restoration	1,018	9	21	0	1,048	1.89%	1,048	0	0
MR-Special Call Cntr	3	0	0	0	3	0.01%	0	2	1
Complaint	1	0	0	0	1	0.00%	0	1	0
Total Residential	53,365	1,085	1,038	47	55,535		55,495	39	1
Total Residential Percentage	96.09%	1.95%	1.87%	0.08%					
Total State of Minnesota	**56,465**	**1,100**	**1,058**	**47**	**58,670**		**58,619**	**49**	**2**
Total ST of MN Percentage	**96.24%**	**1.87%**	**1.80%**	**0.08%**					

Xcel Energy
Customer Complaint Report
April, 2016

	Agree	Compromise	Demonstrate	Refuse	Total	%	Turnaround Days for Closing a Complaint: Initial Inquiry	within 10 days	Longer than 10 days
Commercial									
Billing errors	1,964	9	12	1	1,986	74.19%	1,975	10	1
Inaccurate Metering	2	0	0	0	2	0.07%	2	0	0
Wrongful Disconnect	144	3	0	0	147	5.49%	147	0	0
High Bill	16	0	1	0	17	0.64%	17	0	0
Inadequate Service	311	2	5	0	318	11.88%	316	2	0
Service Extension	1	0	0	0	1	0.04%	1	0	0
Service Restoration	203	0	3	0	206	7.70%	206	0	0
Total Commercial	2,641	14	21	1	2,677		2,664	12	1
Total Commercial Percentage	98.66%	0.52%	0.78%	0.04%					
Industrial									
Billing errors	286	3	0	1	290	64.88%	289	1	0
Inaccurate Metering	1	0	0	0	1	0.22%	1	0	0
Wrongful Disconnect	15	0	0	0	15	3.36%	15	0	0
High Bill	0	0	0	0	0	0.00%	0	0	0
Inadequate Service	56	1	0	0	57	12.75%	57	0	0
Service Extension	0	0	0	0	0	0.00%	0	0	0
Service Restoration	81	1	2	0	84	18.79%	84	0	0
Total Industrial	439	5	2	1	447		446	1	0
Total Industrial Percentage	98.21%	1.12%	0.45%	0.22%					
Residential									
Billing errors	25,258	311	428	11	26,008	39.74%	25,996	12	0
Inaccurate Metering	16	0	0	0	16	0.02%	16	0	0
Wrongful Disconnect	7,594	343	339	12	8,288	12.67%	8,282	5	1
High Bill	288	6	16	0	310	0.47%	310	0	0
Inadequate Service	28,537	422	499	43	29,501	45.08%	29,485	15	1
Service Extension	9	0	3	0	12	0.02%	12	0	0
Service Restoration	1,250	16	36	0	1,302	1.99%	1,302	0	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
Total Residential	62,955	1,098	1,321	66	65,440		65,404	34	2
Total Residential Percentage	96.20%	1.68%	2.02%	0.10%					
Total State of Minnesota	**66,035**	**1,117**	**1,344**	**68**	**68,564**		**68,514**	**47**	**3**
Total ST of MN Percentage	**96.31%**	**1.63%**	**1.96%**	**0.10%**					

Xcel Energy
Customer Complaint Report
May, 2016

	Agree	Compromise	Demonstrate	Refuse	Total	%	Turnaround Days for Closing a Complaint: Initial Inquiry	within 10 days	Longer than 10 days
Commercial									
Billing errors	1,856	6	5	1	1,868	72.15%	1,861	6	1
Inaccurate Metering	2	0	0	0	2	0.08%	2	0	0
Wrongful Disconnect	132	0	2	0	134	5.18%	134	0	0
High Bill	11	0	1	0	12	0.46%	12	0	0
Inadequate Service	297	3	5	0	305	11.78%	305	0	0
Service Extension	0	1	0	0	1	0.04%	1	0	0
Service Restoration	260	3	4	0	267	10.31%	267	0	0
Total Commercial	2,558	13	17	1	2,589		2,582	6	1
Total Commercial Percentage	98.80%	0.50%	0.66%	0.04%					
Industrial									
Billing errors	328	4	0	0	332	64.47%	327	4	1
Inaccurate Metering	1	0	0	0	1	0.19%	1	0	0
Wrongful Disconnect	6	0	0	0	6	1.17%	6	0	0
High Bill	0	0	0	0	0	0.00%	0	0	0
Inadequate Service	69	0	0	0	69	13.40%	69	0	0
Service Extension	0	0	0	0	0	0.00%	0	0	0
Service Restoration	102	1	4	0	107	20.78%	107	0	0
Total Industrial	506	5	4	0	515		510	4	1
Total Industrial Percentage	98.25%	0.97%	0.78%	0.00%					
Residential									
Billing errors	24,656	402	431	8	25,497	41.62%	25,479	16	2
Inaccurate Metering	15	0	2	0	17	0.03%	17	0	0
Wrongful Disconnect	7,718	239	337	19	8,313	13.57%	8,311	2	0
High Bill	280	9	16	0	305	0.50%	305	0	0
Inadequate Service	24,670	334	458	33	25,495	41.61%	25,489	6	0
Service Extension	8	0	7	0	15	0.02%	15	0	0
Service Restoration	1,547	14	54	1	1,616	2.64%	1,614	2	0
MR-Special Call Cntr	0	0	0	0	0	0.00%	0	0	0
Complaint	6	0	1	0	7	0.01%	4	3	0
Total Residential	58,900	998	1,306	61	61,265		61,234	29	2
Total Residential Percentage	96.14%	1.63%	2.13%	0.10%					
Total State of Minnesota	**61,964**	**1,016**	**1,327**	**62**	**64,369**		**64,326**	**39**	**4**
Total ST of MN Percentage	**96.26%**	**1.58%**	**2.06%**	**0.10%**					

Xcel Energy
Customer Complaint Report
June, 2016

	Agree	Compromise	Demonstrate	Refuse	Total	%	Turnaround Days for Closing a Complaint: Initial Inquiry	within 10 days	Longer than 10 days
Commercial									
Billing errors	1,822	9	5	1	1,837	64.61%	1,829	8	0
Inaccurate Metering	4	0	0	0	4	0.14%	4	0	0
Wrongful Disconnect	158	2	1	0	161	5.66%	161	0	0
High Bill	30	1	1	0	32	1.13%	32	0	0
Inadequate Service	381	4	4	1	390	13.72%	390	0	0
Service Extension	1	0	0	0	1	0.04%	1	0	0
Service Restoration	410	2	5	1	418	14.70%	418	0	0
Total Commercial	2,806	18	16	3	2,843		2,835	8	0
Total Commercial Percentage	98.70%	0.63%	0.56%	0.11%					
Industrial									
Billing errors	332	0	1	0	333	59.57%	329	4	0
Inaccurate Metering	0	0	0	0	0	0.00%	0	0	0
Wrongful Disconnect	24	0	0	0	24	4.29%	24	0	0
High Bill	1	0	0	0	1	0.18%	1	0	0
Inadequate Service	75	1	0	0	76	13.60%	76	0	0
Service Extension	0	0	0	0	0	0.00%	0	0	0
Service Restoration	120	0	5	0	125	22.36%	125	0	0
Total Industrial	552	1	6	0	559		555	4	0
Total Industrial Percentage	98.75%	0.18%	1.07%	0.00%					
Residential									
Billing errors	26,379	356	386	10	27,131	41.02%	27,113	18	0
Inaccurate Metering	14	0	2	0	16	0.02%	16	0	0
Wrongful Disconnect	7,262	199	339	6	7,806	11.80%	7,805	1	0
High Bill	475	5	10	1	491	0.74%	491	0	0
Inadequate Service	25,464	433	484	28	26,409	39.92%	26,398	11	0
Service Extension	13	3	0	0	16	0.02%	16	0	0
Service Restoration	4,070	43	153	3	4,269	6.45%	4,267	2	0
MR-Special Call Cntr	1	0	0	0	1	0.00%	0	1	0
Complaint	6	2	0	0	8	0.01%	3	4	1
Total Residential	63,684	1,041	1,374	48	66,147		66,109	37	1
Total Residential Percentage	96.28%	1.57%	2.08%	0.07%					
Total State of Minnesota	**67,042**	**1,060**	**1,396**	**51**	**69,549**		**69,499**	**49**	**1**
Total ST of MN Percentage	**96.40%**	**1.52%**	**2.01%**	**0.07%**					

Xcel Energy
Customer Complaint Report
July, 2016

	Agree	Compromise	Demonstrate	Refuse	Total	%	Turnaround Days for Closing a Complaint: Initial Inquiry	within 10 days	Longer than 10 days
Commercial									
Billing errors	1,649	10	8	0	1,667	56.82%	1,662	5	0
Inaccurate Metering	0	0	0	0	0	0.00%	0	0	0
Wrongful Disconnect	166	2	0	0	168	5.73%	167	1	0
High Bill	58	1	1	0	60	2.04%	60	0	0
Inadequate Service	296	4	6	0	306	10.43%	306	0	0
Service Extension	1	1	0	0	2	0.07%	2	0	0
Service Restoration	694	5	32	0	731	24.91%	731	0	0
Total Commercial	2,864	23	47	0	2,934		2,928	6	0
Total Commercial Percentage	97.61%	0.78%	1.60%	0.00%					
Industrial									
Billing errors	311	1	1	0	313	41.96%	312	1	0
Inaccurate Metering	1	0	0	0	1	0.13%	1	0	0
Wrongful Disconnect	11	0	0	0	11	1.47%	11	0	0
High Bill	5	0	0	0	5	0.67%	5	0	0
Inadequate Service	67	1	0	0	68	9.12%	68	0	0
Service Extension	2	0	0	0	2	0.27%	2	0	0
Service Restoration	330	4	12	0	346	46.38%	346	0	0
Total Industrial	727	6	13	0	746		745	1	0
Total Industrial Percentage	97.45%	0.80%	1.74%	0.00%					
Residential									
Billing errors	26,388	359	459	12	27,218	41.53%	27,212	6	0
Inaccurate Metering	25	0	4	0	29	0.04%	29	0	0
Wrongful Disconnect	5,247	213	267	5	5,732	8.75%	5,730	2	0
High Bill	993	17	54	1	1,065	1.62%	1,065	0	0
Inadequate Service	21,743	409	402	21	22,575	34.45%	22,569	5	1
Service Extension	21	1	2	0	24	0.04%	24	0	0
Service Restoration	8,505	83	295	4	8,887	13.56%	8,884	3	0
MR-Special Call Cntr	2	0	0	0	2	0.00%	0	1	1
Complaint	7	0	0	0	7	0.01%	6	1	0
Total Residential	62,931	1,082	1,483	43	65,539		65,519	18	2
Total Residential Percentage	96.02%	1.65%	2.26%	0.07%					
Total State of Minnesota	**66,522**	**1,111**	**1,543**	**43**	**69,219**		**69,192**	**25**	**2**
Total ST of MN Percentage	**96.10%**	**1.61%**	**2.23%**	**0.06%**					

Xcel Energy
Customer Complaint Report
August, 2016

	Agree	Compromise	Demonstrate	Refuse	Total	%	Turnaround Days for Closing a Complaint: Initial Inquiry	within 10 days	Longer than 10 days
Commercial									
Billing errors	1,920	8	8	0	1,936	64.40%	1,927	9	0
Inaccurate Metering	6	0	0	0	6	0.20%	6	0	0
Wrongful Disconnect	187	2	2	0	191	6.35%	191	0	0
High Bill	41	0	1	0	42	1.40%	40	2	0
Inadequate Service	303	2	4	0	309	10.28%	309	0	0
Service Extension	0	0	0	0	0	0.00%	0	0	0
Service Restoration	518	1	3	0	522	17.37%	521	1	0
Total Commercial	2,975	13	18	0	3,006		2,994	12	0
Total Commercial Percentage	98.97%	0.43%	0.60%	0.00%					
Industrial									
Billing errors	293	2	2	0	297	48.93%	296	1	0
Inaccurate Metering	0	0	0	0	0	0.00%	0	0	0
Wrongful Disconnect	18	0	1	0	19	3.13%	19	0	0
High Bill	5	0	0	0	5	0.82%	5	0	0
Inadequate Service	60	1	0	0	61	10.05%	61	0	0
Service Extension	0	0	0	0	0	0.00%	0	0	0
Service Restoration	221	0	4	0	225	37.07%	225	0	0
Total Industrial	597	3	7	0	607		606	1	0
Total Industrial Percentage	98.35%	0.49%	1.15%	0.00%					
Residential									
Billing errors	29,765	365	433	8	30,571	42.74%	30,550	19	2
Inaccurate Metering	28	0	1	0	29	0.04%	29	0	0
Wrongful Disconnect	8,138	339	406	13	8,896	12.44%	8,894	2	0
High Bill	1,184	15	62	0	1,261	1.76%	1,260	1	0
Inadequate Service	26,004	392	579	29	27,004	37.76%	26,989	14	1
Service Extension	30	1	4	0	35	0.05%	35	0	0
Service Restoration	3,613	17	84	0	3,714	5.19%	3,712	2	0
MR-Special Call Cntr	3	0	0	0	3	0.00%	0	3	0
Complaint	9	0	0	0	9	0.01%	3	6	0
Total Residential	68,774	1,129	1,569	50	71,522		71,472	47	3
Total Residential Percentage	96.16%	1.58%	2.19%	0.07%					
Total State of Minnesota	**72,346**	**1,145**	**1,594**	**50**	**75,135**		**75,072**	**60**	**3**
Total ST of MN Percentage	**96.29%**	**1.52%**	**2.12%**	**0.07%**					

Xcel Energy
Customer Complaint Report
September, 2016

	Agree	Compromise	Demonstrate	Refuse	Total	%	Turnaround Days for Closing a Complaint: Initial Inquiry	within 10 days	Longer than 10 days
Commercial									
Billing errors	1,660	6	4	0	1,670	67.86%	1,660	10	0
Inaccurate Metering	4	0	0	0	4	0.16%	4	0	0
Wrongful Disconnect	186	1	2	0	189	7.68%	189	0	0
High Bill	42	0	1	0	43	1.75%	43	0	0
Inadequate Service	287	0	2	1	290	11.78%	290	0	0
Service Extension	1	1	0	0	2	0.08%	2	0	0
Service Restoration	256	1	6	0	263	10.69%	263	0	0
Total Commercial	2,436	9	15	1	2,461		2,451	10	0
Total Commercial Percentage	98.98%	0.37%	0.61%	0.04%					
Industrial									
Billing errors	211	0	0	0	211	52.10%	211	0	0
Inaccurate Metering	0	0	0	0	0	0.00%	0	0	0
Wrongful Disconnect	16	1	0	0	17	4.20%	17	0	0
High Bill	3	0	1	0	4	0.99%	4	0	0
Inadequate Service	49	0	0	0	49	12.10%	49	0	0
Service Extension	1	0	0	0	1	0.25%	1	0	0
Service Restoration	120	1	2	0	123	30.37%	123	0	0
Total Industrial	400	2	3	0	405		405	0	0
Total Industrial Percentage	98.77%	0.49%	0.74%	0.00%					
Residential									
Billing errors	26,163	293	342	3	26,801	42.90%	26,786	15	0
Inaccurate Metering	26	1	0	0	27	0.04%	26	1	0
Wrongful Disconnect	7,631	311	313	9	8,264	13.23%	8,263	1	0
High Bill	685	5	32	0	722	1.16%	722	0	0
Inadequate Service	23,651	342	461	14	24,468	39.16%	24,464	4	0
Service Extension	19	0	1	0	20	0.03%	20	0	0
Service Restoration	2,095	17	59	0	2,171	3.47%	2,171	0	0
MR-Special Call Cntr	1	0	0	0	1	0.00%	0	1	0
Complaint	5	0	0	0	5	0.01%	1	4	0
Total Residential	60,276	969	1,208	26	62,479		62,453	26	0
Total Residential Percentage	96.47%	1.55%	1.93%	0.04%					
Total State of Minnesota	**63,112**	**980**	**1,226**	**27**	**65,345**		**65,309**	**36**	**0**
Total ST of MN Percentage	**96.58%**	**1.50%**	**1.88%**	**0.04%**					

Xcel Energy
Customer Complaint Report
October, 2016

	Agree	Compromise	Demonstrate	Refuse	Total	%	Turnaround Days for Closing a Complaint: Initial Inquiry	within 10 days	Longer than 10 days
Commercial									
Billing errors	1,890	6	7	0	1,903	71.17%	1,895	8	0
Inaccurate Metering	6	0	0	0	6	0.22%	6	0	0
Wrongful Disconnect	192	2	2	0	196	7.33%	195	1	0
High Bill	35	0	0	0	35	1.31%	35	0	0
Inadequate Service	306	5	1	0	312	11.67%	311	1	0
Service Extension	0	0	0	0	0	0.00%	0	0	0
Service Restoration	221	1	0	0	222	8.30%	221	1	0
Total Commercial	2,650	14	10	0	2,674		2,663	11	0
Total Commercial Percentage	99.10%	0.52%	0.37%	0.00%					
Industrial									
Billing errors	244	1	0	0	245	53.73%	245	0	0
Inaccurate Metering	0	0	0	0	0	0.00%	0	0	0
Wrongful Disconnect	24	0	0	0	24	5.26%	24	0	0
High Bill	4	0	0	0	4	0.88%	4	0	0
Inadequate Service	68	0	0	0	68	14.91%	68	0	0
Service Extension	0	0	0	0	0	0.00%	0	0	0
Service Restoration	112	2	1	0	115	25.22%	115	0	0
Total Industrial	452	3	1	0	456		456	0	0
Total Industrial Percentage	99.12%	0.66%	0.22%	0.00%					
Residential									
Billing errors	24,444	252	270	8	24,974	46.14%	24,963	11	0
Inaccurate Metering	33	0	3	0	36	0.07%	36	0	0
Wrongful Disconnect	5,001	222	178	1	5,402	9.98%	5,401	1	0
High Bill	413	1	16	1	431	0.80%	431	0	0
Inadequate Service	21,205	325	417	16	21,963	40.57%	21,953	9	1
Service Extension	16	0	2	0	18	0.03%	18	0	0
Service Restoration	1,284	7	13	0	1,304	2.41%	1,303	1	0
MR-Special Call Cntr	0	0	0	0	0	0.00%	0	0	0
Complaint	2	0	0	0	2	0.00%	0	2	0
Total Residential	52,398	807	899	26	54,130		54,105	24	1
Total Residential Percentage	96.80%	1.49%	1.66%	0.05%					
Total State of Minnesota	**55,500**	**824**	**910**	**26**	**57,260**		**57,224**	**35**	**1**
Total ST of MN Percentage	**96.93%**	**1.44%**	**1.59%**	**0.05%**					

Xcel Energy
Customer Complaint Report
November, 2016

	Agree	Compromise	Demonstrate	Refuse	Total	%	Turnaround Days for Closing a Complaint: Initial Inquiry	within 10 days	Longer than 10 days
Commercial									
Billing errors	1,598	5	4	1	1,608	66.15%	1,601	5	2
Inaccurate Metering	1	0	0	0	1	0.04%	1	0	0
Wrongful Disconnect	180	0	0	0	180	7.40%	180	0	0
High Bill	29	0	1	0	30	1.23%	30	0	0
Inadequate Service	302	1	2	0	305	12.55%	305	0	0
Service Extension	1	0	0	0	1	0.04%	1	0	0
Service Restoration	300	1	5	0	306	12.59%	306	0	0
Total Commercial	2,411	7	12	1	2,431		2,424	5	2
Total Commercial Percentage	99.18%	0.29%	0.49%	0.04%					
Industrial									
Billing errors	222	1	1	0	224	52.34%	223	1	0
Inaccurate Metering	0	0	0	0	0	0.00%	0	0	0
Wrongful Disconnect	26	1	0	0	27	6.31%	27	0	0
High Bill	2	0	0	0	2	0.47%	2	0	0
Inadequate Service	72	0	0	0	72	16.82%	72	0	0
Service Extension	0	0	1	0	1	0.23%	1	0	0
Service Restoration	101	0	1	0	102	23.83%	102	0	0
Total Industrial	423	2	3	0	428		427	1	0
Total Industrial Percentage	98.83%	0.47%	0.70%	0.00%					
Residential									
Billing errors	22,111	213	206	10	22,540	47.66%	22,533	7	0
Inaccurate Metering	27	0	1	0	28	0.06%	28	0	0
Wrongful Disconnect	3,869	164	145	1	4,179	8.84%	4,179	0	0
High Bill	273	3	5	0	281	0.59%	281	0	0
Inadequate Service	17,065	275	275	11	17,626	37.27%	17,623	3	0
Service Extension	8	1	1	0	10	0.02%	10	0	0
Service Restoration	2,561	15	48	0	2,624	5.55%	2,623	1	0
MR-Special Call Cntr	2	0	0	0	2	0.00%	2	0	0
Complaint	1	0	0	0			1	0	0
Total Residential	45,917	671	681	22	47,290		47,280	11	0
Total Residential Percentage	97.10%	1.42%	1.44%	0.05%					
Total State of Minnesota	**48,751**	**680**	**696**	**23**	**50,149**		**50,131**	**17**	**2**
Total ST of MN Percentage	**97.21%**	**1.36%**	**1.39%**	**0.05%**					

Xcel Energy
Customer Complaint Report
December, 2016

	Agree	Compromise	Demonstrate	Refuse	Total	%	Turnaround Days for Closing a Complaint: Initial Inquiry	within 10 days	Longer than 10 days
Commercial									
Billing errors	1,636	11	3	1	1,651	67.36%	1,649	2	0
Inaccurate Metering	3	0	0	0	3	0.12%	3	0	0
Wrongful Disconnect	199	6	0	0	205	8.36%	203	2	0
High Bill	26	0	0	0	26	1.06%	26	0	0
Inadequate Service	354	3	0	0	357	14.57%	354	3	0
Service Extension	0	0	1	0	1	0.04%	1	0	0
Service Restoration	204	0	4	0	208	8.49%	208	0	0
Total Commercial	2,422	20	8	1	2,451		2,444	7	0
Total Commercial Percentage	98.82%	0.82%	0.33%	0.04%					
Industrial									
Billing errors	296	0	0	0	296	72.37%	292	4	0
Inaccurate Metering	0	0	0	0	0	0.00%	0	0	0
Wrongful Disconnect	25	0	1	0	26	6.36%	26	0	0
High Bill	3	0	0	0	3	0.73%	2	1	0
Inadequate Service	47	0	0	0	47	11.49%	47	0	0
Service Extension	0	0	0	0	0	0.00%	0	0	0
Service Restoration	35	0	2	0	37	9.05%	37	0	0
Total Industrial	406	0	3	0	409		404	5	0
Total Industrial Percentage	99.27%	0.00%	0.73%	0.00%					
Residential									
Billing errors	20,833	233	209	10	21,285	47.18%	21,277	6	2
Inaccurate Metering	13	0	1	0	14	0.03%	14	0	0
Wrongful Disconnect	3,719	215	169	0	4,103	9.09%	4,101	2	0
High Bill	582	6	14	1	603	1.34%	602	0	1
Inadequate Service	16,824	312	283	6	17,425	38.62%	17,423	1	1
Service Extension	12	1	1	0	14	0.03%	14	0	0
Service Restoration	1,642	6	25	0	1,673	3.71%	1,672	1	0
MR-Special Call Cntr	0	0	0	0	0	0.00%	0	0	0
Complaint	0	0	0	0	0	0.00%	0	0	0
Total Residential	43,625	773	702	17	45,117		45,103	10	4
Total Residential Percentage	96.69%	1.71%	1.56%	0.04%					
Total State of Minnesota	**46,453**	**793**	**713**	**18**	**47,977**		**47,951**	**22**	**4**
Total ST of MN Percentage	**96.82%**	**1.65%**	**1.49%**	**0.04%**					

Metro East	2012	2013	2014	2015	2016	5 Year Avg (CAIDI using SAIDI/SAIFI) Proposed Standards for 2017
SAIFI	0.91	0.83	0.86	0.92	0.82	**0.87**
CAIDI	108.36	97.75	92.46	109.67	102.91	**102.42**
SAIDI	98.35	81.28	79.73	101.38	84.89	**89.13**

Metro West	2012	2013	2014	2015	2016	Proposed Standards for 2017
SAIFI	0.98	0.94	0.84	0.84	0.82	**0.89**
CAIDI	105.93	105.09	98.50	108.44	101.43	**103.98**
SAIDI	103.98	98.71	83.02	90.95	83.64	**92.06**

Northwest	2012	2013	2014	2015	2016	Proposed Standards for 2017
SAIFI	0.84	0.93	0.82	0.65	0.80	**0.81**
CAIDI	125.62	102.86	101.02	115.32	149.53	**118.45**
SAIDI	106.07	95.90	82.80	75.27	119.36	**95.88**

Southeast	2012	2013	2014	2015	2016	Proposed Standards for 2017
SAIFI	0.59	0.75	0.81	0.72	0.81	**0.74**
CAIDI	120.50	145.11	158.78	115.64	126.85	**134.40**
SAIDI	71.54	108.83	129.20	82.96	103.28	**99.16**

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 2016 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.

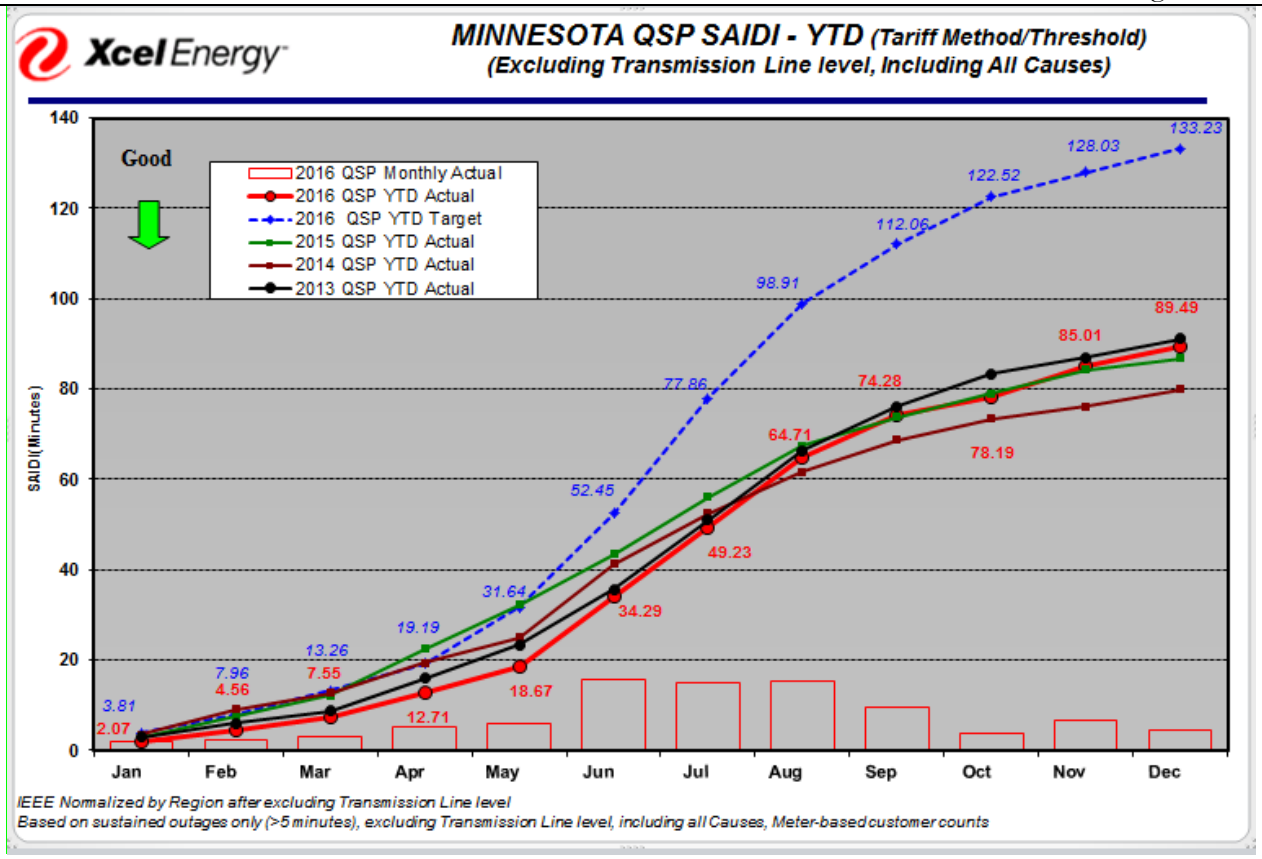
We have also included three tables to illustrate our reliability performance trending as well as a discussion around CEMI (Customers Experiencing Multiple Interruptions) tools to better reflect the customer experience.

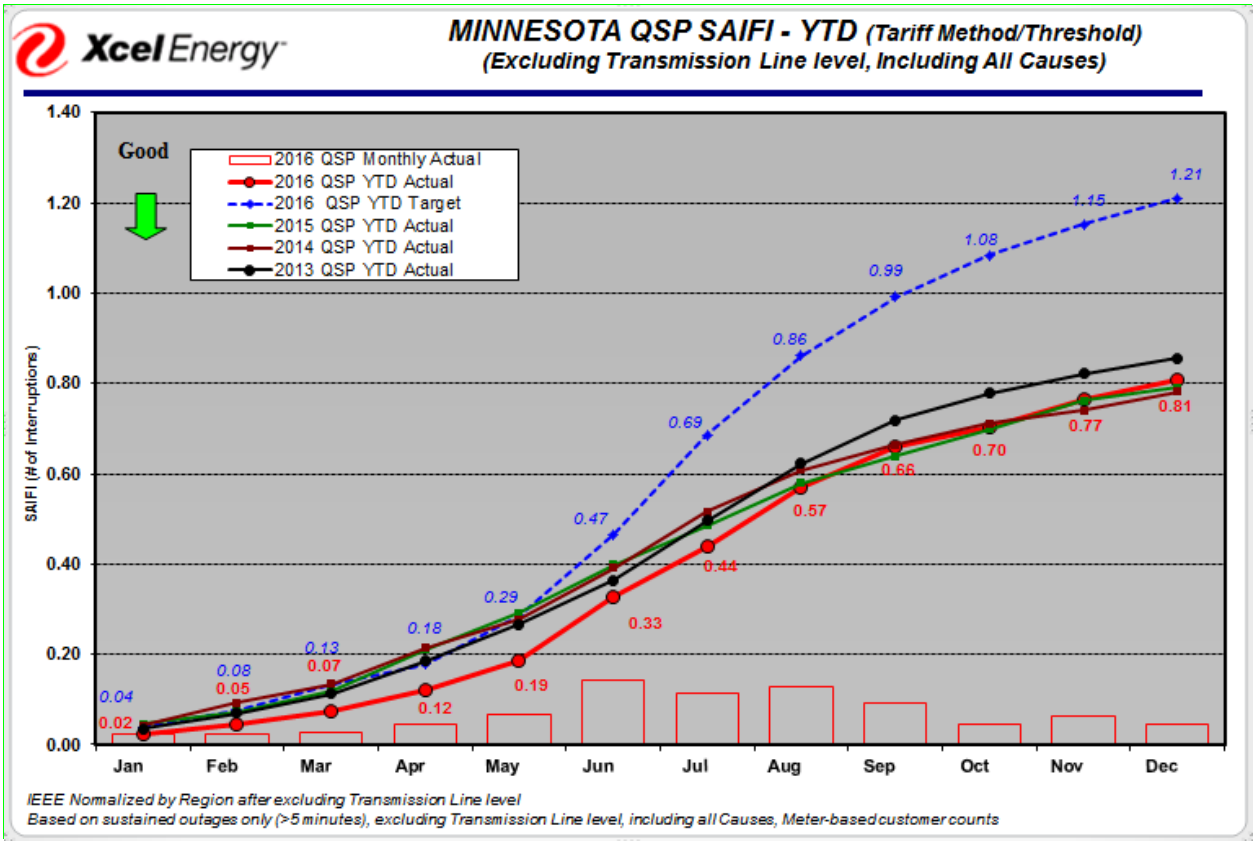
2016 Reliability Results

In 2016, we achieved a SAIDI result of 89.49 minutes, which exceeds our Quality of Service Plan tariff goal of 133.23 minutes.[1] Our 2016 SAIFI result of 0.81 outage events also exceeds the QSP tariff goal of 1.21 outage events.[2] The below graphs show overall system performance for the years 2013 through 2016, with storm days excluded, per the QSP tariff calculation method.

[1] 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

[2] In this context, "exceeding" the goals is a positive result, reflecting good system performance.


Xcel Energy
MINNESOTA QSP SAIDI - YTD (Tariff Method/Threshold)
(Excluding Transmission Line level, Including All Causes)
Good
2016 QSP Monthly Actual
2016 QSP YTD Actual
2016 QSP YTD Target
2015 QSP YTD Actual
2014 QSP YTD Actual
2013 QSP YTD Actual
SAIDI (Minutes)
0
20
40
60
80
100
120
140
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
3.81
7.96
13.26
19.19
31.64
52.45
77.86
98.91
112.06
122.52
128.03
133.23
2.07
4.56
7.55
12.71
18.67
34.29
49.23
64.71
74.28
78.19
85.01
89.49
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


Xcel Energy
MINNESOTA QSP SAIFI - YTD (Tariff Method/Threshold)
(Excluding Transmission Line level, Including All Causes)
Good
2016 QSP Monthly Actual
2016 QSP YTD Actual
2016 QSP YTD Target
2015 QSP YTD Actual
2014 QSP YTD Actual
2013 QSP YTD Actual
SAIFI (# of Interruptions)
0.00
0.20
0.40
0.60
0.80
1.00
1.20
1.40
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
0.04
0.08
0.13
0.18
0.29
0.47
0.69
0.86
0.99
1.08
1.15
1.21
0.02
0.05
0.07
0.12
0.19
0.33
0.44
0.57
0.66
0.70
0.77
0.81
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.

Historical Reliability Indices & Storm Day Exclusions

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

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

Annual Rules[3]		2009	2010	2011	2012	2013	2014	2015	2016	'16 Target
Minnesota	SAIDI	77.36	101.99	81.10	99.00	93.73	86.63	92.08	89.43	NA
	SAIFI	0.74	1.10	0.82	0.90	0.88	0.84	0.84	0.82	NA
	CAIDI	104.49	92.54	98.75	109.47	106.06	102.63	110.02	108.92	NA
Metro East	SAIDI	74.21	88.30	69.89	98.35	81.28	79.73	101.38	84.89	86.13
	SAIFI	0.73	1.15	0.78	0.91	0.83	0.86	0.92	0.82	0.86
	CAIDI	101.87	76.87	89.61	108.36	97.75	92.46	109.67	102.91	100.01
	Storm Days	1 5/20	7 6/25,7/17,8/10, 9/21,10/26, 10/27,11/13	5 7/1,7/10,7/18, 8/1,8/2	5 2/29,6/10, 6/19,7/3,8/3	5 4/23,6/21, 6/22,6/23,6/24	3 2/20,6/14,6/16	1 7/18	5 6/25,7/5,7/6, 7/21,11/18	
Metro West	SAIDI	84.43	114.85	85.07	103.98	98.71	83.02	90.95	83.64	92.35
	SAIFI	0.79	1.19	0.87	0.98	0.94	0.84	0.84	0.82	0.89
	CAIDI	106.58	96.49	98.20	105.93	105.09	98.50	108.44	101.43	103.33
	Storm Days	1 5/20	5 6/25,7/17,10/26 10/27,11/13	7 5/22,6/21,7/1, 7/10,7/18,8/1, 9/29	3 2/29,6/19,8/3	7 6/21,6/22, 6/23,6/24, 6/25,6/26,8/6	1 6/14	1 7/18	3 7/5,7/6,7/21	
Northwest[4]	SAIDI	62.07	84.02	103.27	106.07	95.90	82.80	75.27	119.36	92.66
	SAIFI	0.65	0.77	0.85	0.84	0.93	0.82	0.65	0.80	0.82
	CAIDI	96.21	108.70	122.13	125.62	102.86	101.02	115.32	149.53	113.15
	Storm Days	0 None	8 5/22,6/11,7/17, 8/12,8/13,10/26, 10/27,11/13	8 5/30,6/21,7/1, 7/5,7/10,7/15, 8/1,8/2	1 6/19	3 6/21,6/22,6/23	0 None	1 7/28	3 6/17,7/5,11/18	
Southeast[5]	SAIDI	69.37	103.67	78.15	71.54	108.83	129.20	82.96	103.28	94.14
	SAIFI	0.63	0.86	0.72	0.59	0.75	0.81	0.72	0.81	0.72
	CAIDI	110.06	121.07	107.92	120.50	145.11	158.78	115.64	126.85	130.78
	Storm Days	1 5/20	10 6/11,6/17,6/25, 6/26,6/27,7/24, 8/10,8/13,10/26, 11/13	7 6/14,7/1,7/11, 7/15,7/18,7/23, 7/27	5 6/14,6/19,6/20 8/4,9/5	4 5/2,6/21,7/13, 10/3	7 2/20,4/27, 6/15,6/16,6/17, 6/18,8/21	2 6/22,7/18	4 6/10,6/14,7/5, 7/6	

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).[3]

Pareto Analysis. The following pareto charts show feeder, tap, substation and transmission level customer interruptions by primary cause code for the years 2012 through 2016. 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.

[3] 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]

[TRADE SECRET BEGINS

TRADE SECRET ENDS]

[TRADE SECRET BEGINS

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), CELI (Customers Experiencing Lengthy 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–CAIDI, or to reduce the *frequency* of outages–SAIFI.

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.

Reliability Management Work Practices Chart

[TRADE SECRET BEGINS

TRADE SECRET ENDS]

Reliability Management Work Practices Chart, continued

[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.

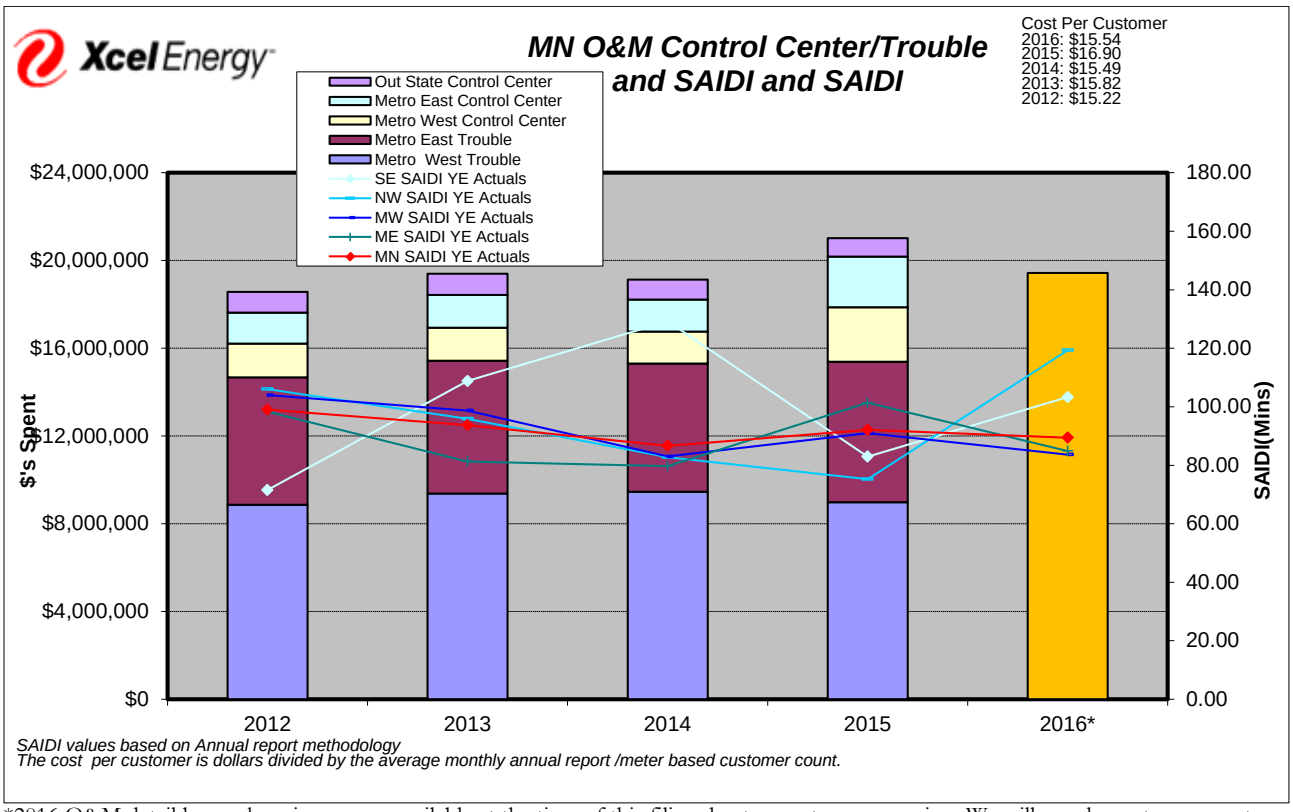
We provide below, graphs demonstrating these costs compared to both SAIDI and SAIFI for 2012-2016.

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

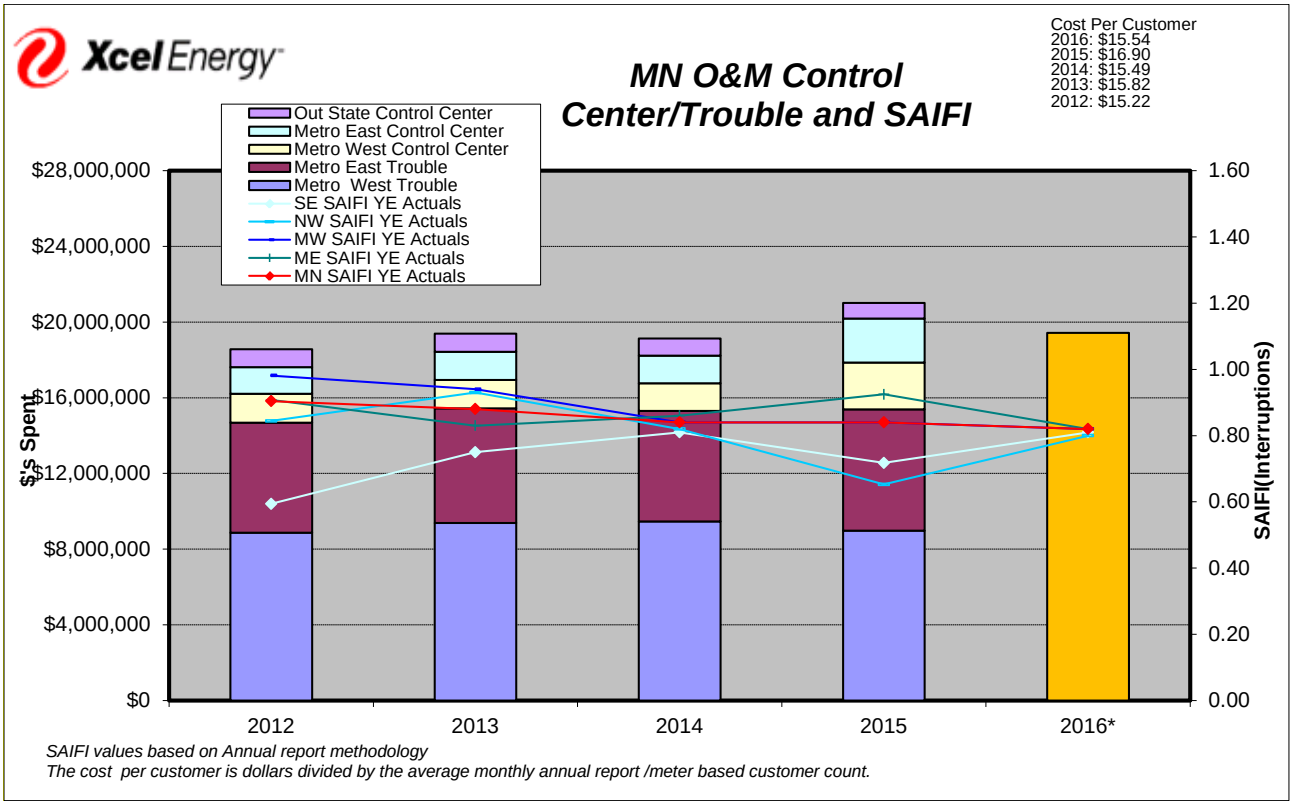
whose primary responsibility is outage restoration and emergency response. We note that this includes dispatchers from North Dakota and South Dakota

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

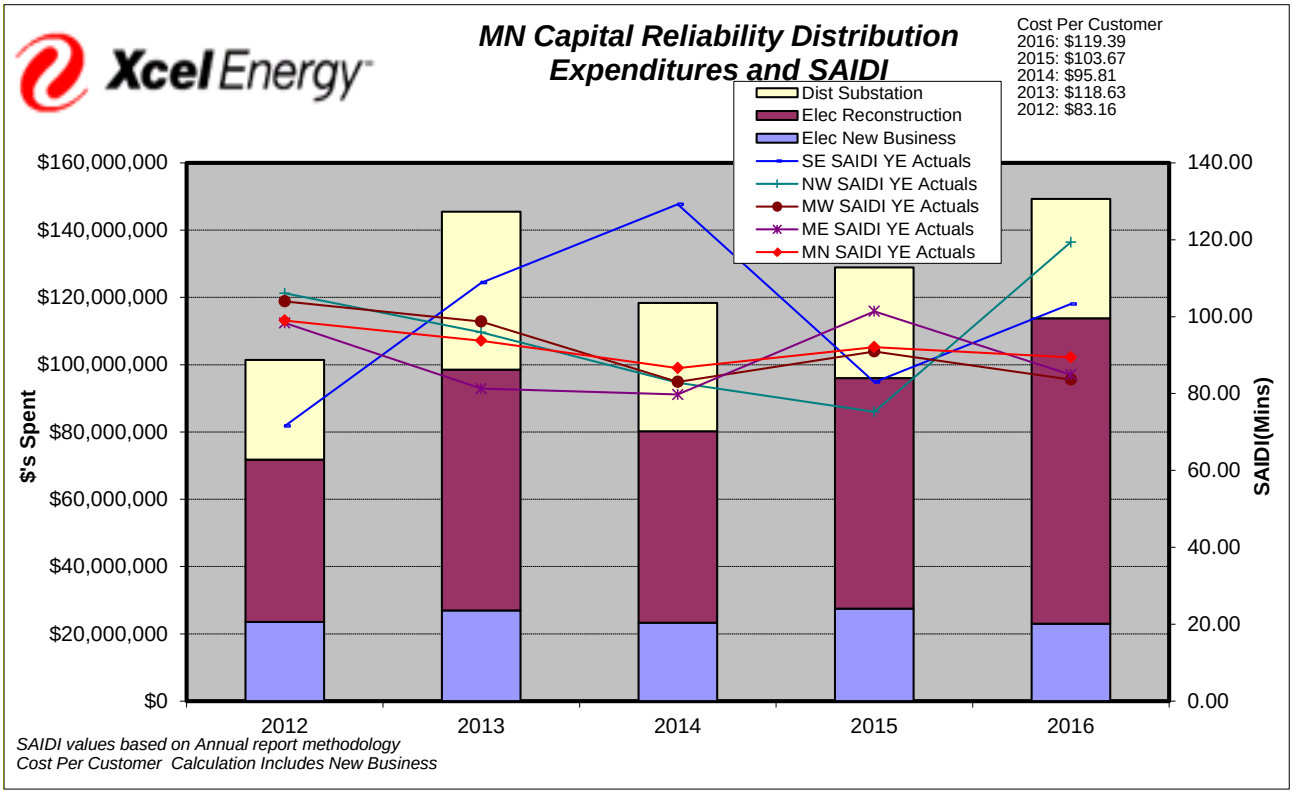
We note that the following capital expenditures include any dollars spent that *may* have an impact on reliability. For example, this would include capacity funding and capital projects, such as cable replacement and our FPIP. On the following graphs, "new business" indicates areas where we are not established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

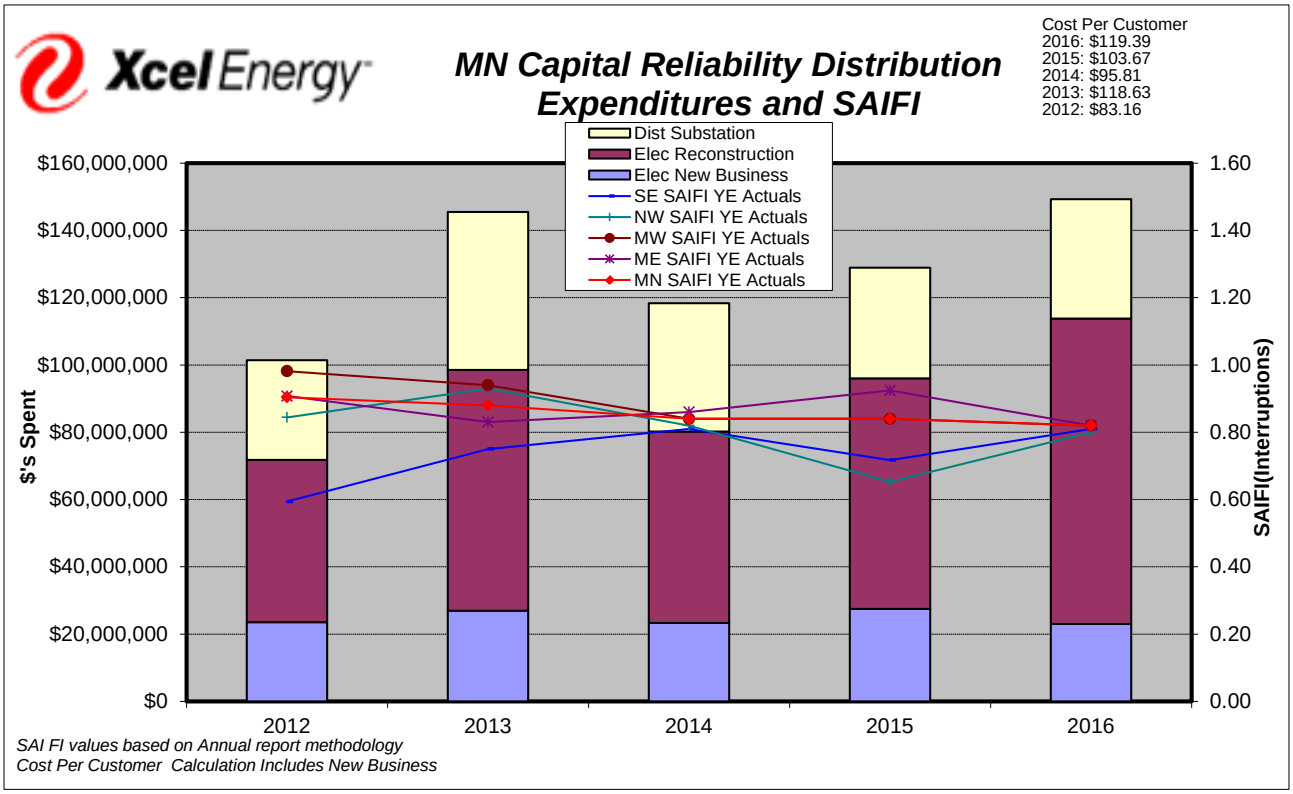


*2016 O&M detail by work region was unavailable at the time of this filing due to a system conversion. We will supplement our report as soon the data is available.



*2016 O&M detail by work region was unavailable at the time of this filing due to a system conversion. We will supplement our report as soon the data is available.





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 Reliability Management System (REMs) 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 2016.

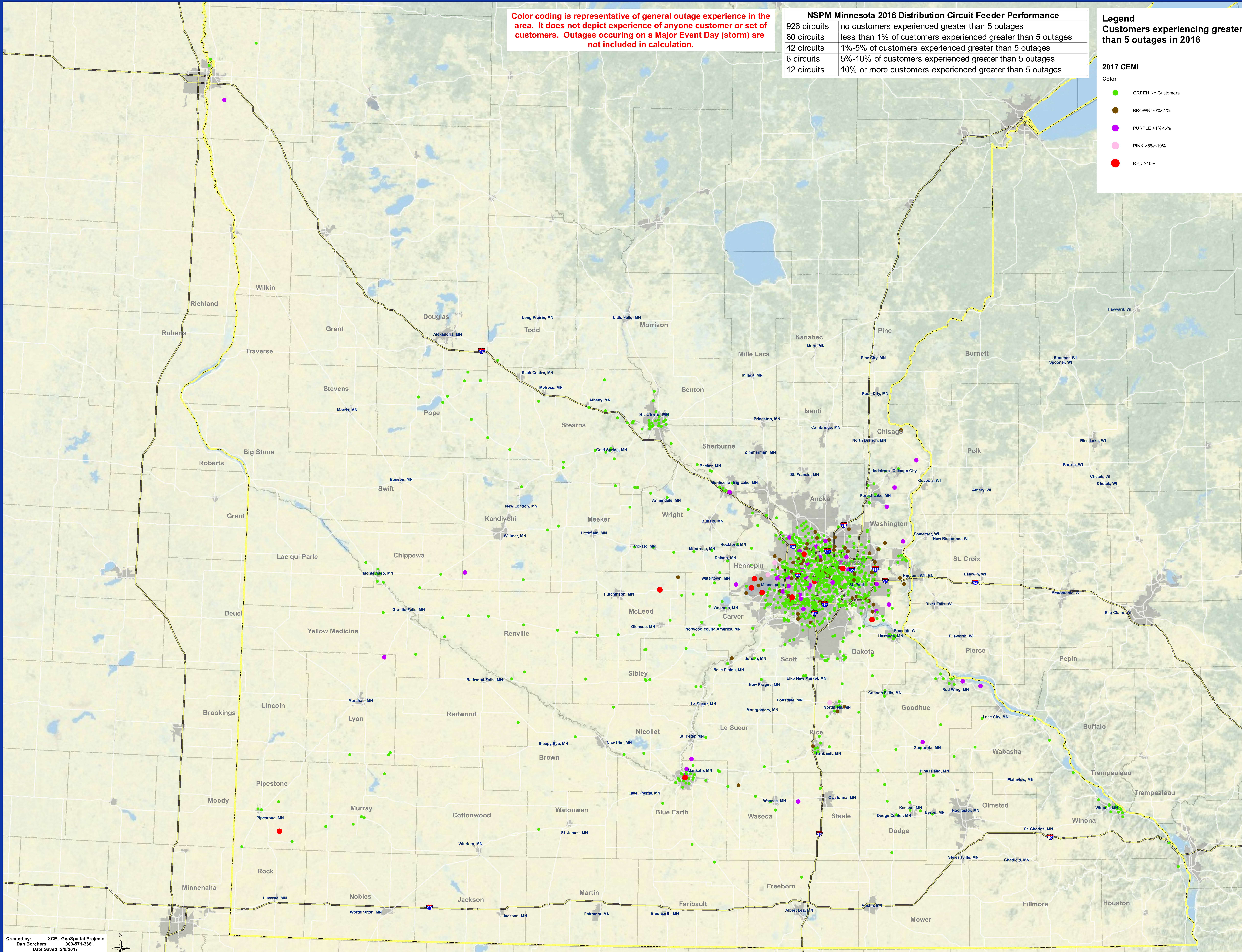
Notes about the Map:

- 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.

NSPM CEMI 2/9/2017



NSPM Minnesota 2016 Distribution Circuit Feeder Performance	
926 circuits	no customers experienced greater than 5 outages
60 circuits	less than 1% of customers experienced greater than 5 outages
42 circuits	1%-5% of customers experienced greater than 5 outages
6 circuits	5%-10% of customers experienced greater than 5 outages
12 circuits	10% or more customers experienced greater than 5 outages

NSP CEMI 2/9/2017

Legend
Customers experiencing greater than 5 outages in 2015

2017 CEMI
Color
- GREEN No Customers
- BROWN >0%<1%
- PURPLE >1%<5%
- PINK >5%<10%
- RED >10%

Anoka
Washington
Ramsey
Hennepin
Carver
Dakota
Buffalo
Rockford
Montrose
Delano
Watertown
Waconia
Norwood Young America
Minneapolis
St. Paul
Forest Lake
Somerset
Hudson
Prescott
Hastings
Ri

NSPM Minnesota 2016 Distribution Circuit Feeder Performance	
926 circuits	no customers experienced greater than 5 outages
60 circuits	less than 1% of customers experienced greater than 5 outages
42 circuits	1%-5% of customers experienced greater than 5 outages
6 circuits	5%-10% of customers experienced greater than 5 outages
12 circuits	10% or more customers experienced greater than 5 outages

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

Created by: XCEL GeoSpatial Projects
Dan Borchers 303-571-3661
Date Saved: 2/9/2017
Document Name: 2015_2_CEMI_Metro

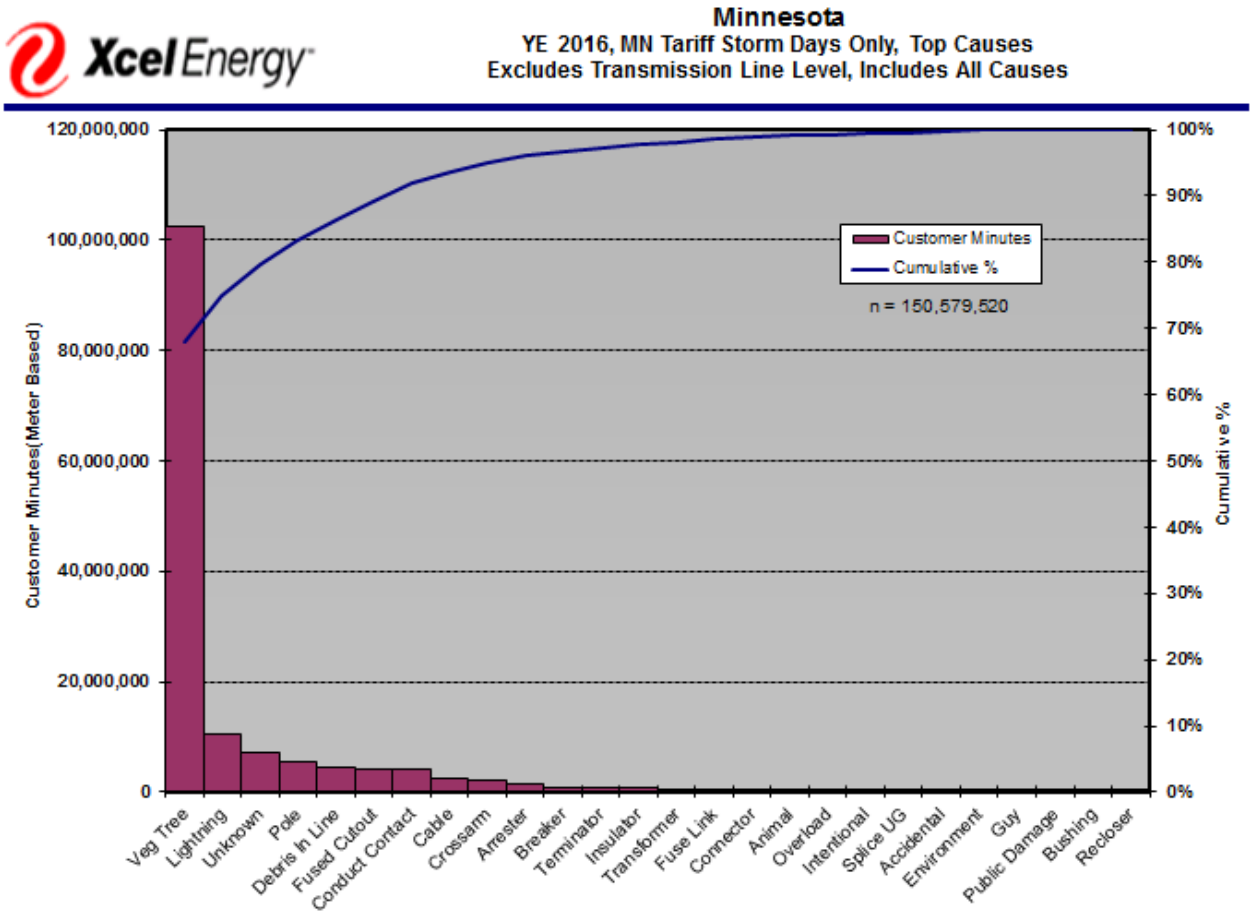
In this Attachment, we provide the following reliability-related information:

- 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

Region	Date	SAIDI on Days within 10% of Storm Threshold	SAIDI on Days within 10-20% of Storm Threshold	SAIDI on Days within 20-30% of Storm Threshold
Metro East	8/10/16			3.3
Metro East	8/11/16	0.9		
Region Total Impact		***0.9***		***3.3***
Metro West	6/25/16			3.1
Metro West	8/19/16			3.4
Metro West	11/18/16		3.2	
Region Total Impact			***3.2***	***6.5***
Northwest	7/6/16			3.0
Northwest	7/10/16			5.0
Northwest	7/11/16		4.0	
Northwest	7/16/16			14.5
Northwest	9/5/16		1.3	
Northwest	12/26/16			1.0
Region Total Impact			***5.3***	***23.6***
Southeast	7/17/16		0.9	
Southeast	7/23/16			3.1
Southeast	8/11/16		0.4	
Southeast	8/18/16	3.5		
Southeast	9/22/16		0.5	
Southeast	12/26/16			5.3
Region Total Impact		***3.5***	***1.9***	***8.3***
MN Total Impact		***0.7***	***2.2***	***7.2***

* 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 2016 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 2016 MAIFI results followed by definitions of the calculation methodologies we applied:

2016 MAIFI Results

Region	Non-Normalized	Xcel Energy QSP Tariff	Xcel Energy Annual Rules
Minnesota	0.91	0.64	0.80
Metro East	0.80	0.70	0.74
Metro West	0.85	0.65	0.76
Northwest	1.42	0.64	0.96
Southeast	1.05	0.39	0.99

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

MAIFI(<=5Mins)	2012	2013	2014	2015	2016
Metro East	0.95	0.97	0.70	0.89	0.80
Metro West	1.01	0.87	0.82	0.73	0.85
Northwest	1.42	1.82	1.51	1.44	1.42
Southeast	1.08	0.89	1.20	0.88	1.05
Minnesota	1.04	1.00	0.89	0.86	0.91

New Tariff - No Transmission Line, All Causes

MAIFI(<=5Mins)	2012	2013	2014	2015	2016
Metro East	0.81	0.77	0.55	0.81	0.70
Metro West	0.76	0.65	0.67	0.55	0.65
Northwest	0.96	0.67	0.81	0.69	0.64
Southeast	0.37	0.35	0.34	0.32	0.39
Minnesota	0.76	0.66	0.61	0.62	0.64

Annual Rules - All Levels, All Causes

MAIFI(<=5Mins)	2012	2013	2014	2015	2016
Metro East	0.85	0.80	0.57	0.83	0.74
Metro West	0.96	0.77	0.80	0.64	0.76
Northwest	1.42	1.28	1.51	1.32	0.96
Southeast	0.95	0.78	0.98	0.83	0.99
Minnesota	0.97	0.83	0.81	0.79	0.80

MAIFI - <= 5 Minutes Duration

Minnesota - MAIFI	January	February	March	April	May	June	July	August	September	October	November	December	YTD
2016 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
2015 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
2014 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
2013 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
2012 With Storms, All Levels, All Causes	0.02	0.03	0.08	0.08	0.15	0.19	0.13	0.14	0.08	0.05	0.03	0.04	1.04
New Tariff Normalized, No Trans Line, All Causes	0.02	0.03	0.06	0.07	0.13	0.11	0.09	0.08	0.08	0.05	0.02	0.03	0.76
Annual Normalized, All Levels, All Causes	0.02	0.02	0.08	0.08	0.15	0.15	0.12	0.13	0.08	0.05	0.03	0.04	0.97

MAIFI - <= 5 Minutes Duration

Metro East - MAIFI	January	February	March	April	May	June	July	August	September	October	November	December	YTD
2016 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
2015 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
2014 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
2013 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
2012 With Storms, All Levels, All Causes	0.02	0.02	0.07	0.11	0.11	0.19	0.11	0.14	0.07	0.04	0.02	0.03	0.95
New Tariff Normalized, No Trans Line, All Causes	0.02	0.02	0.07	0.11	0.11	0.13	0.09	0.10	0.07	0.04	0.00	0.03	0.81
Annual Normalized, All Levels, All Causes	0.02	0.01	0.07	0.11	0.11	0.13	0.10	0.13	0.07	0.04	0.02	0.03	0.85

MAIFI - <= 5 Minutes Duration

Metro West - MAIFI	January	February	March	April	May	June	July	August	September	October	November	December	YTD
2016 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
2015 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
2014 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
2013 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
2012 With Storms, All Levels, All Causes	0.02	0.05	0.11	0.06	0.14	0.18	0.09	0.13	0.11	0.06	0.05	0.02	1.01
New Tariff Normalized, No Trans Line, All Causes	0.02	0.04	0.06	0.04	0.13	0.11	0.07	0.08	0.09	0.06	0.05	0.02	0.76
Annual Normalized, All Levels, All Causes	0.02	0.04	0.11	0.06	0.14	0.16	0.09	0.11	0.11	0.06	0.05	0.02	0.96

MAIFI - <= 5 Minutes Duration

Northwest - MAIFI	January	February	March	April	May	June	July	August	September	October	November	December	YTD
2016 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
2015 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
2014 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
2013 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
2012 With Storms, All Levels, All Causes	0.02	0.00	0.03	0.16	0.35	0.26	0.20	0.12	0.06	0.05	0.01	0.16	1.42
New Tariff Normalized, No Trans Line, All Causes	0.02	0.00	0.03	0.11	0.26	0.13	0.11	0.05	0.06	0.05	0.01	0.12	0.96
Annual Normalized, All Levels, All Causes	0.02	0.00	0.03	0.16	0.35	0.26	0.20	0.12	0.06	0.05	0.01	0.16	1.42

MAIFI - <= 5 Minutes Duration

Southeast - MAIFI	January	February	March	April	May	June	July	August	September	October	November	December	YTD
2016 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
2015 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
2014 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
2013 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
2012 With Storms, All Levels, All Causes	0.05	0.00	0.07	0.00	0.17	0.16	0.30	0.20	0.04	0.04	0.04	0.00	1.08
New Tariff Normalized, No Trans Line, All Causes	0.05	0.00	0.00	0.00	0.04	0.04	0.11	0.05	0.03	0.04	0.00	0.00	0.37
Annual Normalized, All Levels, All Causes	0.05	0.00	0.07	0.00	0.17	0.07	0.30	0.19	0.03	0.04	0.04	0.00	0.95

MAIFI - <= 5 Minutes Duration

Minnesota - Customer Interruptions	January	February	March	April	May	June	July	August	September	October	November	December	YTD
2016 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
CES Cust Served	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	
2015 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
CES Cust Served	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	
2014 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
CES Cust Served	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	
2013 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
CES Cust Served	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	
2012 With Storms, All Levels, All Causes	27,803	34,536	102,984	97,500	187,066	227,323	157,721	170,945	103,140	64,880	42,420	45,544	1,261,862
New Tariff Normalized, No Trans Line, All Causes	27,803	31,244	67,550	81,281	154,532	135,931	104,772	98,842	93,541	64,329	28,593	37,107	925,525
Annual Normalized, All Levels, All Causes	27,803	28,373	102,984	97,500	187,066	178,479	151,053	154,352	101,159	64,880	42,420	45,544	1,181,613
CES Cust Served	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	

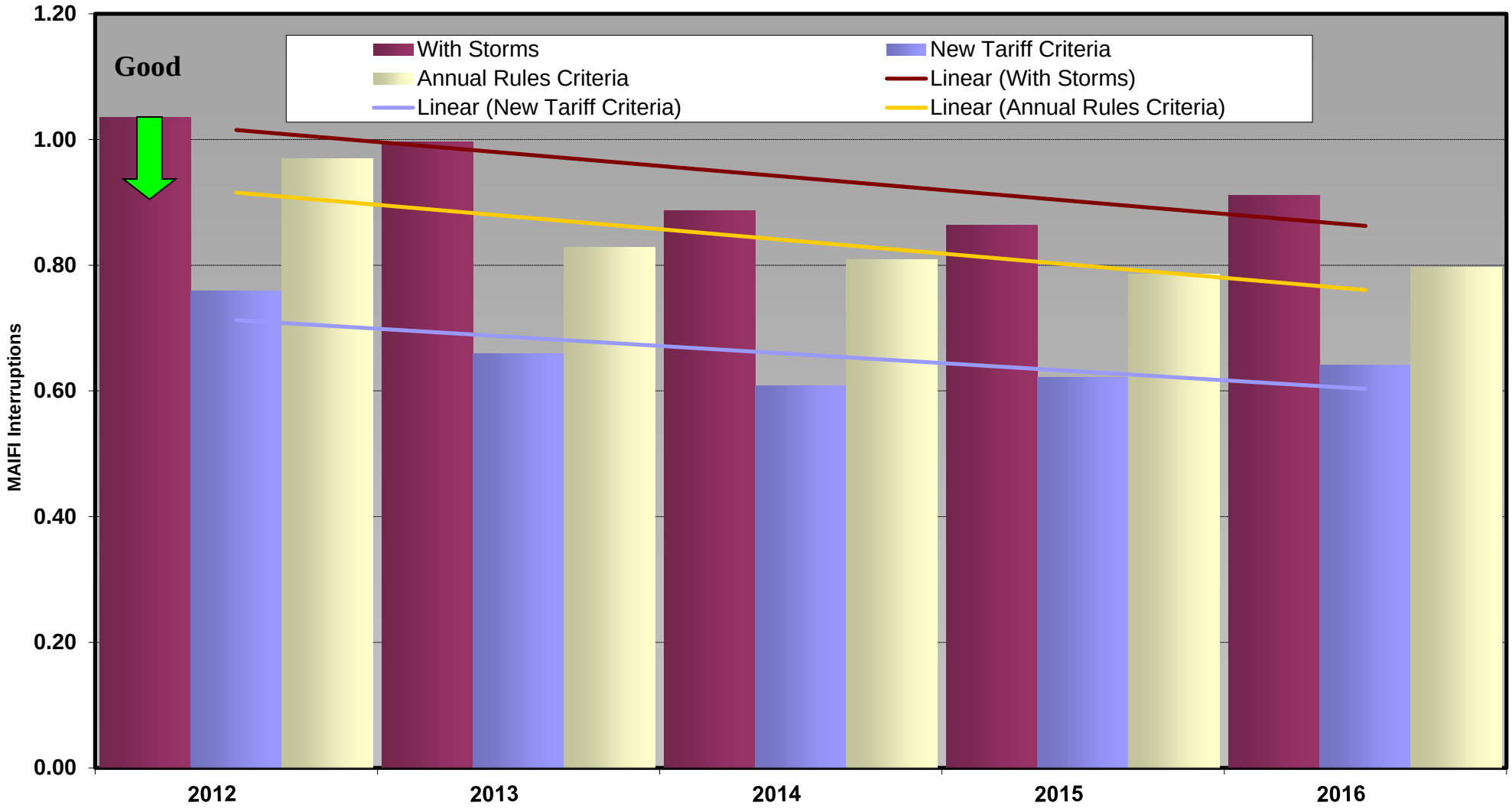
Metro East - Customer Interruptions	January	February	March	April	May	June	July	August	September	October	November	December	YTD
2016 With Storms, All Levels, All Causes	8,042	30,312	31,530	39,980	28,813	25,258	44,241	35,094	49,970	10,848	24,347	2,540	330,975
New Tariff Normalized, No Trans Line, All Causes	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
CES Cust Served	410,535	410,808	411,301	411,260	411,117	410,936	411,390	411,453	411,397	411,786	412,089	412,530	
2015 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
CES Cust Served	408,325	408,859	409,140	409,169	408,830	408,530	408,590	408,804	408,893	409,248	409,466	410,136	
2014 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
CES Cust Served	405,168	405,513	406,266	406,476	406,280	406,118	406,328	406,609	406,781	407,216	407,552	407,915	
2013 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
CES Cust Served	401,230	401,501	401,871	402,068	401,714	401,535	401,482	401,644	401,861	402,237	402,471	402,927	
2012 With Storms, All Levels, All Causes	9,429	7,657	29,988	44,236	45,887	75,216	45,177	55,701	29,928	17,646	8,524	13,069	382,458
New Tariff Normalized, No Trans Line, All Causes	9,429	7,657	29,988	44,236	45,887	50,292	37,309	41,817	29,928	17,646	1	13,069	327,259
Annual Normalized, All Levels, All Causes	9,429	4,786	29,988	44,236	45,887	50,292	38,509	50,798	29,928	17,646	8,524	13,069	343,092
CES Cust Served	401,230	401,501	401,871	402,068	401,714	401,535	401,482	401,644	401,861	402,237	402,471	402,927	

Metro West - Customer Interruptions	January	February	March	April	May	June	July	August	September	October	November	December	YTD
2016 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
CES Cust Served	592,434	593,132	593,410	593,402	593,175	592,828	593,312	593,023	593,171	593,304	593,406	593,764	
2015 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
CES Cust Served	588,110	590,082	590,398	590,516	590,066	589,627	590,093	589,851	589,987	590,525	591,304	591,872	
2014 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
CES Cust Served	583,345	583,434	584,207	584,437	584,033	583,979	584,821	585,482	585,739	586,543	587,045	587,179	
2013 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
CES Cust Served	575,169	575,376	575,700	575,827	575,632	575,368	575,904	575,882	575,985	576,891	577,363	577,422	
2012 With Storms, All Levels, All Causes	9,482	26,854	61,753	35,017	79,060	101,289	52,264	75,539	61,336	35,897	27,008	13,559	579,058
New Tariff Normalized, No Trans Line, All Causes	9,482	23,562	34,254	23,928	73,461	65,101	39,859	44,430	53,364	35,897	27,008	10,010	440,356
Annual Normalized, All Levels, All Causes	9,482	23,562	61,753	35,017	79,060	89,271	52,264	65,334	61,336	35,897	27,008	13,559	553,543
CES Cust Served	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	January	February	March	April	May	June	July	August	September	October	November	December	YTD
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	
2012 With Storms, All Levels, All Causes	2,855		3,052	18,245	41,144	30,468	23,222	14,130	6,615	5,728	1,584	18,908	165,951
New Tariff Normalized, No Trans Line, All Causes	2,855		3,052	13,115	30,118	15,091	13,327	5,760	6,615	5,728	1,584	14,020	111,265
Annual Normalized, All Levels, All Causes	2,855		3,052	18,245	41,144	30,468	23,222	14,130	6,615	5,728	1,584	18,908	165,951
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	January	February	March	April	May	June	July	August	September	October	November	December	YTD
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	
2012 With Storms, All Levels, All Causes	6,037	25	8,191	2	20,975	20,350	37,058	25,575	5,261	5,609	5,304	8	134,395
New Tariff Normalized, No Trans Line, All Causes	6,037	25	256	2	5,066	5,447	14,277	6,835	3,634	5,058		8	46,645
Annual Normalized, All Levels, All Causes	6,037	25	8,191	2	20,975	8,448	37,058	24,090	3,280	5,609	5,304	8	119,027
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

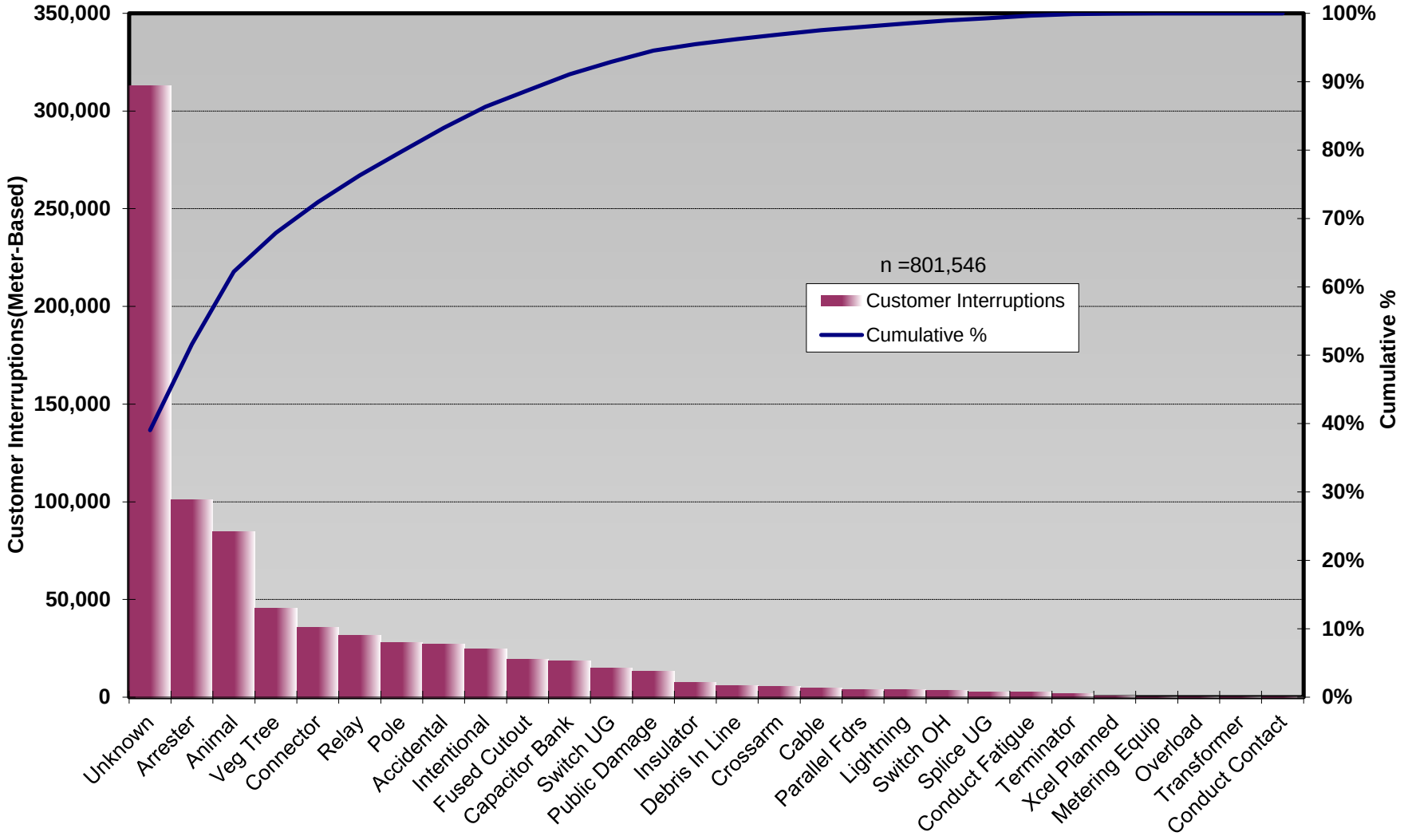


With Storms - No normalization, All Levels, All
Annual Rules - Normalized on Count of Outages, 5 year -rolling 3 sigma, All Levels, All Causes
New Tariff - IEEE Normalization after removing Trans Lines, All Causes

Momentary events <= 5 Minutes

MINNESOTA MAIFI

2016, MN Tariff, No Transmission Lines, All Causes

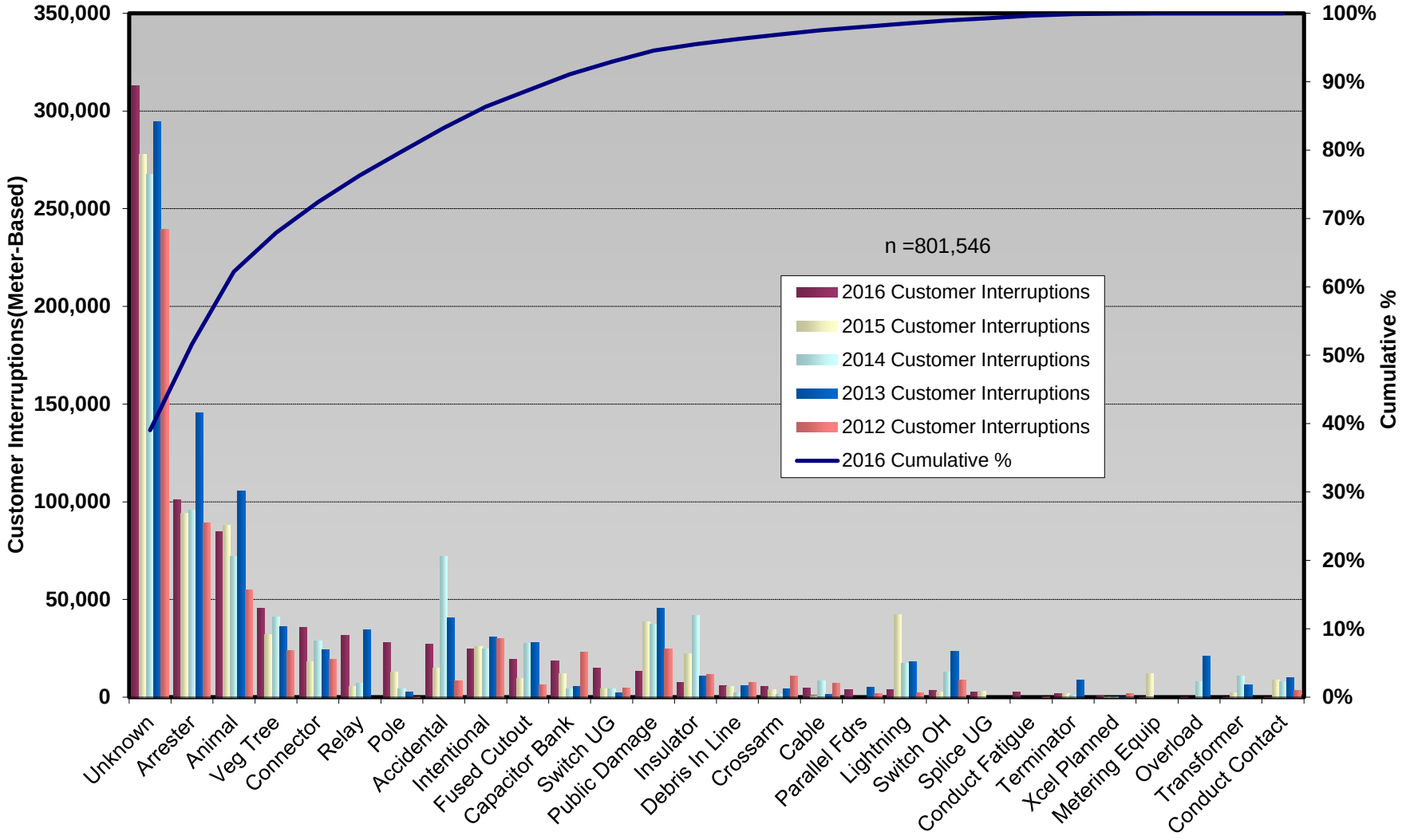


Tariff - IEEE Normalization after removing Trans Lines, All Causes

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
Electric	INVESTIGATE AND REMEDIATE	Order Count	201	153	205	172	188	206	249	339	268	221	205	192	2,599
		Average Days	3.13	3.85	3.35	3.01	3.26	2.98	3.27	3.29	3.31	4.29	3.20	3.32	3.35
		Min Days	0	1	1	1	0	1	1	1	1	0	1	1	0
		Max of Days	6	42	12	8	19	8	16	9	8	156	7	11	156
		StdDev of Days	1.47	3.96	1.48	1.32	1.88	1.24	1.77	1.30	1.50	10.71	1.40	1.58	3.56
	INVESTIGATE AND REFER	Order Count	21	15	15	7	17	15	23	27	18	20	13	24	215
		Average Days	2.90	3.47	2.87	3.71	3.41	3.13	3.39	3.41	3.89	3.40	3.46	3.17	3.33
		Min Days	2	2	1	2	2	2	2	2	2	1	0	1	0
		Max of Days	6	5	5	5	5	6	6	5	6	6	6	6	6
		StdDev of Days	1.30	1.25	1.46	1.25	1.12	1.36	1.31	1.31	1.45	1.54	1.81	1.63	1.40
	REMEDIATE UPON REFERRAL	Order Count								1					1
		Average Days								1.00					1.00
		Min Days								1					1
		Max of Days								1					1
		StdDev of Days													
Electric Order Count			222	168	220	179	205	221	272	367	286	241	218	216	2,815
Electric Average Days			3.11	3.82	3.31	3.04	3.27	2.99	3.28	3.29	3.34	4.21	3.21	3.31	3.35
Electric Min Days			0	1	1	1	0	1	1	1	1	0	0	1	0
Electric Max of Days			6	42	12	8	19	8	16	9	8	156	7	11	156
Electric StdDev of Days			1.45	3.80	1.48	1.32	1.83	1.25	1.73	1.31	1.50	10.27	1.42	1.58	3.44

Gas	INVESTIGATE AND REMEDIATE	Order Count	187	217	297	185	293	230	208	230	256	320	189	158	2,770
		Average Days	2.97	3.06	3.37	2.83	3.12	3.20	2.96	3.37	3.47	3.61	3.47	3.65	3.27
		Min Days	0	0	0	0	0	0	0	0	0	0	0	1	0
		Max of Days	8	7	26	16	7	9	13	10	12	9	10	43	43
		StdDev of Days	1.42	1.42	2.06	1.60	1.37	1.51	1.47	1.61	1.82	1.77	1.73	3.57	1.83
	INVESTIGATE AND REFER	Order Count	76	95	137	68	54	58	34	42	52	55	39	29	739
		Average Days	2.74	2.89	3.16	2.85	3.30	3.02	3.26	3.33	3.54	3.65	3.49	3.66	3.17
		Min Days	1	1	1	2	1	1	2	1	2	2	1	2	1
		Max of Days	7	6	7	6	8	6	6	7	7	7	7	7	8
		StdDev of Days	1.45	1.29	1.55	1.15	1.47	1.30	1.29	1.28	1.57	1.43	1.71	1.52	1.45
	REMEDIATE UPON REFERRAL	Order Count	56	81	105	70	45	39	13	11	8	6	12	11	457
		Average Days	1.93	2.10	2.84	6.83	3.22	8.51	4.77	17.55	5.50	4.50	4.00	2.73	4.23
		Min Days	0	0	0	0	0	1	0	1	1	1	1	0	0
		Max of Days	15	8	11	21	10	71	34	147	13	10	12	7	147
		StdDev of Days	2.47	1.73	2.43	5.92	2.72	13.03	8.95	43.06	4.54	3.83	3.16	2.49	8.68
Gas Order Count			319	393	539	323	392	327	255	283	316	381	240	198	3,966
Gas Average Days			2.73	2.82	3.21	3.70	3.16	3.80	3.09	3.92	3.53	3.63	3.50	3.60	3.36
Gas Min Days			0	0	0	0	0	0	0	0	0	0	0	0	0
Gas Max of Days			15	8	26	21	10	71	34	147	13	10	12	43	147
Gas StdDev of Days			1.70	1.51	2.03	3.46	1.59	4.97	2.43	8.70	1.91	1.77	1.82	3.29	3.39
Total E & G Order Count			541	561	759	502	597	548	527	650	602	622	458	414	6,781
Total E & G Average Days			2.89	3.12	3.24	3.47	3.19	3.47	3.19	3.56	3.44	3.85	3.36	3.44	3.36
Total E & G Days Min			0	0	0	0	0	0	0	0	0	0	0	0	0
Total E & G Days Max			15	42	26	21	19	71	34	147	13	156	12	43	156
Total E & G Days Std Dev			1.61	2.47	1.89	2.90	1.68	3.94	2.10	5.82	1.73	6.54	1.65	2.55	3.41

EXCLUSIONS

Meter Access

Utility	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Grand Total
Electric Order Count	6	9	30	33	11	9	10	6	9	29	1	4	157
Electric Average Days	19.33	104.33	70.30	104.55	63.55	72.67	55.00	48.00	56.89	97.10	6.00	52.25	78.65
Gas Order Count	16	31	68	74	67	18	16	10	16	51	18	14	399
Gas Average Days	8.06	8.29	40.97	41.91	57.79	43.89	45.44	42.30	58.75	73.76	25.39	57.00	45.22
Total E & G Order Count	22	40	98	107	78	27	26	16	25	80	19	18	556
Total E & G Average Days	11.14	29.90	49.95	61.22	58.60	53.48	49.12	44.44	58.08	82.23	24.37	55.94	54.66

Environmental

Electric Order Count	0	0	0	0	0	0	0	0	0	0	0	0	0
Electric Average Days	0	0	0	0	0	0	0	0	0	0	0	0	0

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-17-____
Miscellaneous Electric Service List

Dated this 31st day of March 2017.

/s/
_____
Jim Erickson

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Julia	Anderson	Julia.Anderson@ag.state.mn.us	Office of the Attorney General-DOC	1800 BRM Tower 445 Minnesota St St. Paul, MN 551012134	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 Duluth, MN 558022191	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	150 South Fifth Street, Suite 2300 Minneapolis, MN 55402	Electronic Service	No	GEN_SL_Northern States Power Company dba Xcel Energy-Elec_Xcel Miscl Electric
Carl	Cronin	Regulatory.records@xcelenergy.com	Xcel Energy	414 Nicollet Mall FL 7 Minneapolis, MN 554011993	Electronic Service	No	GEN_SL_Northern States Power Company dba Xcel Energy-Elec_Xcel Miscl Electric
Jeffrey A.	Daugherty	jeffrey.daugherty@centerpointenergy.com	CenterPoint Energy	800 LaSalle Ave Minneapolis, MN 55402	Electronic Service	No	GEN_SL_Northern States Power Company dba Xcel Energy-Elec_Xcel Miscl Electric
Ian	Dobson	ian.dobson@ag.state.mn.us	Office of the Attorney General-RUD	Antitrust and Utilities Division 445 Minnesota Street, BRM Tower St. Paul, MN 55101	Electronic Service 1400	No	GEN_SL_Northern States Power Company dba Xcel Energy-Elec_Xcel Miscl Electric
Emma	Fazio	emma.fazio@stoel.com	Stoel Rives LLP	33 South Sixth Street Suite 4200 Minneapolis, MN 55402	Electronic Service	No	GEN_SL_Northern States Power Company dba Xcel Energy-Elec_Xcel Miscl Electric
Sharon	Ferguson	sharon.ferguson@state.mn.us	Department of Commerce	85 7th Place E Ste 280 Saint Paul, MN 551012198	Electronic Service	No	GEN_SL_Northern States Power Company dba Xcel Energy-Elec_Xcel Miscl Electric
Michael	Hoppe	il23@mtn.org	Local Union 23, I.B.E.W.	932 Payne Avenue St. Paul, MN 55130	Electronic Service	No	GEN_SL_Northern States Power Company dba Xcel Energy-Elec_Xcel Miscl Electric
Alan	Jenkins	aj@jenkinsatlaw.com	Jenkins at Law	2265 Roswell Road Suite 100 Marietta, GA 30062	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
Richard	Johnson	Rick.Johnson@lawmoss.com	Moss & Barnett	150 S. 5th Street Suite 1200 Minneapolis, MN 55402	Electronic Service	No	GEN_SL_Northern States Power Company dba Xcel Energy-Elec_Xcel Miscl Electric
Mark J.	Kaufman	mkaufman@ibewlocal949.org	IBEW Local Union 949	12908 Nicollet Avenue South Burnsville, MN 55337	Electronic Service	No	GEN_SL_Northern States Power Company dba Xcel Energy-Elec_Xcel Miscl Electric
Thomas	Koehler	TGK@IBEW160.org	Local Union #160, IBEW	2909 Anthony Ln St Anthony Village, MN 55418-3238	Electronic Service	No	GEN_SL_Northern States Power Company dba Xcel Energy-Elec_Xcel Miscl Electric
Michael	Krikava	mkrikava@briggs.com	Briggs And Morgan, P.A.	2200 IDS Center 80 S 8th St Minneapolis, MN 55402	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 Farmington, MN 55024	Electronic Service	No	GEN_SL_Northern States Power Company dba Xcel Energy-Elec_Xcel Miscl Electric
John	Lindell	john.lindell@ag.state.mn.us	Office of the Attorney General-RUD	1400 BRM Tower 445 Minnesota St St. Paul, MN 551012130	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 St. Paul, MN 55106	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 Minneapolis, MN 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 Suite 1300 Minneapolis, Minnesota 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
Richard	Savelkoul	rsavelkoul@martinsquires.com	Martin & Squires, P.A.	332 Minnesota Street Ste W2750 St. Paul, MN 55101	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 St. Paul, MN 55102	Electronic Service	No	GEN_SL_Northern States Power Company dba Xcel Energy-Elec_Xcel Miscl Electric
Ron	Spangler, Jr.	rlspangler@otpco.com	Otter Tail Power Company	215 So. Cascade St. PO Box 496 Fergus Falls, MN 565380496	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	150 South 5th Street Suite 2300 Minneapolis, MN 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 200 South Sixth Street Minneapolis, MN 55402	Electronic Service	No	GEN_SL_Northern States Power Company dba Xcel Energy-Elec_Xcel Miscl Electric
Eric	Swanson	eswanson@winthrop.com	Winthrop Weinstine	225 S 6th St Ste 3500 Capella Tower Minneapolis, MN 554024629	Electronic Service	No	GEN_SL_Northern States Power Company dba Xcel Energy-Elec_Xcel Miscl Electric
Lisa	Veith	lisa.veith@ci.stpaul.mn.us	City of St. Paul	400 City Hall and Courthouse 15 West Kellogg Blvd. St. Paul, MN 55102	Electronic Service	No	GEN_SL_Northern States Power Company dba Xcel Energy-Elec_Xcel Miscl Electric
Daniel P	Wolf	dan.wolf@state.mn.us	Public Utilities Commission	121 7th Place East Suite 350 St. Paul, MN 551012147	Electronic Service	No	GEN_SL_Northern States Power Company dba Xcel Energy-Elec_Xcel Miscl Electric