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April 1, 2015

VIA E-FILING
Daniel Wolf
Executive Secretary
Minnesota Public Utilities Commission
121 7th Place East, Suite 350
St. Paul, MN 55101-2147

Re: 2015 Safety, Reliability and Service Quality
Standards Report Docket No. E015/M-15-___

Dear Mr. Wolf:

Minnesota Power hereby submits, via electronic filing, its 2015 Safety, Reliability and Service Quality Standards Report as required by Minn. Rules 7826.0100-2000 and Commission's December 12, 2014 Order in Docket No. E015/M-14-281.

Please contact me at the number above if you have any questions regarding this filing.

Yours truly,

Lori Hoyum

LH:sr
Attach.
cc: Service List

Before The
Minnesota Public Utilities Commission

Docket No. E-999/R-01-1671

Minnesota Power's
Safety, Reliability
and
Service Quality Standards Report
under
Minn. Rule 7826

April 1, 2015

STATE OF MINNESOTA
BEFORE THE
MINNESOTA PUBLIC UTILITIES COMMISSION

In the Matter of Minnesota Power's 2015 Annual Report Concerning Safety, Reliability, Service Quality, And Proposed Annual Reliability Standards	Docket No. E015/M-15-___

I. INTRODUCTION

Minnesota Power submits this Report to the Minnesota Public Utilities Commission ("Commission") pursuant to Minn. Rules, Chapter 7826 and in compliance with the Commission's Order dated December 12, 2014 in Docket No. E015/M-14-281. Through this Report, Minnesota Power provides the Commission, Department of Commerce-Division of Energy Resources ("Department") and other stakeholders, information detailing the Company's efforts and commitment to provide safe, reliable and cost effective electric service to its unique customer base.

Minnesota Power serves approximately 144,000 retail electric customers and sixteen municipal systems across a 26,000-square-mile service area in central and northeastern Minnesota. Residential customers comprise less than ten percent of the utility's total annual delivery. More than half of Minnesota Power's total energy supply is sold to industrial customers who operate around the clock. This ratio of industrial demand gives Minnesota Power a uniquely high load factor and a load profile with less variation than most utilities. Minnesota Power is expected to remain a winter-peaking utility for the foreseeable future, as residential customers do not have the influence on overall demand as seen with summer peaking utilities.

Minnesota Power balances its reliability goals against the need to leverage capital investments while efficiently managing its operating expenses. Minnesota Power believes that system reliability metrics[1] are best compared over multiple years to identify statistically relevant

[1] Attachment A

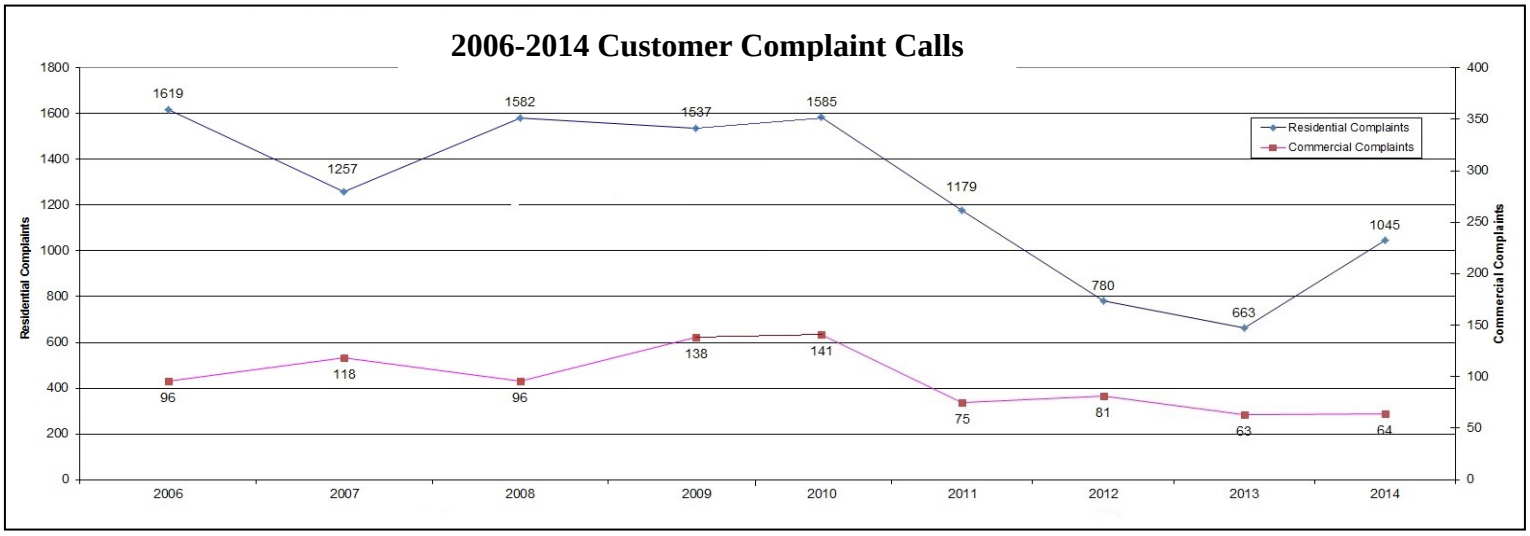
trends. The 2014 storm excluded results for System Average Interruption Duration Indice ("SAIDI") and System Average Interruption Frequency Indice ("SAIFI") were 88.35 and .96. In 2013 the comparable results were 120.43 and 1.14. The 2014 results surpass the 2014 SAIDI goal of 97.50, as well as the 2013 SAIFI goal of 1.02.

SAIDI (in minutes) **2014**	88.35
SAIDI** (in minutes) **2013	*120.43*
SAIFI (# of outages) **2014**	0.96
SAIFI** (# of outages) **2013	*1.14*

Minnesota Power experienced a slight uptick in the number of residential customer complaint calls in 2014, as is depicted in the "Residential and Commercial Complaints" chart on Page 32. The Company does not know for certain what specifically caused this increase in residential customer complaints since the increase is contrary to the downward trend in reliability statistics for the Company in 2014. The Company's commercial complaints for 2014 remained relatively static. When viewed in relation to historical complaint numbers, as depicted in the "2006-2014 Customer Complaint Calls" chart on Page 3, 2014 customer complaints were below the historical average over the period of approximately 1,250 calls for residential customers and 95 calls for commercial customers. In aggregate, total complaints were less than 1% of the total number of customers.

Minnesota Power believes that the abnormally cold and harsh winter was the cause of the increased number of estimated billings for November and December of 2013. During that timeframe cold temperatures caused a significant number of equipment issues, which is common for utility equipment in extreme weather. This resulted in poor metering communications between the customer meters and the affected substations. The result was customer billings that in certain cases had large "catch up" billings in January and February of 2014. The communications interruptions also impacted dual fuel customers during and after the 2013/2014 holidays.

When looking at the complaints broken out by type and month, this causation is supported by the fact that 70.08 percent of the complaints were categorized under 'high bill' category, and of that 70.08 percent, almost half of those high bill complaints were received in January and February of 2014. However, Minnesota Power is committed to working towards reducing the number of residential complaints received to reflect 2012-2013 totals.



II. REPORTING REQUIREMENTS

Minnesota Power's policies and procedures ensure pro-active management of its electrical system. Minnesota Power employs several methods to maintain reliability and provide active contingency planning. The primary methods used are discussed in detail below:

PLANNING PROCESS

Minnesota Power uses a planning horizon of ten years to optimize the use of its time, labor and capital. This planning process results in capital investments in the following six broad categories.

- CUSTOMER SERVICE EXTENSIONS - Extension of service to new customers. This fulfills the Company's obligation to serve and grow its customer base.
- SYSTEM IMPROVEMENTS - System improvements are the accumulation of all the projects completed to keep the system in compliance with regulations and codes. Issues which are addressed include, but are not limited to: system capacity, voltage performance and power quality.
- AGE RELATED REPLACEMENTS - These are typically end-of-life replacement projects. This equipment is still in service, but could be jeopardized by ice accumulations, high winds or additional decay.
- BULK SUBSTATION IMPROVEMENTS – Capital is spent on building or replacing distribution substations. Most often spent to create or upgrade substations to meet capacity needs.
- GOVERNMENT MANDATED RELOCATIONS - These are projects done to comply with government requests. Most often these projects are system relocations due to road construction which require vacating of or relocating within a road right of way.
- FACILITY/SUPPORT PROJECTS - These are projects which are necessary to the operation of the electrical system, but are not used for the generation, transmission or distribution of electricity. They are typically facility projects, and often pertain to the upkeep of service buildings and properties.

Contained in Minnesota Power's ten-year plan are projects identified and developed for the purpose of maintaining and improving the overall system. It is the Company's construction roadmap and is written to not only address specific problems, but to also increase overall system

performance and reliability. It is important to understand that this ten year plan may be modified to meet customer or business needs. Because it serves as a roadmap, the plan details are reviewed frequently and are modified, if necessary, to reflect the needs of customers, government agencies or other Minnesota Power stakeholders.

VEGETATION MANAGEMENT PROGRAM

System reliability can be adversely impacted by many external environmental factors. One of the more significant factors that can impact the Company's system is vegetation encroachments. A coordinated and systematic vegetation management program is a key component of Minnesota Power's distribution reliability effort. Minnesota Power has designed a vegetation management program to address each distribution line approximately every five years and transmission lines every seven years. Vegetation management benefits the system in various ways.

- Reduces momentary outage events due to vegetation contact
- Improves system performance by reducing wildlife contacts
- Improves restoration as circuits are easier to access

In 2011, Minnesota Power entered into six-year contracts for vegetation management for both its transmission and distribution lines. This long term commitment maintains levels of vegetation management consistent with utility best practices while reducing costs through efficiencies realized from the vegetation management contractors having defined and committed long-term work scopes.

On Page 31 of the Report Minnesota Power has provided a graph of the 2014 overall vegetation budget versus 2014 vegetation expense. A budget variance is present as the Company continues to focus budget resources to progress work on the transmission lines. The transmission line refocus has been necessary to meet the expectations outlined for NERC Facility Rating Alert compliance (discussed in detail on Pages 17, 18, 19 and 20 of the Report). The chart on Page 31 demonstrates that the Company will trend toward targeted budget spend for vegetation management and will continue to work diligently in 2015 to achieve its six year contracted spending goal. The Company is currently mid-way through its first six year cycle of contracted vegetation management.

LINE INSPECTION PROGRAM

Minnesota Power has an active line inspection program which includes the inspection of each pole on a ten year cycle. Poles that are 20 years and older are bored and checked internally for structural integrity. Approximately 15,000 poles are inspected annually. Depending on what is found during the pole inspection, one of four following actions is taken:

1) Poles found to be compliant with inspection criteria are identified as needing no work pending the next ten year inspection; or
2) If inspection reveals a physical loss of strength at the ground line, but an otherwise good pole, a metal brace called a pole stub is applied; or
3) If insects or decay within the pole are found and treatable, action is taken to stop further effects from the insect or decay; or
4) If the pole is beyond treatment or stubbing, it is replaced.

Besides poles, line inspectors also inspect attachments to the pole, as well as ground mounted equipment looking for potential problems. The line inspectors are given contact information that allows them to resolve issues requiring immediate response in the field. Minnesota Power is currently in the seventh year of its second ten year cycle. The Company estimates that the average age of the poles in its service territory are 35 years old and the average age of a replaced pole is 56 years old. Minnesota Power has found this to be a prudent and logical way of evaluating and replacing the poles on its system.

FCC Pole Attachment Order:

Under section 224 of the Communications Act of 1934, the Federal Communications Commission (Commission) regulates just and reasonable rates, terms and conditions for attachments to utility poles by telecommunications, cable television, and broadband companies. An April 7, 2011 revision to the Act also lays out accelerated procedures for the pole attachment process, as well as clarifying how the rules impact wireless attachments. These rules only apply to investor owned utilities.

The matter of most concern for Minnesota Power is the allowance of wireless providers to access the space on the pole above the “communications space.” The communications space

was created in order to separate electric supply conductors from communications conductors. Traditionally, third parties were not allowed access to the pole above the area of what was deemed the communications space. The Order does address safety considerations by allowing utilities to deny access "where there is insufficient capacity, and for reasons of safety, reliability, and generally applicable engineering purposes." Utilities may not use this provision for blanket prohibitions on pole top attachments.

In relation to utilities reliability and outage response time, if a utility must wait for a communications provider to respond to stabilize or remove their damaged equipment, it could significantly increase the response time to an outage or emergency. This could also increase the cost of maintenance and repair as the line workers will be required to spend more time out in the field and may possibly have to remove equipment not owned or managed by the utility. There is no current evidence with which to make any determinations of the effect this may have on a utility's reliability statistics. This is a matter that the Company is monitoring closely and will discuss in future Reports if complications arise.

IMPROVED CUSTOMER COMMUNICATION

Customer Care:

Minnesota Power is currently working on implementing a new customer information system ("CIS"). The system is Customer Care and Billing ("CC&B") from Oracle with an anticipated implementation target of second quarter 2015. The Company is replacing a vintage 1994 mainframe green screen system that has served Minnesota Power and its customers well for twenty years. The new system will allow Minnesota Power the ability to greatly enhance and improve its current communication with customers while establishing industry best practices. For example, a second phase to the system will feature an on-line portal for customers so that they will have the option to not only transact with Minnesota Power over the phone, but also on-line.

In 2012, Minnesota Power implemented a call monitoring initiative for its Customer Information Representatives ("Representatives"). This process uses actual calls as a training tool to provide Representatives feedback and assessment of call resolution effectiveness. This has been very beneficial in bringing call standards in the Call Center to a new level.

In 2013, Minnesota Power implemented an after-call customer survey that helps to keep a daily pulse on customer satisfaction. Minnesota Power utilizes the after-call surveys to work with Representatives to ensure quality customer service and alignment with customer expectations. The call monitoring and the after-call customer survey have been great additions to continually improve Minnesota Power's customer service focus. In 2014, the Company continued to utilize the surveys as training tools and to track customer satisfaction numbers.

In addition to the after-call survey, in 2014 the Company partnered with JD Power[2] in their Residential Customer Service Survey. JD Power is respected in the utility industry as a trusted source with its survey model. The Company has found their online tools very informative and helpful as it develops its customer experience initiative.

Interactive Voice Response:

Minnesota Power uses an Interactive Voice Response ("IVR") unit as a means of improving communication with customers during an outage. The IVR is a telephone system that is able to interact with customers. The system has the intelligence to read the phone number of the incoming caller. If the number is in the CIS, the IVR will look to the Outage Management System[3] ('OMS") to see if the caller is in an area affected by an outage. If the caller is part of a known outage, the system reports back that they are part of a known outage and that crews have been dispatched. If the information is available, the system will also communicate estimated restoration time. This provides Minnesota Power the capabilities of letting each caller know what problem is affecting their area as well as give them an estimate of the outage length. The IVR has eased congestion during periods of multiple or widespread outages.

Minnesota Power is also using the IVR to communicate information to the OMS. The Company installed a General Electric *PowerOn* OMS in late 2006. This system gives a real time look at the distribution system by tying incoming IVR data, information from the field, data from

[2] J.D. Power and Associates is an American-based global marketing information services firm. The firm conducts surveys of customer satisfaction, product quality, and buyer behavior for industries ranging from cars to marketing and advertising firms.

[3] An outage management system (OMS) provides the capability to efficiently identify and resolve outages and to generate and report valuable historical information.

Minnesota Power's Energy Management System[4] ("EMS") and the Geographic Information System[5] ("GIS") together. With data from these sources, the OMS is able to predict the location of the problem. Based on that information, the OMS predicts what customers are without power. Once the problem is confirmed in the field, actual conditions are modeled in the OMS and the exact customers affected by the outage are identified. This method of outage detection makes identifying outages more reliant on real time data, and therefore, more efficient.

For years, Minnesota Power has used the IVR to initiate outbound calls to customers for various reasons. The Company is careful not to overuse this valuable tool but does have several campaigns that it believes are important to our customers:

- Cold Weather Alerts – at the beginning of the season the Company urges its customers to apply for assistance and about a month prior to the end of the program, encourages customers to call and make payment arrangements for their remaining balances;
- Customer Affordability of Residential Electric (CARE) – the Company runs these calls periodically throughout the year to financially vulnerable customers, urging them to apply for the CARE program.

In 2014 Minnesota Power made an important change to its IVR main menu by creating an upfront menu choice for Western Union Speedpay. Western Union is the Company's phone and online payment vendor. Before this change, customers were required to navigate through several more IVR layers to get to this same payment option. By adding this option, our customers have the ability to go directly to Western Union Speedpay by making one simple choice. This results in less time on the phone for customers and has decreased call center agent transfer interactions by 34 percent.

Voltage Monitoring:

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[4]A system of computer-aided tools used by operators of electric utility grids to monitor, control, and optimize the performance of the generation and/or transmission system. The monitor and control functions are known as System Control and Data Acquisition; the optimization packages are often referred to as "advanced applications".

[5] A system designed to capture, store, manipulate, analyze, manage, and present all types of geographically referenced data.

For the last several years, Minnesota Power has been deploying voltage monitors on circuits that had historically been challenging to supervise. These monitors were put in place to allow real time checks of feeder voltage and also to report momentary operations. The installed equipment is produced by a company named Telemetrics. In 2011, the Company completed testing to prove that Telemetric data could be brought into the EMS, which ultimately brings the data to the OMS, giving dispatchers a more complete picture of conditions in the field. While a promising development for the future, the cost of upgrading the EMS further cannot be justified at this time due to other higher priority projects such as the Paper Insulated Lead Cable ("PILC") cable replacement.

Outage Monitoring:

Minnesota Power unveiled a website based Outage Center in 2010 which facilitates the reporting and display of outage information. The Outage Center provides visitors with specific outage locations and also allows them to report outages or check the status of outages online. The Outage Center augments the IVR unit and obtains information directly from the OMS. Extensive precautions have been taken to ensure that customer information is not compromised. Great care was also taken in creating a map detailed enough for a customer to be able to recognize an event in their area without giving the exact location of the problem. In 2011, Minnesota Power introduced applications to allow customers to view the Outage Center on their Android, Blackberry and iPhone devices. Customers are able to now report outages as well as check on the status of outages from anywhere at any time.

In addition to the customer-centric features described above, Minnesota Power has completed implementation on its planned integration of the OMS and Advanced Metering Infrastructure ("AMI") system. The interface streams data directly from customer meters to the OMS. The architecture of the system provides outage or "last gasp" messages from all AMI meters. The meters utilize an internal temporary power source to provide notification of customer outages. Additionally, the meters stream "power on" messages when service is restored. The interface between the OMS and AMI system was completed in November of 2012 and is currently in use by approximately 23 percent of Minnesota Power's customers.

IMPROVED CREW MOBILIZATION

In 2013 a new system was installed to mobilize crews for unscheduled work. The Automation of Reports and Consolidated Orders System ("ARCOS") system is programmed with the Company's callout lists. When a crew is needed, the Service Dispatcher simply lets ARCOS know what type of crew labor is required and ARCOS places automated phone calls to employees based on union callout rules. A task that formerly could take the Service Dispatcher upwards of one hour to complete is now done in several minutes by the ARCOS. This ultimately could result in a reduction of outage durations.

SMART GRID PROJECTS

Meter Data Warehouse:

As part of a comprehensive Smart Grid upgrade plan, Minnesota Power has completed design and implementation of both a Meter Data Warehouse ("MDW") and OMS integration as part of its Department of Energy American Recovery and Reinvestment Act ("ARRA") Smart Grid Investment Grant ("SGIG") AMI Project. The creation of the MDW has allowed for a central repository for all AMI data as part of the SGIG project, integrating the metering AMI data in the same data historian as the rest of company operational data. This has allowed a central repository for multiple uses of the AMI data, including some distribution operational data such as loading information. Minnesota Power designed this warehouse based on common standards in order to allow for future secure interfaces by third-party systems. The OMS integration allows for real-time tracking and verification of customer outages based on messaging coming from metering endpoints in the field.

Synchrophasor Project:

Minnesota Power is a participant in the Midcontinent Independent Transmission System Operator ("MISO") Synchrophasor Project. MISO was awarded a SGIG to install Phasor Measurement Units ("PMUs") across its footprint. The PMUs will provide high speed data that can be used, in part, to verify the computer simulation models that are used to plan and operate

the system today. As application software matures along with the rollout of these devices across the Eastern Interconnection[6], there is potential to operate the system based on data collected from the synchrophasor devices. To date, Minnesota Power has installed four PMU's and two Phasor Data Concentrators ("PDC"). The PDC compiles all the PMU data from Minnesota Power and sends it to MISO in one data stream. All equipment is currently operational and providing high speed measurement information to MISO and critical locations throughout the transmission system.

Advanced Metering Infrastructure:

Minnesota Power continues the process of implementing its AMI meter installation. At the end of 2014 the Company had installed approximately 35,000 AMI meters. The current AMI population represents approximately 23 percent of the overall meter population.

Equipment	Percent in Use	Description
Mechanical Meters	Less than 1%	Traditional electro-mechanical meter that records kWh usage.
AMR – Mechanical Hybrid	61%	Traditional Electro-mechanical meters that are retro-fitted with a one-way electronic automatic meter reading (AMR) module capable of reporting multiple quantities including kWh, kW, and outage count.
AMR – Solid State	16%	Modern Solid State electronic meters integrated with a one-way AMR module or retrofitted with an external AMR unit. Capable of reporting multiple quantities including kWh, kVARh, kW, and outage count.
AMI – Solid State	23%	Modern solid state devices integrated with a two-way AMI communication module. Capable of multiple measurement functions including Time of Use (TOU), kW, kWh, KVA, kVAh, kVAR, kVARh, instantaneous and average voltage, two channel load profile, and remote disconnect. Also capable of remote firmware, program, and display updates.

Time-of-Use Rates and Demand Response:

[6] All of the electric utilities in the Eastern Interconnection are electrically tied together during normal system conditions and operate at a synchronized frequency operating at an average of 60Hz. The Eastern Interconnection

Minnesota Power continues development of the Time-of-Day Rate with Critical Peak Pricing pilot project and Time-of-Day Rate filing which was submitted a Time-of-Day Rate filing to the Commission on March 20, 2012 which was approved on November, 30 2012.[7] The accompanying web portal that enables customers to view their usage information in monthly, daily and hourly increments was also introduced to Pilot Project participants in March of 2012. These efforts build upon Minnesota Power's existing conservation improvement programs and will offer insight into customer's appetites for more frequent and in depth information about their energy usage. Minnesota Power offered this rate to their customers in Quarter 3 of 2014 and rolled out the rate and related AMI system changes corresponding to the rate through Quarter 4 of 2014. The pilot is scheduled to continue through Quarter 4 of 2015, with analysis of the rate and rate impacts continuing into 2016.

Minnesota Power has offered its customers load management rates since 1983. Below is a chart that expands upon the Company's various customer load management offerings.

Time-of-use and load management rate offerings

Name	Description	Number of Customers/Meters	Start Date
Residential Dual Fuel Interruptible Electric Service	Available to customers where a non-electric source of energy is available	7,315[8]	1983
Residential Controlled Access Electric Service	Available to customers for controlled energy storage or other loads. Energized period: 11 p.m. – 7 a.m.	309[9]	1995
Commercial/Industrial Dual Fuel Interruptible Electric Service	Available to customers where an alternative source of energy is available during periods of interruption	531[10]	1983
Commercial/Industrial Controlled Access Electric Service	Available to customers for controlled energy storage of loads. Energized period: 11 p.m. – 7 a.m.	60[11]	1995
Rider for Large Power Interruptible Service	Available to customer taking service under Large Power service for a specified amount of load that may be interrupted. The interruptible load is certified. The load available for interruption is limited to 200 MW.	0 (no longer open to additional customers)	1993

[7] Docket No. E015/M-12-233
[8] Source: 2013 FERC Form 1 page 304, line 4
[9] Source: 2013 FERC Form 1, page 304, line 6
[10] Source: 2013 FERC Form1, page 304, line 16
[11] Source: 2013 FERC Form 1, page 304, line 17

Rider for General Service/Large Light and Power Interruptible Service	Available to customers taking service under specific services such as General Service, Large Light & Power Service, with at least 200 kW of load Certified or Non-Certified Interruptible that qualifies for interruptible service. The customer is billed on its current rate, but will receive an additional credit of 11% of customer's billing before any applicable adjustment.	1[12]	1995
Rider for Released Energy	Available to Large Power customers who are willing to curtail energy at the request of the Company	3[13]	1998
Pilot Rider for Large Light & Power Time-of-Use Service	Available to customer taking service under the Large Light and Power Service in excess of 10,000 kW	0	2011
Rider for Voluntary Energy Buyback	Available to General Service/ Large Light and Power customers including all applicable Riders. Customers must provide a minimum of 200 kW of curtailable demand for energy buyback transactions. Energy buyback facilitate short-term off-system sales or assist in avoiding higher-cost energy purchase to meet Company's firm energy requirements.	0	2001
Rider for Large Power Incremental Production Service	Available to any customer taking service under the Large Power Service whose Electric Service Agreement has a minimum term of at least four years beyond the initiation of Incremental Production Service	10[14]	1993
Pilot Rider for Residential Time-of-Day Service	Available to customers taking service under the Residential Service Schedule who reside in single-family dwellings in specified Duluth and Hermantown ZIP codes and who enrolled during application period in 2014. Rates vary for On-peak, Off-peak, and Critical Peak Pricing periods.	647[15]	2014

Distribution Automation:

Currently, isolating problems and connecting alternate feeds is done manually. As part of Minnesota Power's SGIG pilot project, the Company has instituted a system to isolate and reconfigure the distribution feeders to reenergize and restore power to affected customers

[12] Source: Number of Customers currently billed in the Company's Customer Information System (CIS)
[13] Source: Number of Customers currently billed in CIS
[14] This Rider is an option available to all 10 Large Power Customers, but up to 9 customers are currently and frequently billed in CIS under this Rider
[15] Source: Number of Customers currently billed in CIS

automatically. The concept behind this is that this automation will reduce large blocks of outage time on sections of a circuit not directly affected by an issue on the system. The fiber communications addition provides further communication redundancy between two critical substations in the Duluth area, along with providing situational awareness at the distribution feeder level. To date, the system has operated two times. During the second event in 2013, approximately 2,800 customers could have experienced an outage of up to several hours if upgrades to the system had not been made. As a result of the automation investments, approximately 70 percent of the effected customers were restored nearly instantaneously with only a momentary interruption of service. While the events showed how well the system is able to isolate a problem and reconfigure the distribution feeders to restore power to the remaining customers, the cost of investment in this technology is currently too great for a single annual event to make a reasonable value proposition for customers. However, if a more troublesome location were identified on Minnesota Power's system or in the future there is a reduction in the cost of the equipment; further application of the technology will be considered.

It is important to note that for more than 35 years, Minnesota Power has been making strategic investments into infrastructure and technologies to improve both the transmission and distribution systems. At times, Minnesota Power has taken a leadership role in the country with regard to these investments, such as the investment in one of the first utility-owned fiber optic links in the country, which has subsequently led to the installation of hundreds of miles of fiber optic cable.

SYSTEM CONSTRUCTION AND ANIMAL PROTECTION

In densely populated areas, loops and ties are used to help shorten restoration times. When a system is looped, two paths are created to each service point. Generally speaking, both of those paths are from the same source, but restoration is shorter as a secondary path can be used while the primary path is repaired. The same is true of ties. Generally, a tie is created by joining two different circuits. This, too, gives electricity the capability to flow to a customer on one of two (or more) different paths. This makes restoration faster and easier as customers can be served from an alternate part of the system while repairs are made on the primary system.

Minnesota Power continues to make progress on the reduction of animal contact with energized equipment. Wildlife protectors have been available for years. In years past, when

animal protection was put on electrical equipment it quickly resolved issues caused by wildlife. Unfortunately, in time, the inside of the wildlife protectors would become contaminated which in turn would cause flashovers and outages would return. These flashovers were difficult to find as they generally happened on the inside of the wildlife protection and were not visible. Issues were also created by the wildlife protection devices contributing to overheating of equipment. Over the last several years, however, wildlife protection devices have changed. New designs in wildlife protection devices are effective in controlling wildlife, may be installed without customer outages, eliminate contamination and do not cause overheating problems. The new devices are more expensive than equipment previously used, but preliminary indications suggest that they are capable of animal protection without the side effects of contamination and overheating. Results will be more apparent the longer the equipment maintains functionality in the field. The Company continues to monitor the progress of the wildlife protection upgrades.

Paper Insulated Lead Cable Replacement ("PILC"):

Minnesota Power began active replacement of five circuits in 2013 when the Company started experiencing associated reliability issues. The five circuits were originally constructed with PILC in the late 1920's and early 1930's. The circuits were remarkably reliable for over 90 years and the Company only began experiencing issues in the 2012-2013 timeframe. After investigation of the root cause, the indication is that the loss of mineral oil in the insulating paper is the underlying factor in the problems experienced.

When failures began in 2012, a six year plan was created to address the replacement of the PILC cables and their associated infrastructure. As failures continued in 2013, the six year plan was substantially accelerated. While the original plan called for $700,000 in capital spending for 2013, actual spending equaled $2.03 million. The original capital designated for the subsequent five years of the plan has now been compressed into the 2014-2017 timeframe. High impact projects will be prioritized while those projects with long permitting timelines and a need for substantial collaboration with the City of Duluth and the State of Minnesota will be completed later on.

There are approximately seven miles of the PILC cable to replace in the Duluth area. Before much of that replacement can be completed, however, a great deal of infrastructure work must be done. This infrastructure work includes placing and replacing manhole and duct systems

for 5 feeders. Unfortunately, the ducts and manholes requiring replacement are largely in two-lane downtown streets which are not easily closed off. These streets provide much of the freight handling access for many of the downtown buildings as well as access to a substantial amount of downtown parking. The work will be challenging due to the accommodations that need to be made for all stakeholders affected by the project scope.

As stated previously, $2.03 million was spent in 2013. This spending was initiated by an overhead bypass feed for several PILC feeders. This allowed the Company to remove the absolute worst performing sections of cable from service. A 34 kV tap to the Fourth Ave station and transformer placements at this location were also completed in 2013. These will allow Minnesota Power to add new sources into the downtown to provide better back up for two of our PILC circuits.

The major cost for 2013 was a project to create cable and duct crossing under Mesaba Avenue (a major thoroughfare which separates the 15th Avenue West substation from downtown Duluth). Issues with unmarked sewers, ledge rock and unseasonably harsh December weather slowed progress, but ductwork has been installed and cables have been installed.

The Company spent an additional $2.01 million in 2014 to install roughly four thousand lineal feet of ductwork and five new feeders. The new feeders have an alternate path from the 15th Avenue West substation to 8th Avenue West. The new 15kV copper cable is not yet energized but will be cut over in the second quarter of 2015. Once energized, this new cable will replace 20,000 feet of PILC cable.

NERC Facility Ratings Alert:

On June 18, 2007 the Federal Energy Regulatory Commission ("FERC") granted the North American Electric Reliability Corporation ("NERC") the legal authority to enforce reliability standards with all users, owners, and operators of the bulk power system in the United States, and made compliance with those standards mandatory and enforceable with penalties.

NERC's role includes discovering, identifying, and providing information that is critical to ensuring the reliability of the bulk power system in North America. In order to effectively

disseminate this information, NERC utilizes e-mail based "alerts" designed to provide concise, actionable information to the electricity industry. As defined in its Rules of Procedure, the NERC alerts are divided into three distinct levels as follows:

- Industry Advisory- Purely informational intended to alert registered entities to issues or potential problems. A response to NERC is not necessary.
- Recommendation to Industry- Recommended specific action be taken by registered entities. Requires a response from recipients as defined in the alert.
- Essential Action- Identify actions deemed to be "essential" to bulk power system reliability. Requires NERC Board of Trustees approval prior to issuance. Similar to recommendations, essential actions also require recipients to respond as defined in the alert.

On October 7, 2010, NERC issued a Recommendation to Industry for Consideration of Actual Field Conditions in Determination of Facility Ratings ("Recommendation"). Recipients of this Recommendation were to review the current Facility Ratings Methodology for their transmission lines to verify that the methodology used to determine facility ratings is based on actual field conditions. Line ratings depend on many limiting factors, including transmission facility placement, tower height, topographical profiles, and maintaining adequate conductor clearances (i.e., conductor-to-ground, conductor-to-conductor) under a variety of ambient weather and loading conditions.

Entities were to describe plans to complete an assessment, due to NERC by December 15, 2010, of their facilities to verify whether the actual field conditions conform to the entity's design tolerances in accordance with its Facility Ratings Methodology and to describe how and when all transmission lines will be assessed.

Within six months of the date of this Recommendation, each registered entity was to have identified and reported all transmission facilities where an entity determined that the existing conditions were different than the design condition of the facilities and what those differences were to the applicable Reliability Coordinators and Regional Entities. The Midwest Reliability Organization ("MRO") is the Regional Entity for Minnesota Power and other Minnesota utilities. Lastly, the registered entity was to correct any issues identified in its assessment as expeditiously

as possible, but no later than 24 months following the date of the Recommendation, or October 7, 2012. The NERC rapidly reconsidered the complexity of this task and modified the timeline for identification of facilities for which actual conditions may impact line ratings. Discrepancies for the highest-priority facilities with regard to bulk power system reliability were to be identified and reported to the applicable Regional Entity no later than December 31, 2011, medium priority facilities no later than December 31, 2012, and lowest priority facilities no later than December 31, 2013. Any discrepancies identified in the course of the evaluation were to be mitigated within one year.

Minnesota Power continues to aggressively execute its assessment plan. To date, aerial LiDAR16-based surveys have been completed and PLS-CADD17 models have been developed and evaluated for all transmission lines being evaluated for the Facility Ratings Alert. No ratings discrepancies were found on Minnesota Power's High priority line. All discrepancies on Medium and Low priority lines have been identified and reported to the MRO.

Because Minnesota Power used line derating where possible, 157 potential discrepancies on 7 Medium priority lines were mitigated without requiring physical construction. Further evaluation of the remaining points of interest revealed 239 actual discrepancies on 18 Medium priority lines. The required mitigation for these discrepancies generally consisted of installing a transmission structure to increase conductor to ground clearances. In some instances other mitigation methods, such as burying or lowering a distribution line or removing an object in the right-of-way, were also utilized. On July 26, 2013, Minnesota Power submitted a request to the MRO for an extension of the deadline for remediation of its Medium priority lines, to be completed by June 30, 2014. This extension was required to address issues associated with construction access to the discrepancies, outage constraints associated with construction and the extent of discrepancies identified on the Medium priority lines. The request was granted by the MRO and Minnesota Power successfully completed the mitigation of all discrepancies on its Medium priority lines on June 24, 2014, within the allotted timeframe.

[16] LiDAR ("Light Detection and Ranging") is an active remote sensing technology that uses laser light to detect and measure surface features on the earth.
[17] Power Line Systems - Computer Aided Design and Drafting – an overhead power line design program

On January 2, 2014, Minnesota Power submitted a request to the MRO for an extension of the deadline for the analysis of its Low priority lines, to be completed by February 28, 2014. This extension was required to allow Minnesota Power to complete its thorough review process of the spans of interest that had been identified on 41 of its 97 Low priority circuits in order to continue to differentiate in its reporting to the MRO between spans of interest – some of which may not need further analysis after a derate or reduced design clearance margins are applied – and discrepancies that require physical mitigation. The request was granted by the MRO and Minnesota Power reported all discrepancies identified on its Low priority lines in a supplementary progress update submitted to the MRO on February 27, 2014. In the update, Minnesota Power reported that 1,689 spans of interest had been identified on 85 Low priority circuits. Because Minnesota Power used line derating and accepted reduced design clearance margins where possible, 761 of the total 1,689 spans of interest were mitigated without requiring physical construction. As of December 22, 2014, Minnesota Power had completed mitigation of 269 of the remaining 928 discrepancies reported in the February 27, 2014 update, with construction outages currently scheduled well into 2015 to continue mitigating discrepancies on Low priority lines.

EMERGENCY PREPAREDNESS AND MUTUAL AID

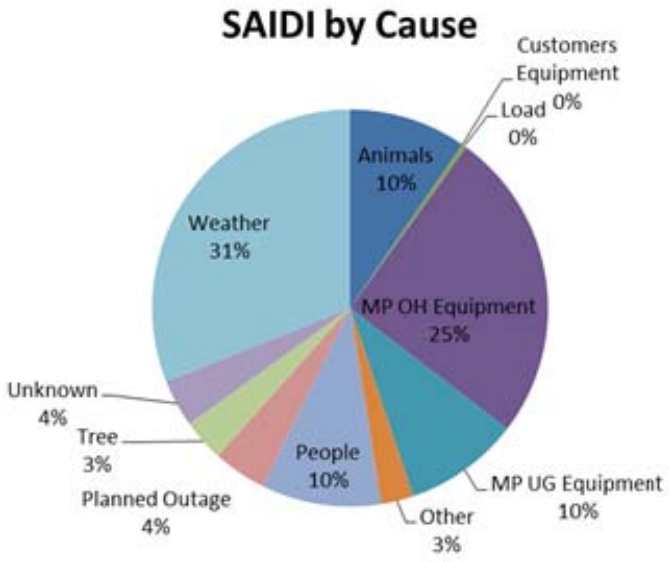
Mutual aid is the cooperation between utilities to provide labor and vehicles to a utility so profoundly affected by outages that it is unlikely they will have the ability to restore power to all of their customers within four to seven days. A robust protocol has been developed between the Midwest Mutual Aid member utilities. Generally a utility calls upon Mutual Aid when they face a week or more of outage times and multiple weeks of restoration work. To begin the process, Mutual Aid member representatives are contacted via e-mail, text message and finally a call by an interactive voice response unit. Each company has a minimum of two (and most have three) Mutual Aid representatives so attendance by each utility on the conference call is virtually guaranteed. At the beginning of a Mutual Aid call, the moderator references a spreadsheet with all of the utility names and their representatives. The moderator will work utility by utility obtaining and recording system status, utility needs and utility resources. After all of the utilities have reported, the most effective response coordination is formulated and finalized.

The Mutual Aid effort is done at cost for the affected utility. Minnesota Power did not receive any Midwest Mutual Aid group requests in 2014. In the event of a major customer

service disruption event (e.g. ice storm, tornado) within its service territory, Minnesota Power is confident industry assistance is only a conference call away.

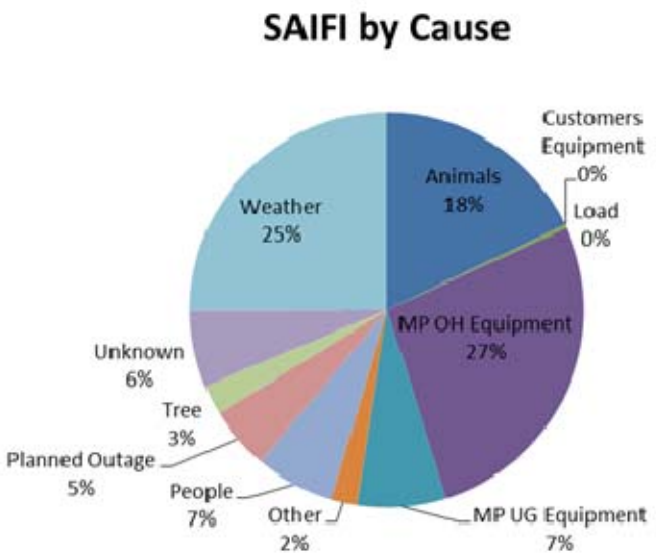
III. RELIABILITY COST MATRIX

Minnesota Power has provided summary information to assist stakeholders in understanding the Company's overall system reliability and the main factors that affect reliability. The Company has prepared charts and graphs in an effort to convey what it believes are the main contributing factors that can impact the long-term reliability metrics of the distribution system. The graphs and charts below show the contributing factors to SAIDI and SAIFI and the relationship between operational performance and cost. The Company strives to provide information in an easily understandable format.



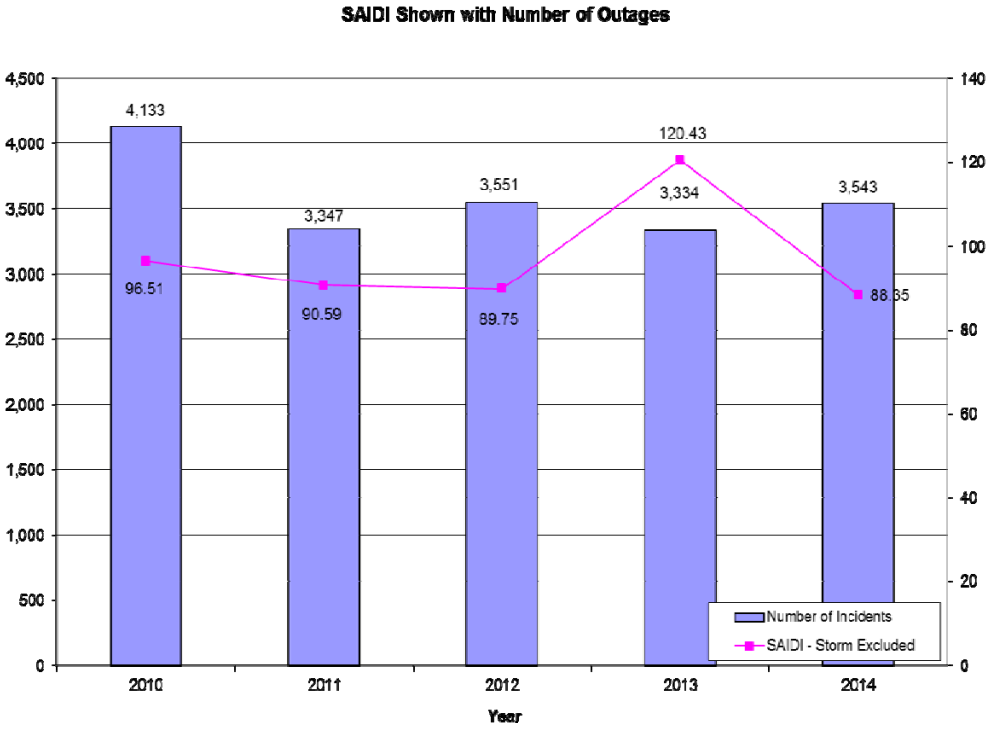
This chart shows the percentage of Company SAIDI reported by each of the identified causes.

OH – Overhead
UG – Underground

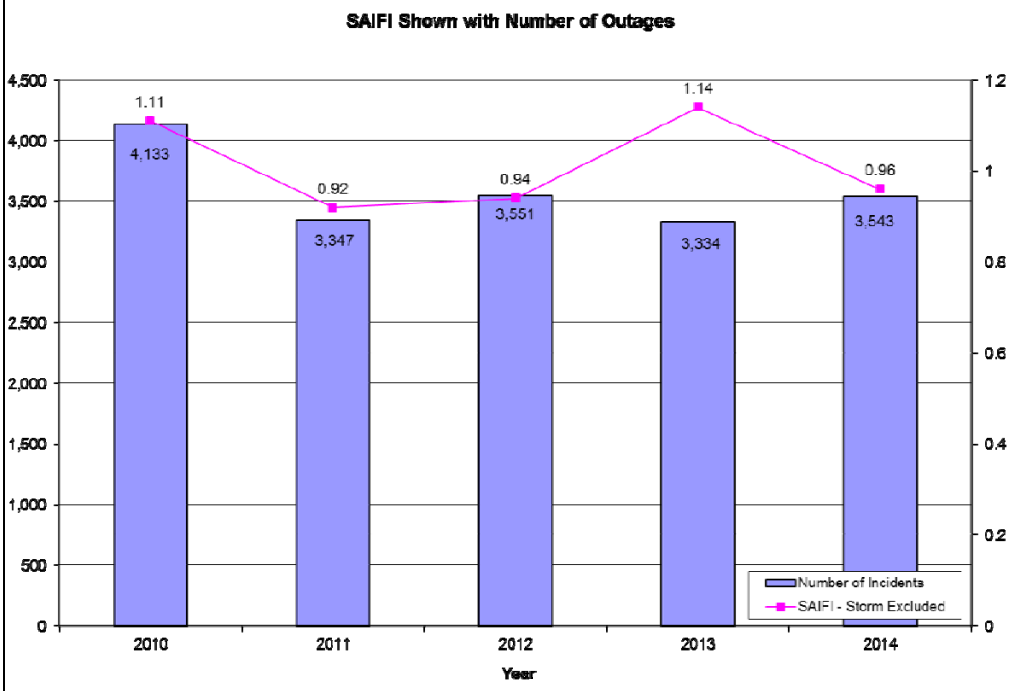


This chart shows the percentage of Company SAIFI reported by each of the identified causes.

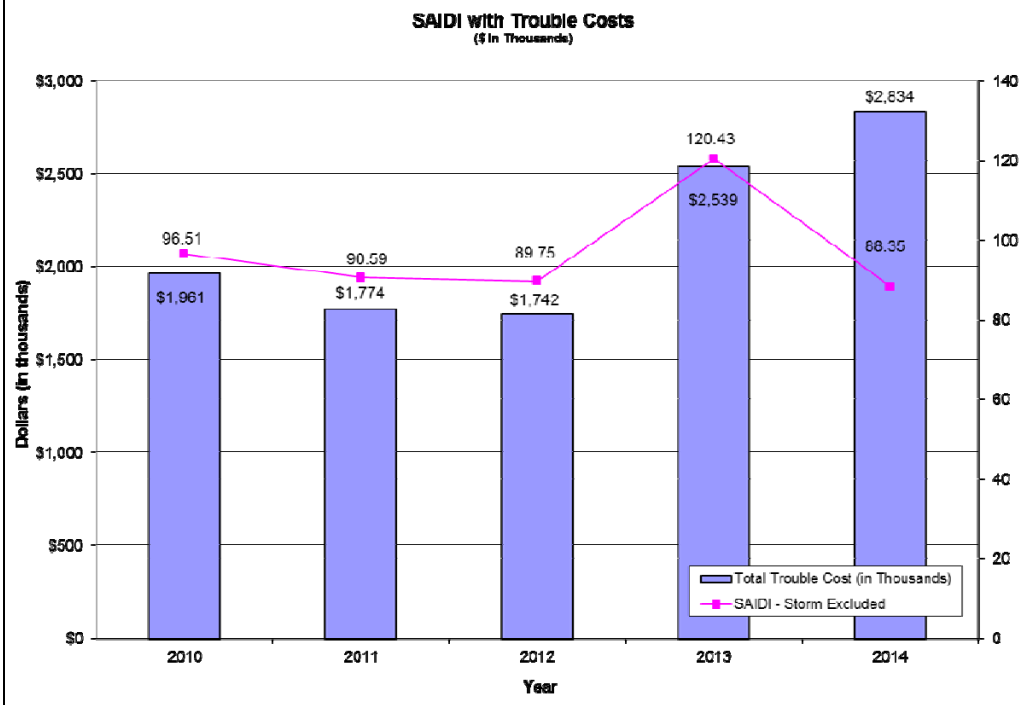
OH – Overhead
UG – Underground



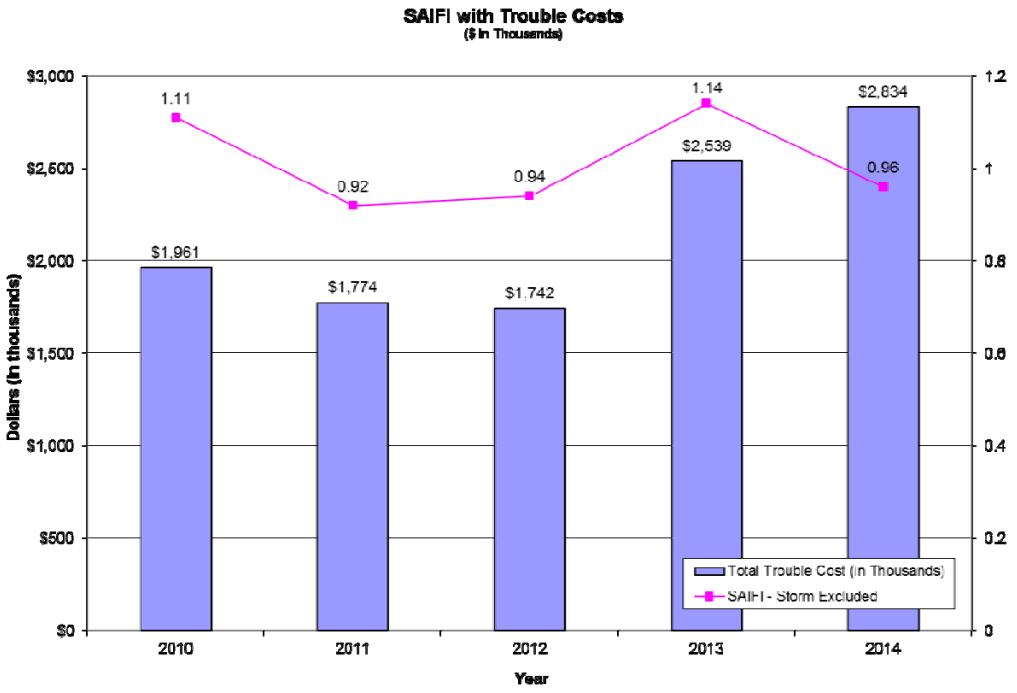
This chart presents the history of SAIDI against Minnesota Power's historic number of outages.



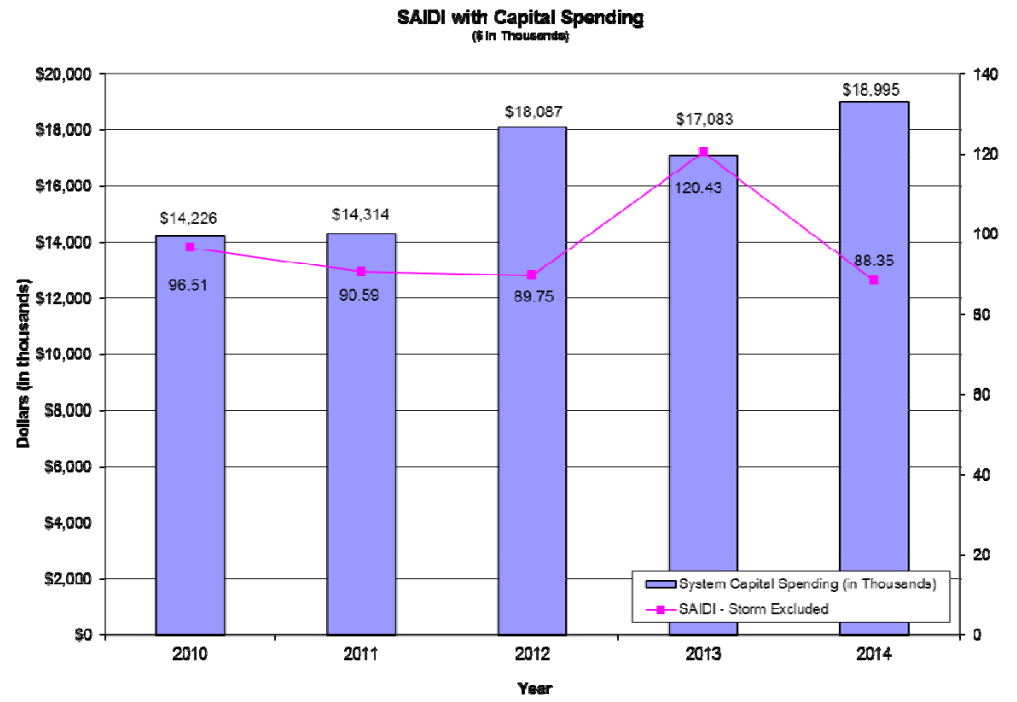
This chart presents the history of SAIFI against Minnesota Power's historic number of outages.



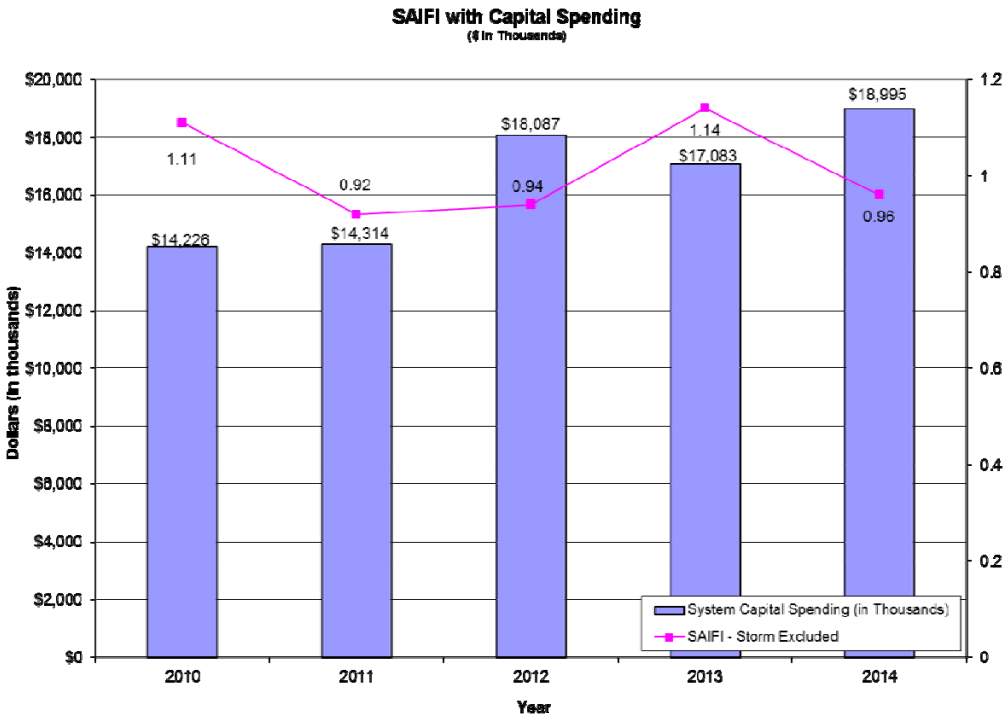
This chart shows historic SAIDI with operation & maintenance dollars spent on trouble calls. (This is unplanned work done without the replacement of capital assets.)



This chart shows historic SAIFI with operation & maintenance dollars spent on trouble calls. (This is unplanned work done without the replacement of capital assets.)



This chart shows historic SAIDI compared to capital dollars spent on distribituion system maintenance and upgrade. (This is generally planned work done to address revenue, system improvements, age related replacements, bulk substation improvements, government mandates and other projects.)



This chart shows historic SAIFI compared to capital dollars invested on distribution system maintenance and upgrade. (This is generally planned work done to address the six catergories presented at the beginning of this section.)

IV. POWER QUALITY

Minnesota Power resolves power quality issues on a case by case basis. When a customer calls with a complaint or questions regarding a power quality issue, Minnesota Power investigates and resolves all problems caused by the Company. In the event of complaints regarding low voltage or high voltage, Minnesota Power will do an investigation of the customer's service and check for loose or overheated connections. If no problem is found or if the problem is intermittent, the Company will install a recording voltmeter. This meter allows for monitoring of the voltage over time and under various customer and system loading conditions. If those recordings demonstrate that the Company is not meeting its prescribed voltage standards, Minnesota Power performs the required maintenance in order to bring the voltage within the limits stated in its Distribution Standards. There are seldom requests from customers for power quality studies. The Company has observed that customers seem to experience fewer power quality issues than in the past. This is most likely due to more robust electronics and the widespread use of battery back-up options.

In 2006, Minnesota Power began a pilot program to install voltage/outage monitoring equipment on primary lines not monitored by its EMS. These were normally lower voltage rural systems served by substations without communications infrastructure. The pilot has grown over the past several years to include other applications including customer sites and some lines that had limited EMS data points. The Company has over 150 monitors active at this time. Minnesota Power is partnered with Sensus-Telemetric and utilizes their monitors that are communicating through a public cellular network (TCP/IP). Sensus-Telemetric hosts the web site where the information is made available to build reports and set up alarms (email messages). Minnesota Power has completed an evaluation to provide Telemetric Voltage Monitors ("TVM-3") alarms to its dispatchers through an interface with the OMS. Sensus Distribution Automation TVM voltage monitors measure line voltage and provide real-time notifications of steady state values, outages and under or over voltage conditions. The TVM-3 provides outage information more rapidly than customer calls. It also confirms when service is restored. When dispatchers get crews to accurate locations more quickly, outage restoration times can be reduced. Improved monitoring of voltages also helps the Company determine the overall condition of the system.

MAIFI

The Momentary Average Interruption Frequency Index ("MAIFI") index provides a measure of the average number of short outages, an interruption of electrical service that Minnesota Power defines as lasting less than five minutes that an average customer experiences in a year. While Minnesota Power has tracked MAIFI statistics for the last decade, it has done so with the knowledge that the Company's MAIFI data collection is and will continue to be incomplete without a significant investment in the technology necessary to enable Minnesota Power to collect and report all momentary outages. The accuracy of the MAIFI index will increase as incident tracking technologies continue to develop and are deployed across the distribution system. The Company continues to evaluate the cost of implementation versus the potential benefits. Unfortunately, as the capability to collect momentary information improves, the performance trend of the statistics may likely appear to degrade.

Momentary outage data is collected a few ways. About 30 percent of Minnesota Power's systems report through SCADA[18] The remaining data is collected manually. Some is collected to satisfy a customer request, and some is collected when device maintenance is done. The rest is collected in the OMS from customer phone calls reporting a brief interruption. The data collected for 2014 has been provided in the summary table on Page 31.

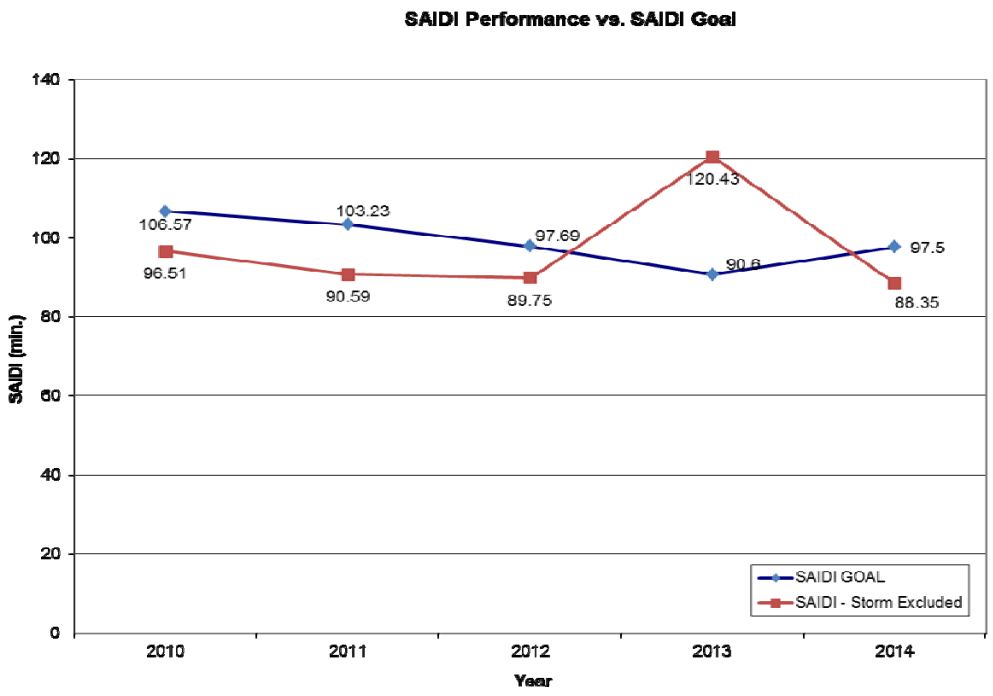
[18] Supervisory Control and Data Acquisition "SCADA" A system of remote control and telemetry used to monitor and control the electrical system.

V. MINNESOTA POWER 2014 SUMMARY GRAPH AND SYSTEM MAPS

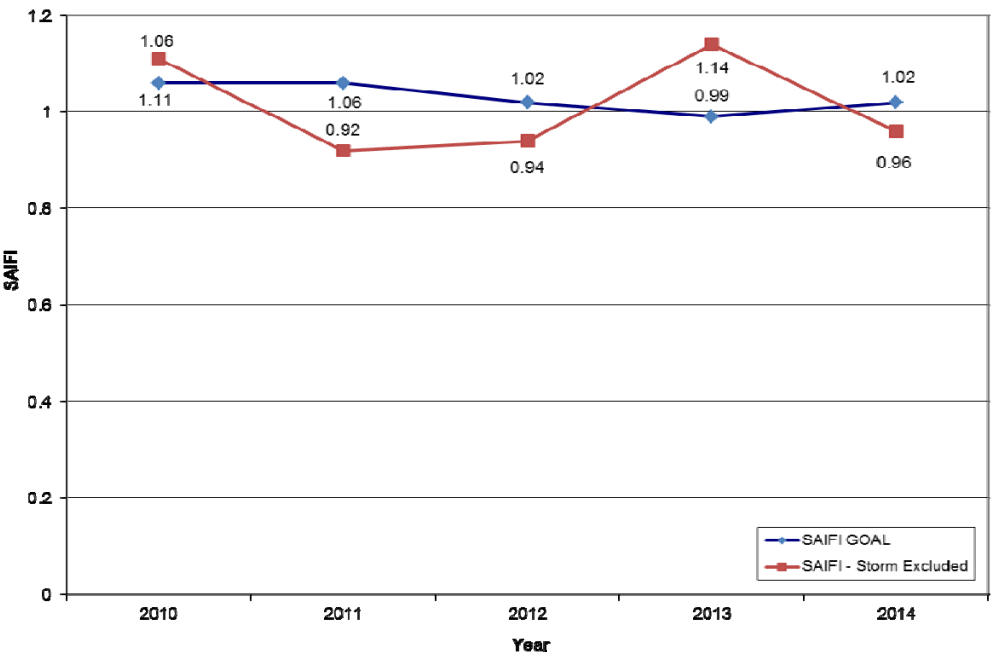
Minnesota Power is committed to maintaining safe, reliable and cost effective electricity service. Minnesota Power strives to provide the quality of service customers require. Further details on 2014 performance results are contained in the remaining pages of this report beginning with graphs of the safety, reliability and service quality issues which impact Minnesota Power's customers. Each graph contains a brief explanation of the indices. The graphs shown are:

- SAIDI Performance vs. SAIDI Goal
- SAIFI Performance vs. SAIFI Goal
- 5 yr. Historic SAIDI and SAIFI
- 5 yr. Historic CAIDI Values
- MAIFI – Momentary Average Interruption Frequency Indices
- Distribution Vegetation Management Budget vs. Actual Investment
- Total Company Vegetation Management Budget vs. Actual Investment
- Percentage of Calls Answered in 20 Seconds
- Customer Complaints
- Number of Lineworkers Available for Trouble Calls

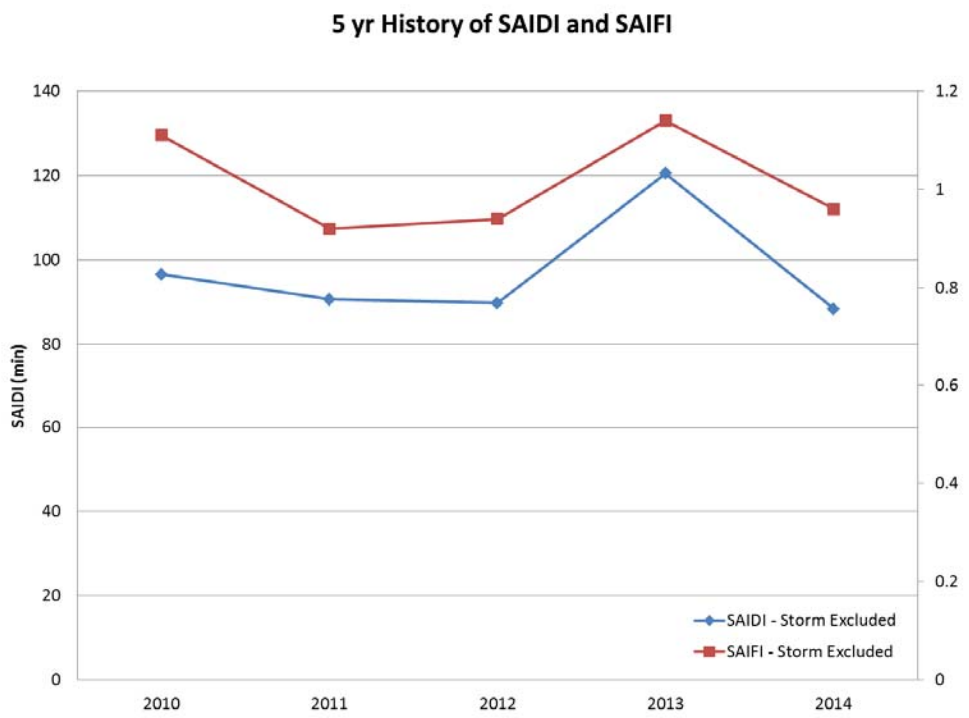
Current year details of this data are available within the full 2014 Report. Previous year details are available in their respective Reports.



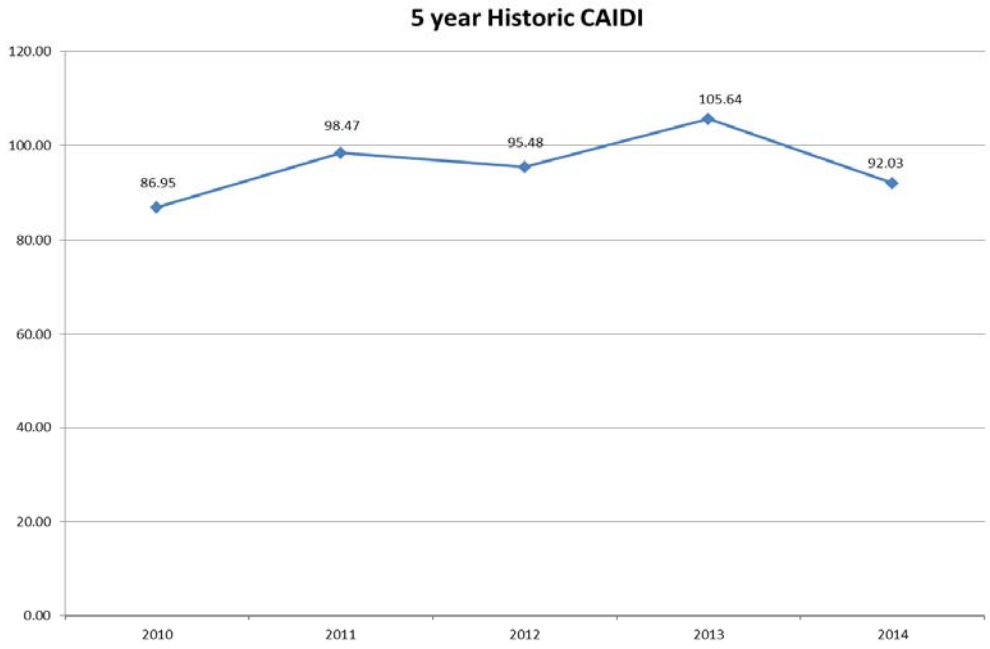
SAIDI is the System Average Interruption Duration Indice. SAIDI provides the duration, in minutes, of the average time customers are interrupted.



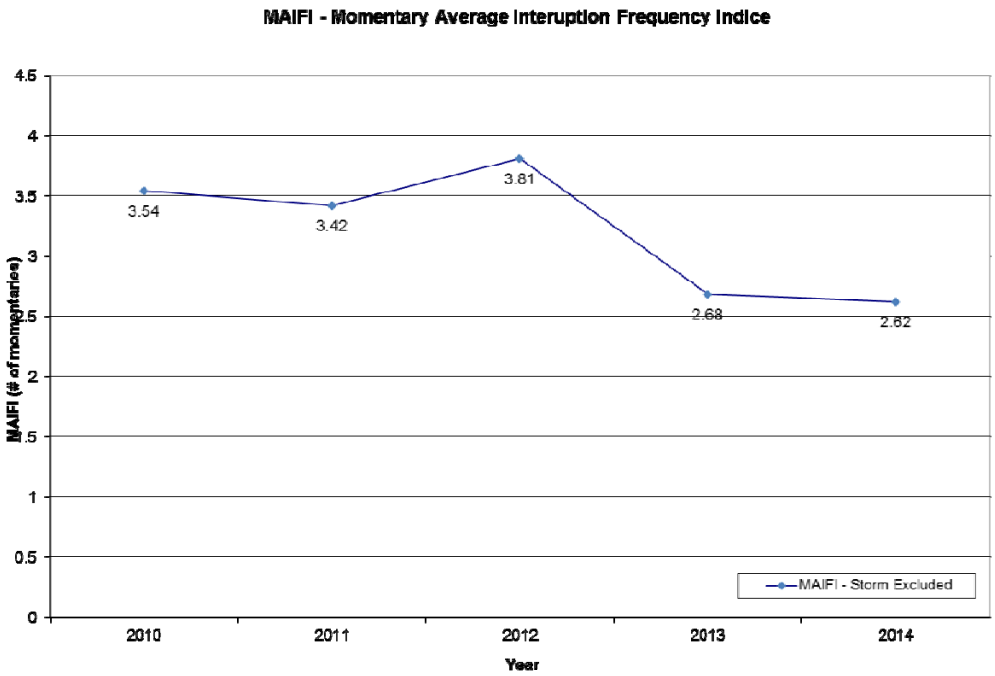
SAIFI is the System Average Interruption Frequency Indice. SAIFI provides the frequency of sustained power outages (longer than five minutes) experienced by the average customer.



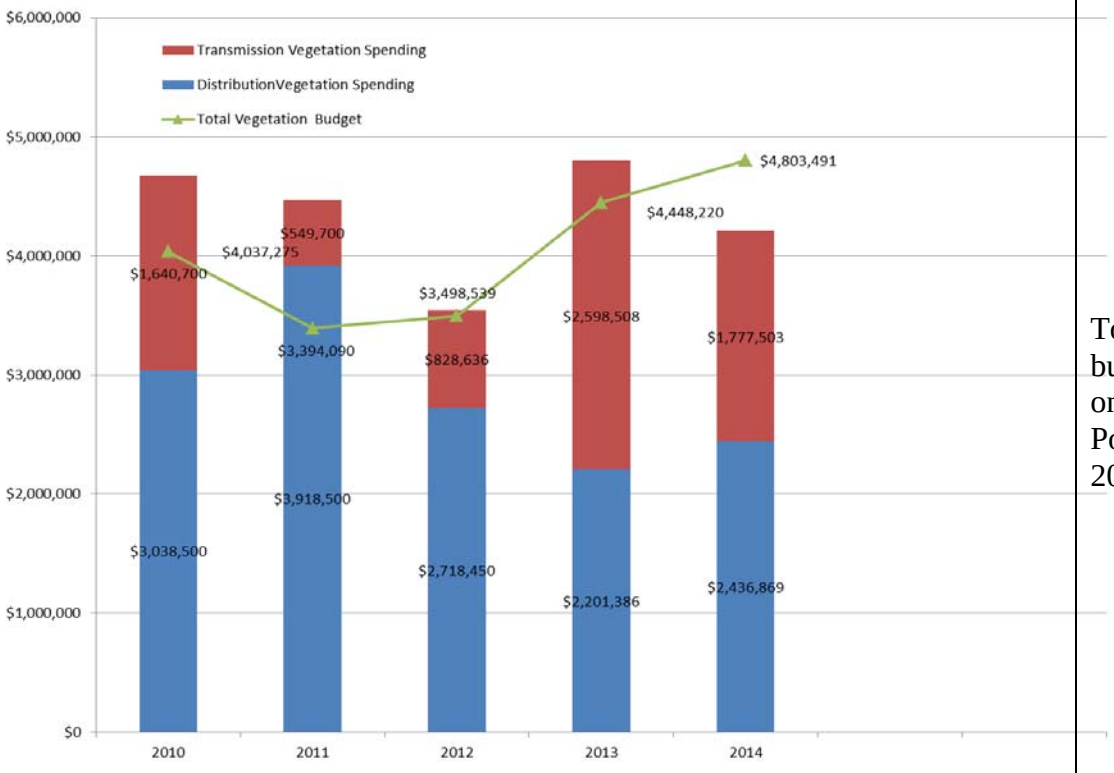
SAIFI is an indication of how many outages an average customer experiences and SAIDI is an indication of how long the average customer is without power.



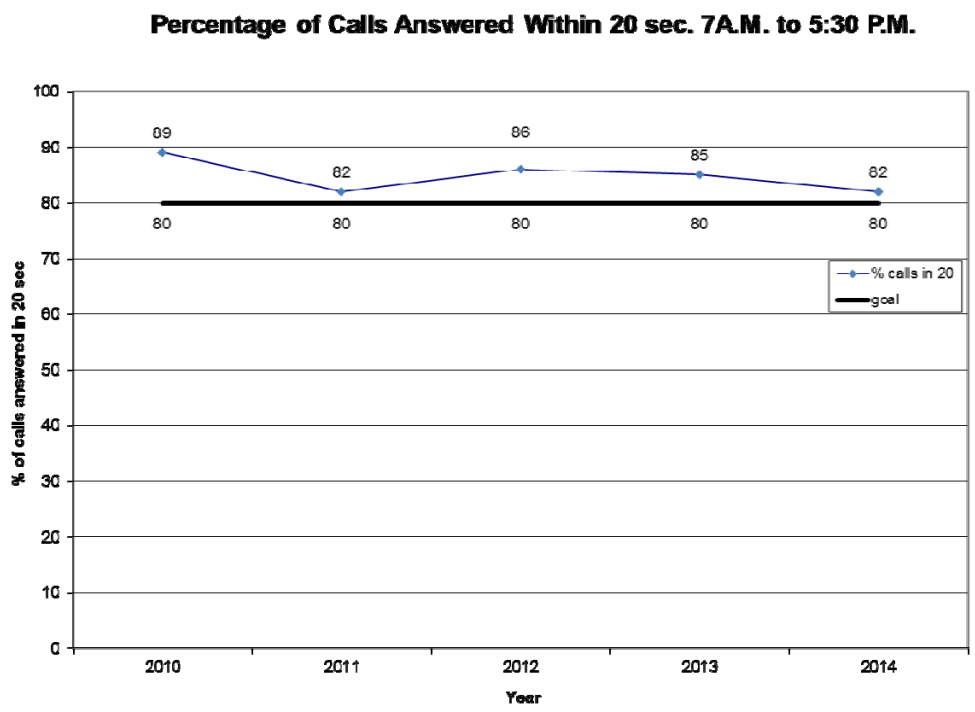
CAIDI is derived by dividing SAIDI by SAIFI. The statistic generally speaks to the amount of time needed to respond to an outage.



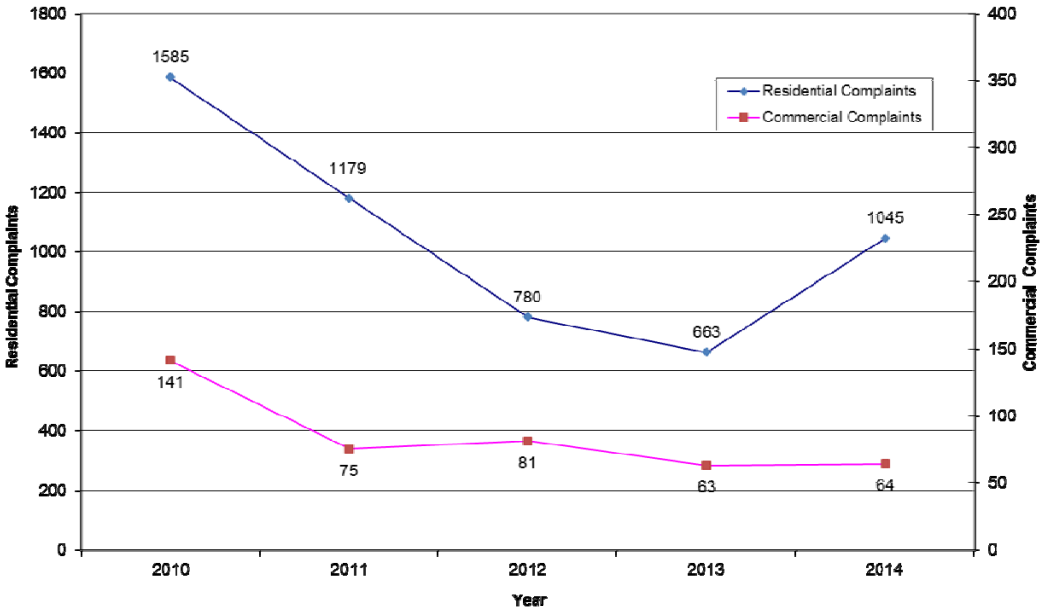
MAIFI is the Momentary Average Interruption Frequency Indices.



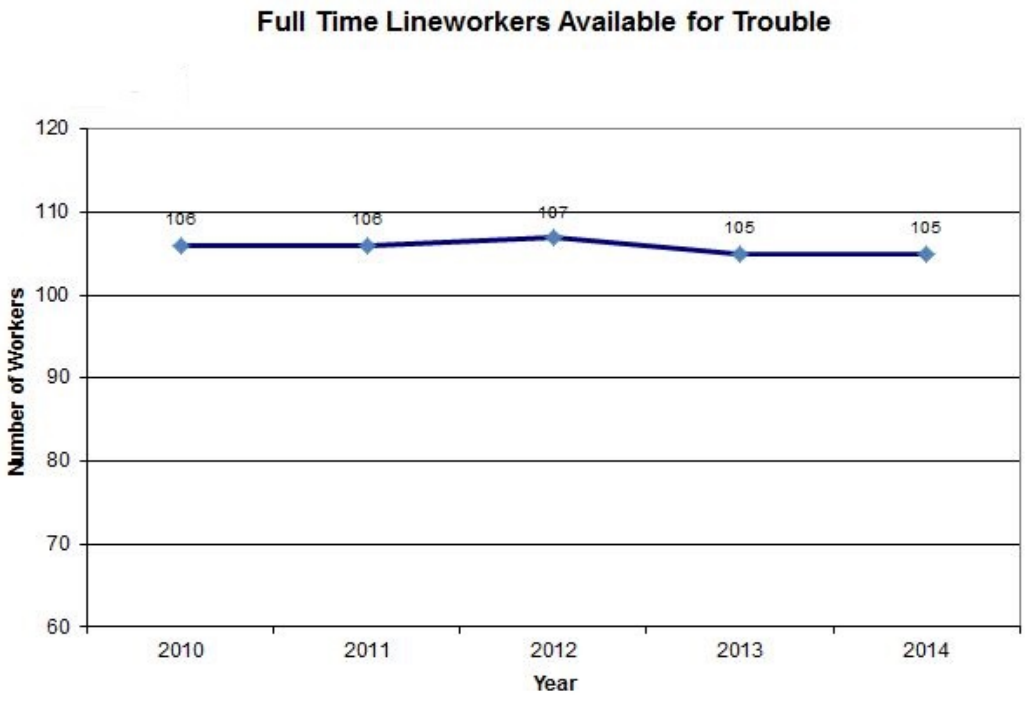
Total vegetation budget and spending on the Minnesota Power's system for 2014.



Answering a call in 20 seconds generally equates to three rings. The goal is 80 percent of calls answered in 20 seconds.

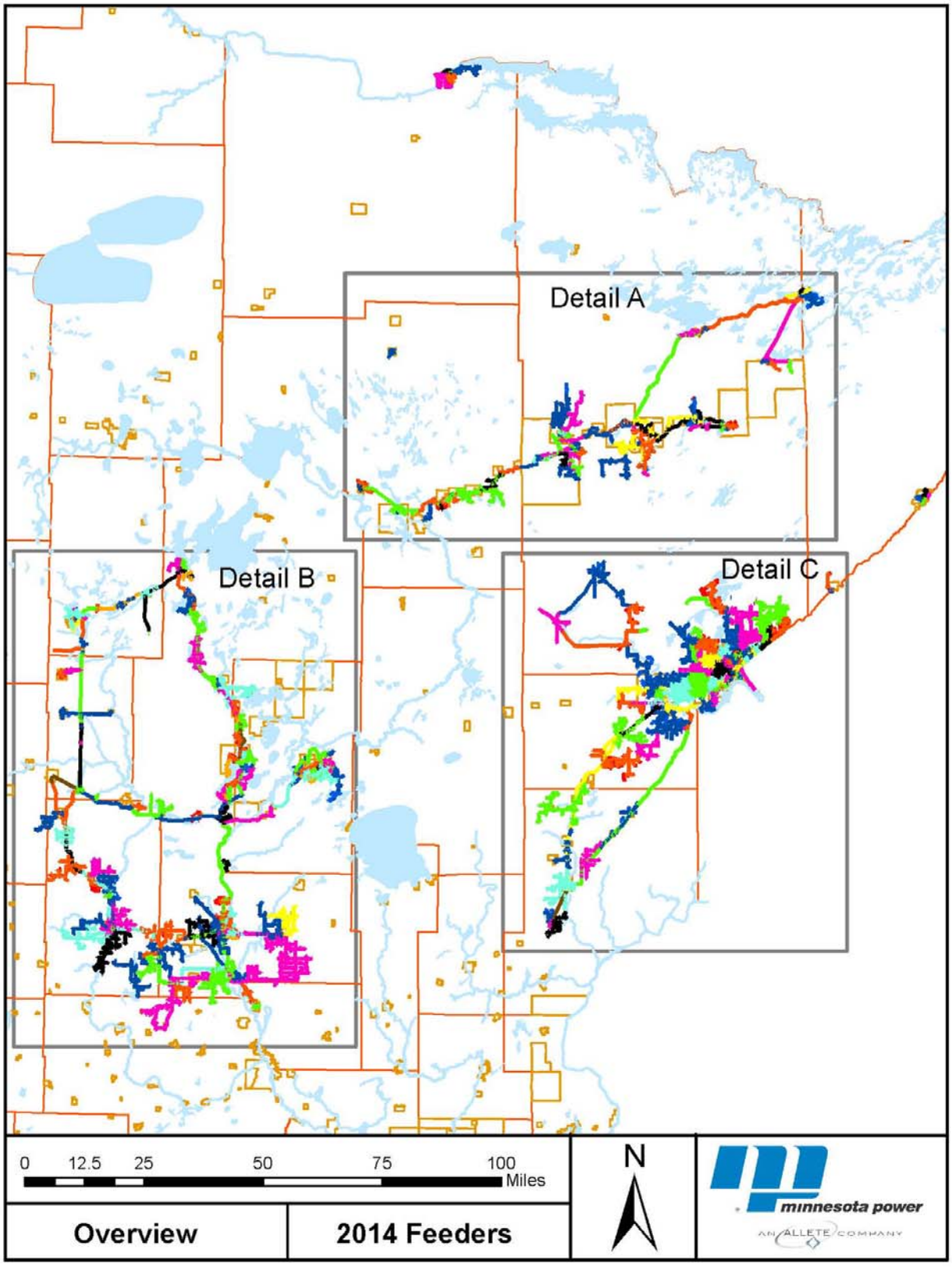


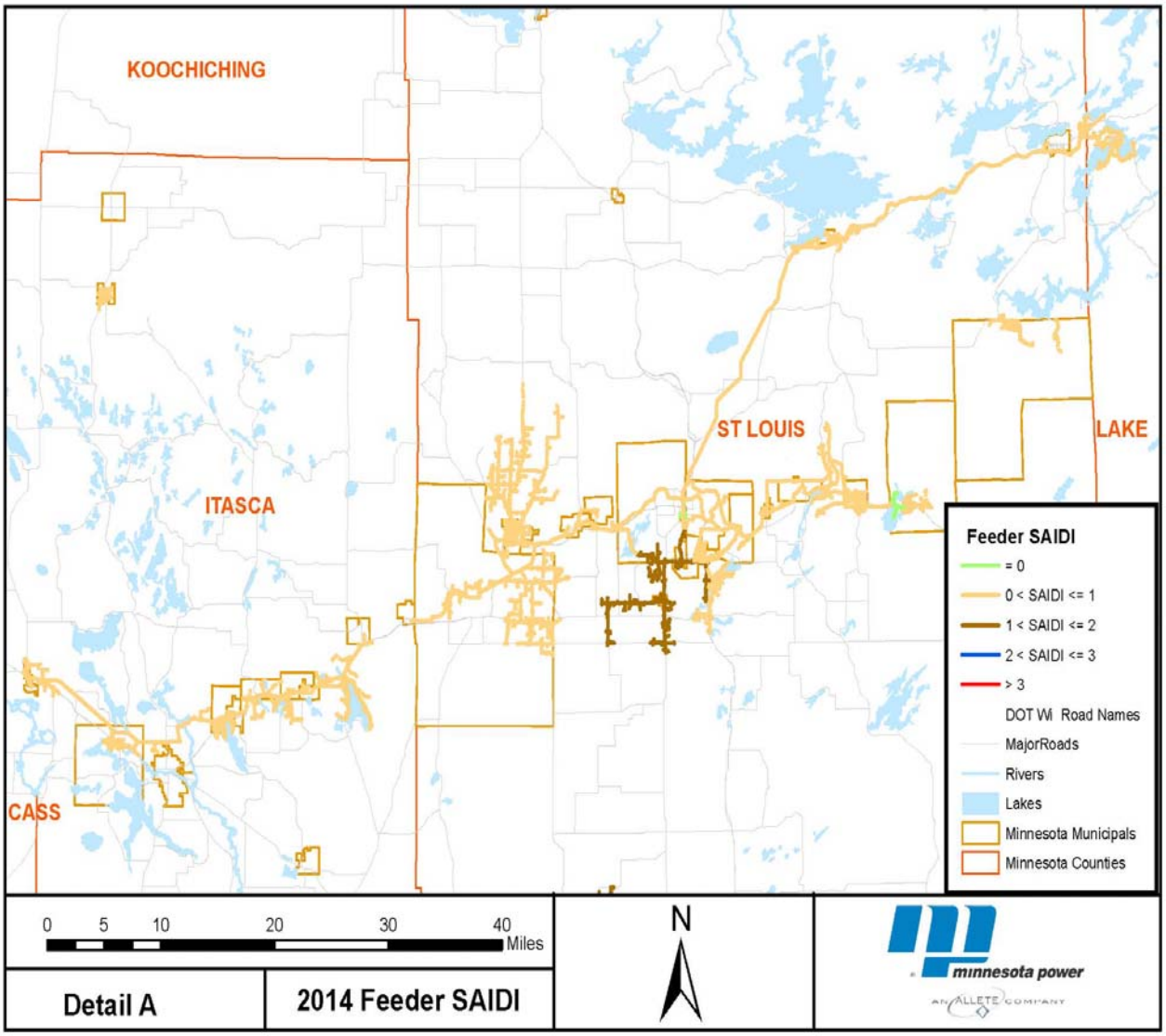
Customer complaints are generally tracked for potential billing errors, possible inaccurate metering, wrongful disconnection, service extension intervals, service restoration intervals as well as other issues.

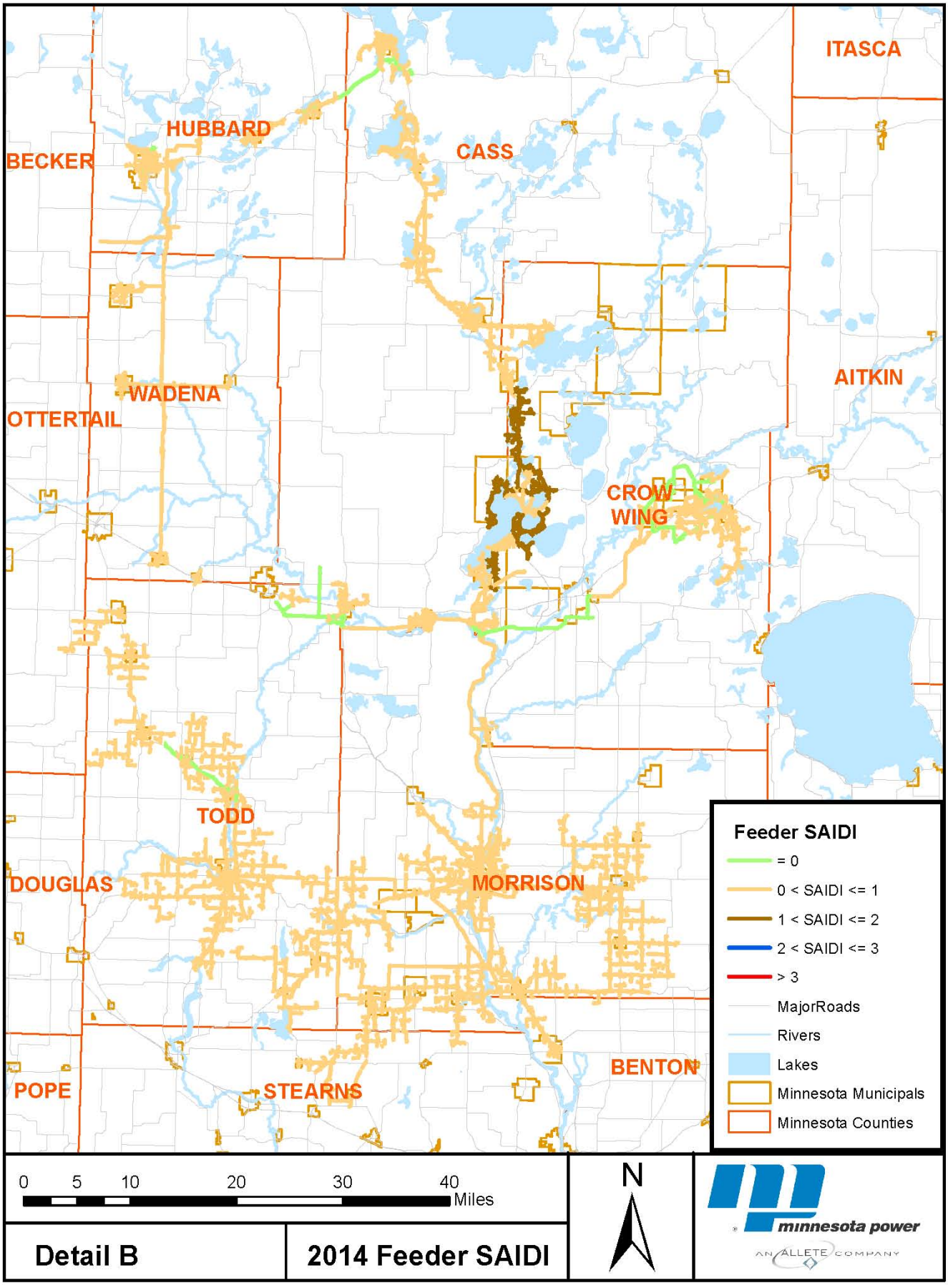


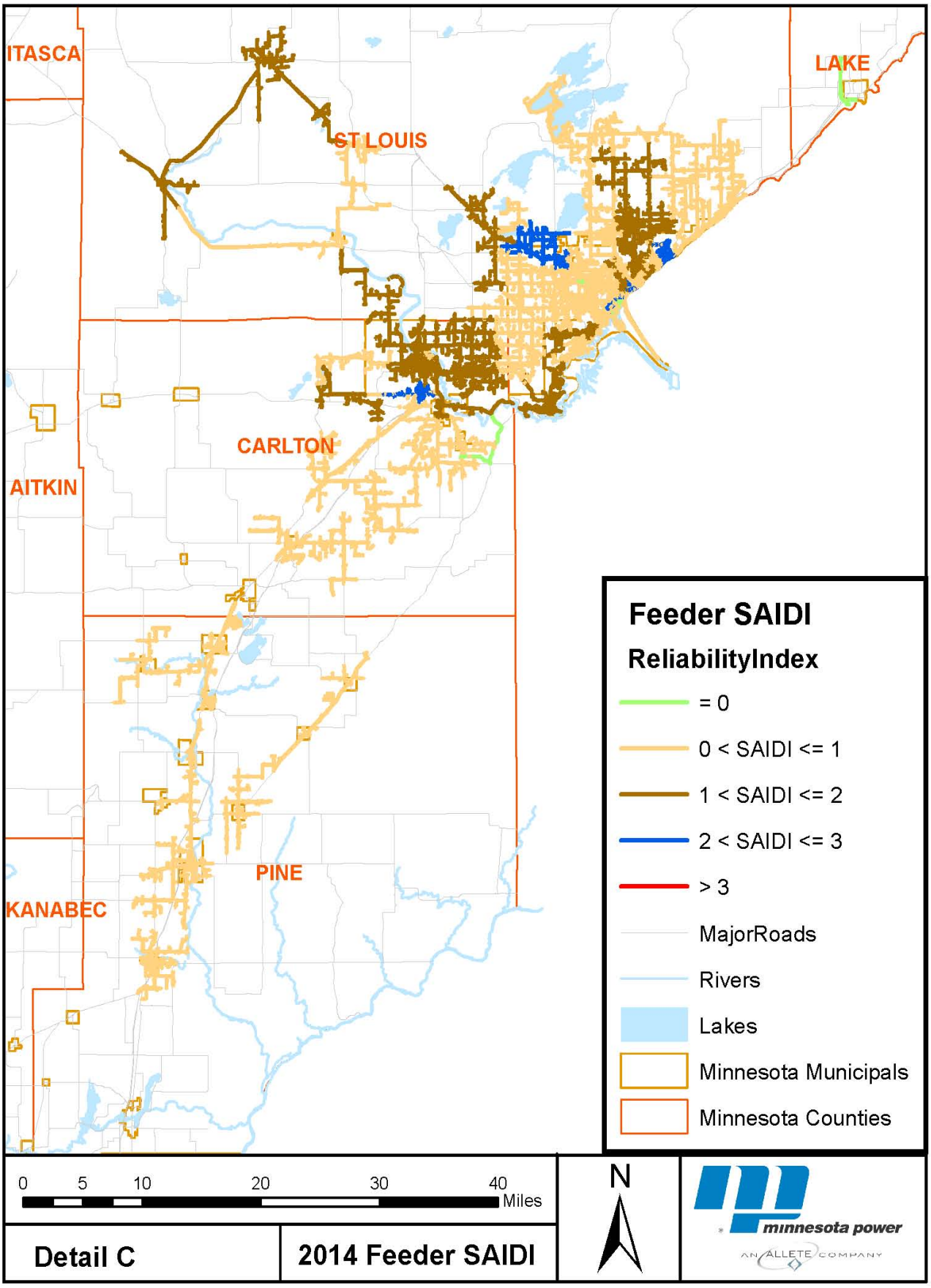
Minnesota Power had 105 full-time equivalent employees in Field Operations during 2014.

There are four maps presented below. The first is a "Key Map" and shows the entire Minnesota Power service territory. Adjoining feeders are displayed in different colors to give an idea of how many circuits there are and to what degree they are divided. There are approximately 300 circuits in the Minnesota Power distribution system. Due to space limitation, the feeders are not shown at optimal resolution. The three maps following the "Key Map" are three separate maps which show in minutes how much SAIDI each feeder has contributed to the overall company SAIDI. They are broken up geographically to make them easier to read.


Detail A
Detail B
Detail C
0 12.5 25 50 75 100
Miles
N
Overview
2014 Feeders
minnesota power
AN ALLETE COMPANY


KOOCHICHING
ITASCA
CASS
ST LOUIS
LAKE
Feeder SAIDI
= 0
0 < SAIDI <= 1
1 < SAIDI <= 2
2 < SAIDI <= 3
> 3
DOT Wi Road Names
MajorRoads
Rivers
Lakes
Minnesota Municipals
Minnesota Counties
0 5 10 20 30 40
Miles
N
Detail A
2014 Feeder SAIDI
minnesota power
AN ALLETE COMPANY


ITASCA
HUBBARD
BECKER
CASS
AITKIN
WADENA
OTTERTAIL
CROW WING
TODD
DOUGLAS
MORRISON
BENTON
POPE
STEARNS
Feeder SAIDI
= 0
0 < SAIDI <= 1
1 < SAIDI <= 2
2 < SAIDI <= 3
> 3
MajorRoads
Rivers
Lakes
Minnesota Municipals
Minnesota Counties
0 5 10 20 30 40
Miles
N
minnesota power
AN ALLETE COMPANY
Detail B
2014 Feeder SAIDI


ITASCA
ST LOUIS
LAKE
CARLTON
AITKIN
PINE
KANABEC
Feeder SAIDI
ReliabilityIndex
= 0
0 < SAIDI <= 1
1 < SAIDI <= 2
2 < SAIDI <= 3
> 3
MajorRoads
Rivers
Lakes
Minnesota Municipals
Minnesota Counties
0 5 10 20 30 40
Miles
N
minnesota power
AN ALLETE COMPANY
Detail C
2014 Feeder SAIDI

Minnesota Power's Safety, Reliability and Service Quality Standards Report-Annual Safety Reporting in compliance with Docket No. E-999/R-01-1671.

Table of Contents:

ANNUAL SAFETY REPORT

7826.0400

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

Number of Cases

Total number of deaths	Total number of cases with days away from work	Total number of cases with job transfer or restriction	Total number of other recordable cases
0	3	8	10

Number of Days

Total number of days of job transfer or restriction	Total number of days away from work
267	26

Injury and Illness Types

Injuries	Skin disorders	Respiratory conditions	Poisonings	All other illnesses
21	0	0	0	0

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

There were no incidents in 2014 in which injuries requiring medical attention occurred as a result of downed wires or other electrical system failures

A listing of all incidents in which property damage resulting in compensation occurred as a result of downed wires or other electrical system failures and the remedial actions taken is included in the following table:

Date of Claim	Name	Cause of Damage	Paid	Remedial Action
1/1/2014	Wilt, Dave	Work Procedure	637.50	Reimbursement Made for Damages Incurred
1/20/2014	Teige, Laura	Work Procedure	1,278.81	Reimbursement Made for Damages Incurred
2/13/2014	Enterprise	Vehicle Damage	930.62	Reimbursement Made for Damages Incurred
2/20/2014	Butler, Pat	Work Procedure	248.91	Reimbursement Made for Damages Incurred
3/7/2014	Interstate Batteries	Vehicle Damage	585.94	Reimbursement Made for Damages Incurred
3/8/2014	Enterprise	Vehicle Damage	525.65	Reimbursement Made for Damages Incurred
4/3/2014	Enterprise	Vehicle Damage	786.38	Reimbursement Made for Damages Incurred
4/9/2014	Enterprise	Vehicle Damage	1,372.30	Reimbursement Made for Damages Incurred
4/9/2014	Enterprise	Vehicle Damage	660.94	Reimbursement Made for Damages Incurred
4/22/2014	Enterprise	Vehicle Damage	2,689.84	Reimbursement Made for Damages Incurred
4/28/2014	Veenhuis, Gerald & Sharon	Work Procedure	150.00	Reimbursement Made for Damages Incurred
5/15/2014	Enterprise	Vehicle Damage	932.59	Reimbursement Made for Damages Incurred
5/27/2014	Roth, Brian (Corbea Farms)	Work Procedure	500.00	Reimbursement Made for Damages Incurred
6/1/2014	Schuster, Diane	Work Procedure	70.00	Reimbursement Made for Damages Incurred
6/1/2014	Black, Milton	Miscellaneous Equipment Failure	1,592.44	Reimbursement Made for Damages Incurred
6/11/2014	Heidrich, Anton	Work Procedure	2,250.30	Reimbursement Made for Damages Incurred
6/15/2014	Mayry, Roger	Work Procedure	1,185.40	Reimbursement Made for Damages Incurred
6/15/2014	Benson, Rob	Miscellaneous Equipment Failure	925.74	Reimbursement Made for Damages Incurred
6/25/2014	Hibbing Park Hotel	Work Procedure	1,780.00	Reimbursement Made for Damages Incurred
8/7/2014	Enterprise	Vehicle Damage	557.64	Reimbursement Made for Damages Incurred
9/1/2014	Leblanc, Roger	Work Procedure	6,612.00	Reimbursement Made for Damages Incurred
10/1/2014	Rensted, Jay	Work Procedure	190.32	Reimbursement Made for Damages Incurred
10/25/2014	Ellerbroek, Mark	Miscellaneous Equipment Failure	476.00	Reimbursement Made for Damages Incurred
Total Claims: 23		**Total Payments:**	$26,939.32	

RELIABILITY REPORTING REQUIREMENTS

7826.0500

The utility's SAIDI, SAIFI and CAIDI are calculated using the data excluded by the IEEE 2.5 beta method (data from major event days). Included are the causes of outages occurring on major event days, as well as the outage data using two different methods and detailed explanations of the differences. A major event is excluded based on the 2.5 beta method defined by the IEEE Standard for Distribution Reliability. The normalization process is designed to remove all outage records attributed to a specific, major event such as a large storm. Non-Major Event normalized means that all major events such as a wind storms, ice storms, etc, are included in the reliability calculations. Since there was one excluded event in 2013 these values are different than the Major Event normalized values.

A.

The utility's SAIDI for the calendar year by work center and for its assigned service area as a whole.

SAIDI (in minutes) **2014**	88.35

SAIDI calculated from Major Event Excluded data:

SAIDI (in minutes) **2014**	41.39

Major Event normalized using the IEEE 2.5 Beta method:

SAIDI (in minutes) **2014**	88.35

Non-Major Event normalized:

SAIDI (in minutes) **2014**	129.74

B.

The utility's SAIFI for the calendar year by work center and for its assigned service area as a whole.

SAIFI (# of outages) **2014**	0.96

SAIFI calculated from Major Event Excluded data:

SAIFI (# of outages) **2014**	0.19

Major Event normalized using the IEEE 2.5 Beta method:

SAIFI (# of outages) **2014**	0.96

Non-Major Event normalized:

SAIFI (# of outages) **2014**	1.15

C. *The utility's CAIDI for the calendar year by work center and for its assigned service area as a whole.*

CAIDI (outage min/customer) **2014**	92.49

CAIDI calculated from Major Event Excluded data:

CAIDI (outage min/customer) **2014**	20.68

Major Event normalized using the IEEE 2.5 Beta method:

CAIDI (outage min/customer) **2014**	92.49

Non-Major Event normalized:

CAIDI (outage min/customer) **2014**	113.17

D. *An explanation of how the utility normalizes its reliability data to account for major storms*.

In 2014, there were three major events excluded based on the 2.5 beta method defined by the IEEE Standard for Distribution Reliability. The normalization process is designed to remove all outage records attributed to a specific major event, such as a large storm. At Minnesota Power, normalization is performed only when the following criterion is met for a major event:

Daily SAIDI is greater than the Threshold for Major Event Days:

As storms occur, customers call into Minnesota Power representatives and/or the Interactive Voice Response ("IVR") system to report outages. Those calls are then used to create trouble orders using a prediction engine within our

Outage Management System ("OMS"). That information, along with information from other sources (Operations Log, and Telemetric's emails) is entered into a database for comparison. Often the weather event will have been detected by multiple sources. Duplications are eliminated and an accurate time and duration for each event is calculated.

Once all data streams have been combined and duplications have been eliminated, the resulting database is analyzed by the Reliability Engineer. The database is queried to look for timeframes when the Company SAIDI has incurred an incremental increase above the Threshold for Major Event Days. When sets of data are discovered that meet the criterion discussed above, that data is flagged and set aside. What remains is Minnesota Power's Storm Normalized Data.

Threshold for Major Event Day calculation description:

A Threshold for a major event day (T_{med}) is computed once per year. First, assemble the 5 most recent years of historical values of daily SAIDI and discard any day with a SAIDI value of zero. Then, compute the natural log of each SAIDI value and compute the average (alpha) and standard deviation (beta) of the natural logarithms. The major event day threshold can then be found by using this equation: T_{med} = exp (alpha + 2.5*beta). If any day in the next year has SAIDI greater than T_{med}, it qualifies as a major event day. Note that an excluded event is not limited to a single day and may span consecutive days depending on the severity of the event.

As stated earlier, storm normalization is designed to exclude data from rare, major events that may skew the overall data. Three weather related major events, each spanning one day, were excluded in 2014. There were zero excluded events in 2011. There was one storm excluded event in 2010 that spanned two days. In 2009, there were zero excluded events. There were two storm excluded events in 2008 that met the Threshold for Major Event Day criterion. In 2007, there were two storm excluded events and there were also two events that met the second criteria (10 minutes added to SAIDI), but did not meet the first criteria of affecting at least 12 percent of Minnesota Power's customers. In 2006, two events met the first criteria (12 percent of customers); however none met the second requirement of increasing SAIDI by 10 minutes. Therefore, no events were excluded in 2006. Storm exclusion has followed a similar pattern in previous years. In 2004 and 2002 there were no events excluded. Three events were excluded in 2003 and only one in 2001 and 2005.

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E. *An action plan for remedying any failure to comply with the reliability standards set forth at part 7826.0600 or an explanation as to why non-compliance was unavoidable under the circumstances.*

Minnesota Power was successful in meeting the reliability standards set for SAIDI, SAIFI, and CAIDI for the year 2014.

Minnesota Power used the 2.5 Beta method for excluding storm related outages, which excluded three weather related major events, each spanning one day, in 2014.

F. *To the extent technically and administratively 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.*

9 Line–

- On **June 15, 2014,** storms in the area knocked a tree onto 9L, between the Burnett 88 and Meadowlands 77 switches, causing the 9L breaker at the Cloquet Substation, the 9-151LW and 9-162LW breakers at the Savanna Substation, and the 9L breaker at the Blackberry Substation, to lockout. Crews were able to isolate the outage and restore all customers in an average of 212 minutes. The tree was then removed and 9L was energized to its normal state. No further action is necessary.

23 Line–

- On **September 4, 2014,** a broken cross arm on 23 Line caused the 23L breaker to trip at the Sandstone Substation. Line crews were initially able to restore 464 customers in 82 minutes through switching. The cross arm was replaced and the remaining 256 customers were restored in 219 minutes, energizing 23 Line to its normal state. No further action is necessary.

30 Line–

- On **April 25, 2014,** a broken cross arm between the Aurora 77 and Pineville 77 switches on 30 Line caused the 30L breaker at the Virginia Substation to open. Line crews were able to make repairs to the cross arm and restore all 299 customers after 56 minutes. No further action is necessary.
- On **April 28, 2014,** very windy storms blew a tree onto 30 Line, causing the 30L breaker at the Virginia Substation to open. Line crews were able to isolate the outage, remove the tree, and restore power to all 299 customers after 87 minutes. No further action is necessary.
- On **September 5, 2014,** a bad insulator caused the 30L breaker at the Virginia Substation to open. Line crews were able to isolate the outage through switching, restoring 295 customers in 27 minutes. Crews then made proper repairs and restored the remaining 4 customers after 121 minutes. No further action is necessary.

32 Line–

- On **March 31, 2014,** a broken insulator off of the Ely Sub B tap on 32 Line resulted in the 32L breaker at the Winton H.E. Station to open. Line crews were able to make repairs and restore all 867 customers after 90 minutes. No further action is necessary.

59 Line–

- On **September 4, 2014,** windy conditions in the area knocked a tree branch into 59 Line, causing the breaker, 59L, at the Mahtowa Substation, and 59LM, at the Sandstone Substation, to lock out. Initially crews restored 1,562 customers in 33 minutes and the remaining 2,025 customers in 47 minutes through switching. No further action is necessary.

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

There were 16 reports filed under 7826.0700 during 2014. Please refer to Attachment B for written copies of the reports.

2014 major interruptions affecting 500 or more customers for over an hour

Feeder Id	Communities	Customers Affected	Date/Time off	Date/Time On	Duration	Cause
HIB-308	Hibbing, Chisholm	596	41,655.24	41655.30069	94 MINUTES	Bad breaker inside of Substation.
32 LINE	Ely, Tower, Soudan	851	41,730	41729.9375	134 MINUTES	Unknown, possilby weather.
HIB-308	Hibbing	596	41730.66597	41730.81181	210 MINUTES	308 breaker- relay issue with the physical breaker.
CLQ-412	Cloquet	556	41,758	41757.97292	522 MINUTES	Trees, high wind.
RGV-252	Duluth	2825	41757.70069	41757.75417	77 MINUTES	Tree took down OH primary wire.
9 LINE	Floodwood, Meadowlands	1223	41805.64583	41805.75278	212 MINUTES	Tree on transmission line.
INF-3	I-Falls	1070	41819.75208	41819.79722	65 MINUTES	Trees, storms.
Gary-200, 201	Duluth	2727	41,834	41834.15069	94 MINUTES	Bad breaker within sub.
NPS-1	Nisswa	549	41,842	41842.74444	1127 MINUTES	Many broken poles, conductor down. Severe damage to feeder.
SLA-250	Duluth	2498	41,842.06	41842.12292	97 MINUTES	Tree on wire near Highland Pumps 88
VRG-311	Mountain Iron, Iron, Eveleth	908	41,847	41847.33403	133 MINUTES	Tree branch.
LFL-526	Pierz, Little Falls, Lastrup	893	41875.22083	41875.28194	88 MINUTES	Lightning.
BAX-534	Baxter, Gull Lake	1,316	41,886	41886.51875	341 MINUTES	Broken insulator and tree on feeder.
FCS-214	Canosia, Pike Lake, Air Park	1358	41919.39583	41919.44097	65 MINUTES	Vehicle struck 3phase pole.
TMS-412	Thomson	545	41942.93819	41943.00972	197 MINUTES	Beaver took down tree between Thomson and Fon du Lac power houses.
RGV-254	Duluth	2119	41993.28472	41993.33125	67 MINUTES	Regulator fire at 10th Ave E and 3rd sub.

H. *To the extent technically feasible, circuit interruption data, including identifying the worst performing circuit in each work center, stating the criteria the utility used to identify the worst performing circuit, stating the circuit's SAIDI, SAIFI, and CAIDI, explaining the reasons that the circuit's performance is in last place, and describing any operational changes the utility has made, is considering, or intends to make to improve its performance.*

Section H requires that Minnesota Power report on the Company's worst performing circuit for each work center. Since Minnesota Power considers our entire service area a single work center, this would result in only one circuit being reported. As in the past, rather than listing only one feeder, the four worst performing feeders (2 urban and 2 rural) are identified. This is done in recognition of how reliability indices are affected by differing characteristics of feeder length and quantity of customers.

The feeder evaluation process utilized high feeder SAIDI and high total customer-minutes of outage (i.e. # customers X SAIDI) as criteria for selection of two urban and two rural feeders.

Worst Performing Feeders Using Major Event Normalized Data

Criteria	Circuit	Customers Affected	SAIDI	SAIFI	CAIDI
High Feeder SAIDI (Urban)	Stuntz, N of Wilpen Bridge	54	1,090.13	6.24	174.7
High Customer Outage Minutes (Urban)	15th Ave. W. 223	1,986	519,096	1.09	239.8
High Feeder SAIDI (Rural)	Sawyer 6311	357	715.22	5.92	120.81
High Customer Outage Minutes Rural)	Four Corners 214	1,372	278,732	2.17	93.62
High Feeder SAIDI (Urban)	15th Ave. W. 231	64	606.31	2.3	263.61
High Customer Outage Minutes (Urban)	Colbyville 242	2470	282.3	3.17	89.05
High Feeder SAIDI (Rural)	Mahtowa 6411	531	691.8	2.95	234.51
High Customer Outage Minutes (Rural)	Sandstone 6531	1235	543,429	1.21	364.72

Stuntz, N of Wilpen Bridge

Major Outage Events:

- **January 16, 2014** – The Hibbing 308F breaker failed, which resulted it to lockout.
  - Crews were able to switch all customers onto Hibbing 315 feeder, which restored all power, so crews could make repairs.
- **April 1, 2014** – A fuse for the heating unit in the Hibbing 308F breaker blew resulting in the 308F breaker to lockout and it could not reclose.
  - Crews replaced the fuse, tested the breaker, and restored all power.
- **April 29, 2014** – An insulator failed on Hibbing 308 feeder causing crews to deenergize between Stunz 77 and Fraiser 88.
  - Crews replaced the insulator and all power was restored.
- **July 11, 2014** – A conductor fell in Hibbing 308, causing the 308F breaker to lockout.
  - Crews repaired the conductor and restored all power.
- **August 7, 2014** – Cutouts failed in the Hibbing 308 feeder, causing the 308F breaker to lockout.
  - Crews replaced the cutouts and restored all power.
- **September 4, 2014** – A tree fell onto Hibbing 308 feeder, during a very windy storm, causing the 308F breaker to lockout.
  - The tree was removed from the line, repairs were made, and all power was restored.

15th Ave. W. 223

Major Outage Events:

- **January 26, 2014** – A vehicle hit a pole causing the 223F breaker to lockout.
  - Some customers were restored through sectionalizing, the pole was replaced, and all power was restored to the remaining customers.

Sawyer 6311

Major Outage Events:

- **March 10, 2014** – The Scanlon 420F breaker tripped for an unknown reason.
  - Crews patrolled the entire feeder to find no evidence of anything wrong, so all power was restored.
- **April 28, 2014** – A tree fell onto Scanlon 420 during a very windy storm, causing the 420F breaker to lockout.
  - The tree was removed from the line, repairs were made, and all power was restored.
- **June 18, 2014** – The 1H recloser at the Scanlon Hydro Electric Station had a mechanical failure, causing the Scanlon 420F breaker to lockout.
  - Crews were able isolate the bad recloser and restored all power.
- **October 30, 2014** – A beaver took down a tree onto Thomson 412 feeder between the Thomson and Fond Du Lac power stations, causing the 412F breaker to lockout.
  - The tree was removed from the line, repairs were made, and power was restored.

- **November 8, 2014** – Windy storms knocked a tree onto Thomson 412 feeder, causing the 412F breaker to lockout.
    - Crews were able to isolate the cause of the outage and restore all power through switching.

Four Corners 214

Major Outage Events:

- **April 1, 2014** – A bad arrester on GRE's 115/69kV transformer resulted in the 129L breaker to open, affecting all customers fed out of Four Corners substation.
    - The bad arrester was replaced and power was restored.
- **October 7, 2014** – A contractor driving a dump truck hit a pole, resulted in the 214F breaker to lockout.
    - Some customers were restored through sectionalizing, the pole was replaced all power was restored to the remaining customers.

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.*

There were 9 reported instances in 2014.

Date	Account	Trouble Order
5/29/2014	1416261600	217566
5/29/2014	1716261402	217570
5/29/2014	234808	217583
5/29/2014	1516161510	217588
7/22/2014	161317312	222900
7/22/2014	1719185410	223087
9/27/2014	91452	235017
9/27/2014	1119179491	235017
9/27/2014	157026	235032

Due to a recent large changeover in staff, along with a conversion of our outage management system, some of the instances exceeding the ANSI standard were not recorded properly. Minnesota Power is currently reviewing and modifying the documentation methods and will have accurate statistics to report for 2015.

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

Minnesota Power had 105 full-time equivalent field employee positions in 2014 responsible for responding to trouble calls and for the operation and maintenance of distribution lines.

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

Minnesota Power has no additional information to report at this time.

RELIABILITY STANDARDS

7826.0600
Subpart 1

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

Minnesota Power proposes the following weather-excluded reliability indices as targets not to exceed in 2014:

SAIDI = 97.13
SAIFI = 1.01
CAIDI = 96.17

- The SAIDI target is calculated as an average of the last five years of actual SAIDI performance.
- The SAIFI target is calculated as an average of the last five years of actual SAIFI performance.
- The CAIDI target is calculated as SAIDI divided by SAIFI.

REPORTING METER-READING PERFORMANCE

7826.1400

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

A. *The numbers and percentages of customer meters read by utility personnel.*

Residential

Month	Co. Reads	Est	Total	% Read	System Total	% Read of System Total
Jan-14	106,422	8,409	114,831	**92.68%**	146,397	**72.69%**
Feb-14	112,495	2,331	114,826	**97.97%**	146,319	**76.88%**
Mar-14	113,405	1,425	114,830	**98.76%**	146,322	**77.50%**
Apr-14	113,211	1,611	114,822	**98.60%**	146,341	**77.36%**
May-14	113,282	1,567	114,849	**98.64%**	146,395	**77.38%**
Jun-14	117,378	949	118,327	**99.20%**	146,508	**80.12%**
Jul-14	112,420	2,525	114,945	**97.80%**	146,613	**76.68%**
Aug-14	113,676	1,323	114,999	**98.85%**	146,666	**77.51%**
Sep-14	113,107	1,932	115,039	**98.32%**	146,802	**77.12%**
Oct-14	117,665	1,002	118,667	**99.16%**	146,905	**80.10%**
Nov-14	113,428	1,700	115,128	**98.52%**	146,978	**77.17%**
Dec-14	113,728	882	114,610	**99.23%**	146,985	**77.37%**
2014 Avg	113,351	2,138	115,489	**98.14%**	146,603	**77.32%**

Commercial

Month	Co. Reads	Est	Total	% Read	System Total	% Read of System Total
Jan-14	18,714	995	19,709	**94.95%**	146,397	**12.78%**
Feb-14	19,129	583	19,712	**97.04%**	146,319	**13.07%**
Mar-14	19,329	388	19,717	**98.03%**	146,322	**13.21%**
Apr-14	19,366	361	19,727	**98.17%**	146,341	**13.23%**
May-14	19,286	460	19,746	**97.67%**	146,395	**13.17%**
Jun-14	19,447	325	19,772	**98.36%**	146,508	**13.27%**
Jul-14	19,236	571	19,807	**97.12%**	146,613	**13.12%**
Aug-14	19,492	361	19,853	**98.18%**	146,666	**13.29%**
Sep-14	19,401	492	19,893	**97.53%**	146,802	**13.22%**
Oct-14	19,690	262	19,952	**98.69%**	146,905	**13.40%**
Nov-14	19,567	425	19,992	**97.87%**	146,978	**13.31%**
Dec-14	19,433	225	19,658	**98.86%**	146,985	**13.22%**
2014 Avg	19,341	454	19,795	**97.71%**	146,603	**13.19%**

Industrial

Month	Co. Reads	Est	Total	% Read	System Total	% Read of System Total
Jan-14	444	9	453	**98.01%**	146,397	**0.30%**
Feb-14	450	3	453	**99.34%**	146,319	**0.31%**
Mar-14	450	3	453	**99.34%**	146,322	**0.31%**
Apr-14	449	3	452	**99.34%**	146,341	**0.31%**
May-14	442	11	453	**97.57%**	146,395	**0.30%**
Jun-14	448	7	455	**98.46%**	146,508	**0.31%**
Jul-14	444	9	453	**98.01%**	146,613	**0.30%**
Aug-14	449	4	453	**99.12%**	146,666	**0.31%**
Sep-14	451	3	454	**99.34%**	146,802	**0.31%**
Oct-14	453	3	456	**99.34%**	146,905	**0.31%**
Nov-14	452	3	455	**99.34%**	146,978	**0.31%**
Dec-14	445	1	446	**99.78%**	146,985	**0.30%**
2014 Avg	448	5	453	**98.92%**	146,603	**0.31%**

Municipal Pumping

Month	Co. Reads	Est	Total	% Read	System Total	% Read of System Total
Jan-14	295	18	313	**94.25%**	146,397	**0.20%**
Feb-14	298	17	315	**94.60%**	146,319	**0.20%**
Mar-14	305	10	315	**96.83%**	146,322	**0.21%**
Apr-14	307	8	315	**97.46%**	146,341	**0.21%**
May-14	306	9	315	**97.14%**	146,395	**0.21%**
Jun-14	310	5	315	**98.41%**	146,508	**0.21%**
Jul-14	304	11	315	**96.51%**	146,613	**0.21%**
Aug-14	310	7	317	**97.79%**	146,666	**0.21%**
Sep-14	295	23	318	**92.77%**	146,802	**0.20%**
Oct-14	316	4	320	**98.75%**	146,905	**0.22%**
Nov-14	315	4	319	**98.75%**	146,978	**0.21%**
Dec-14	304	5	309	**98.38%**	146,985	**0.21%**
2014 Avg	305	10	316	**96.80%**	146,603	**0.21%**

Lighting

Month	Co. Reads	Est	Total	% Read	System Total	% Read of System Total
Jan-14	198	7	205	**96.59%**	146,397	**0.14%**
Feb-14	198	7	205	**96.59%**	146,319	**0.14%**
Mar-14	198	7	205	**96.59%**	146,322	**0.14%**
Apr-14	202	3	205	**98.54%**	146,341	**0.14%**
May-14	201	4	205	**98.05%**	146,395	**0.14%**
Jun-14	203	3	206	**98.54%**	146,508	**0.14%**
Jul-14	202	4	206	**98.06%**	146,613	**0.14%**
Aug-14	202	5	207	**97.58%**	146,666	**0.14%**
Sep-14	203	5	208	**97.60%**	146,802	**0.14%**
Oct-14	209	-	209	**100.00%**	146,905	**0.14%**
Nov-14	204	6	210	**97.14%**	146,978	**0.14%**
Dec-14	204	2	206	**99.03%**	146,985	**0.14%**
2014 Avg	202	4	206	**97.86%**	146,603	**0.14%**

B. *The numbers and percentages of customer meters self-read by customers.*

Residential

Month	Cust Reads	Est	Total	% Read	System Total	% Read of System Total
Jan-14	18	4	22	**81.82%**	146,397	**0.01%**
Feb-14	24	-	24	**100.00%**	146,319	**0.02%**
Mar-14	21	1	22	**95.45%**	146,322	**0.01%**
Apr-14	26	3	29	**89.66%**	146,341	**0.02%**
May-14	21	2	23	**91.30%**	146,395	**0.01%**
Jun-14	30	3	33	**90.91%**	146,508	**0.02%**
Jul-14	32	2	34	**94.12%**	146,613	**0.02%**
Aug-14	25	1	26	**96.15%**	146,666	**0.02%**
Sep-14	36	3	39	**92.31%**	146,802	**0.02%**
Oct-14	26	3	29	**89.66%**	146,905	**0.02%**
Nov-14	46	4	50	**92.00%**	146,978	**0.03%**
Dec-14	36	3	39	**92.31%**	146,985	**0.02%**
2014 Avg	28	2	31	**92.14%**	146,603	**0.02%**

Commercial

Month	Cust Reads	Est	Total	% Read	System Total	% Read of System Total
Jan-14	3	-	3	**100.00%**	146,397	**0.00%**
Feb-14	3	-	3	**100.00%**	146,319	**0.00%**
Mar-14	2	-	2	**100.00%**	146,322	**0.00%**
Apr-14	4	-	4	**100.00%**	146,341	**0.00%**
May-14	3	-	3	**100.00%**	146,395	**0.00%**
Jun-14	4	-	4	**100.00%**	146,508	**0.00%**
Jul-14	5	-	5	**100.00%**	146,613	**0.00%**
Aug-14	4	-	4	**100.00%**	146,666	**0.00%**
Sep-14	5	-	5	**100.00%**	146,802	**0.00%**
Oct-14	3	-	3	**100.00%**	146,905	**0.00%**
Nov-14	5	-	5	**100.00%**	146,978	**0.00%**
Dec-14	9	-	9	**100.00%**	146,985	**0.01%**
2014 Avg	4	-	4	**100.00%**	146,603	**0.00%**

Industrial

Month	Cust Reads	Est	Total	% Read	System Total	% Read of System Total
Jan-14	-	-	146,397	**0.00%**	146,086	**0.00%**
Feb-14	-	-	146,319	**0.00%**	146,091	**0.00%**
Mar-14	-	-	146,322	**0.00%**	146,075	**0.00%**
Apr-14	-	-	146,341	**0.00%**	146,051	**0.00%**
May-14	-	-	146,395	**0.00%**	146,055	**0.00%**
Jun-14	-	-	146,508	**0.00%**	146,097	**0.00%**
Jul-14	-	-	146,613	**0.00%**	146,195	**0.00%**
Aug-14	-	-	146,666	**0.00%**	146,222	**0.00%**
Sep-14	-	-	146,802	**0.00%**	146,274	**0.00%**
Oct-14	-	-	146,905	**0.00%**	146,348	**0.00%**
Nov-14	-	-	146,978	**0.00%**	146,449	**0.00%**
Dec-14	-	-	146,985	**0.00%**	146,432	**0.00%**
2014 Avg	-	-	146,603	**0.00%**	146,198	**0.00%**

Municipal Pumping

No Self-reads

Lighting

No Self-reads

C. *The number and percentage of customer meters that have not been read by utility personnel for periods of six to twelve months and for periods of longer than twelve months, and an explanation as to why they have not been read.*

Residential/Commercial/ Industrial /Municipal Pumping/Lighting

Months Estimated	Company Read Service Points	% of Total	Not Read Reason	Customer Read Service Points	% of Total	Not Read Reason
6 Months	3	0.002%	No Access/AMR	1	0.001%	No Access
7 Months	7	0.005%	No Access/AMR	0	0.000%	No Access
8 Months	7	0.005%	No Access/AMR	0	0.000%	No Access
9 Months	1	0.001%	No Access/AMR	0	0.000%	No Access
10 Months	2	0.001%	No Access/AMR	0	0.000%	No Access
11 Months	0	0.000%	No Access/AMR	0	0.000%	No Access
12 Months	4	0.003%	No Access/AMR	0	0.000%	No Access
12+Months	8	0.005%	No Access/AMR	0	0.000%	No Access
Totals:	**32**			**1**	**0**	

Minnesota Rules 7820.3300 requires that meters be read at least annually.

Customers with Company read meters that are not read for six to twelve months are left reminder notices at the home and/or are sent reminder letters of the utility's need to access the meter. A similar process is used for customer read meters not read for over twelve months. In addition, phone calls are made to each customer in an attempt to schedule a meter reading. Disconnection warnings are issued for unresponsive accounts. In accordance with the Cold Weather Rule, no disconnections for unread meters are performed during the Cold Weather Rule months.

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

Staffing by Work Center (Minnesota Power System)

2014	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Meter Reader Collector	10	10	10	9	9	9	8	8	8	8	8	8

REPORTING INVOLUNTARY DISCONNECTIONS

7826.1500

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.*

2014 INVOLUNTARY DISCONNECT REPORT

	A			B		C						D		
	Customers Receiving Disconnection Notices			Customers Who Sought CWR Protection	Customers Who Were Granted CWR Protection	Customers Disconnected Involuntarily			Customers Restored within 24 hours			Customers Restored to Service by entering into a payment plan		
Month	**Res**	**Com**	**Ind**	**Res Only**	**Res Only**	**Res**	**Com**	**Ind**	**Res**	**Com**	**Ind**	**Res**	**Com**	**Ind**
Jan	3508	912	21	636	636	67	5	0	24	1	0	12	0	0
Feb	3314	994	12	492	492	76	3	0	19	0	0	14	0	0
Mar	2863	841	14	347	347	149	7	0	24	1	0	20	0	0
Apr	3668	936	12	73	73	162	2	0	33	0	0	36	0	0
May	3430	838	12	0	0	631	9	0	223	3	0	90	2	0
Jun	2754	664	11	0	0	500	8	0	187	2	0	83	1	0
Jul	3101	764	16	0	0	407	7	0	121	0	0	41	1	0
Aug	2462	692	8	0	0	674	3	0	102	0	0	45	0	0
Sep	3029	749	10	0	0	364	20	0		0	0	39	1	0
Oct	2675	742	8	425	425	184	2	0	55	0	0	48	0	0
Nov	2463	809	10	517	517	20	0	0	2	0	0	10	0	0
Dec	2529	749	13	362	362	23	1	0	9	0	0	5	0	0
Totals	**35796**	**9690**	**147**	**2852**	**2852**	**3257**	**67**	**0**	**799**	**7**	**0**	**443**	**5**	**0**

REPORTING SERVICE EXTENSION REQUEST RESPONSE TIMES

7826.1600

The annual service quality report must include a detailed 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 Minnesota Power 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.*

Residential Locations not Previously Served						
Month	**Date Completed**	**1-10 Days**	**11-21 Days**	**21 Days and Over**	**Total**	**Response Time (Calendar Days)**
January	2	1	0	0	3	-1.33
February	4	0	0	0	4	-6.50
March	6	1	0	0	7	-13.43
April	10	0	0	0	10	-6.90
May	23	2	0	1	26	-2.38
June	32	13	2	0	47	-2.36
July	33	4	4	1	42	-2.40
August	32	6	1	1	40	-7.33
September	65	14	8	0	87	-3.37
October	113	30	14	2	159	-3.92
November	43	12	4	19	78	8.23
December	13	4	1	6	24	6.13
Totals	376	87	34	30	527	-1.68

Commerical Locations not Previously Served						
2014 Month	**Request Date Met**	**1-10 Days**	**11-21 Days**	**Over 21 Days**	**Total**	**Response Time (Calendar Days)**
January	12	1	0	0	13	-10.62
February	2	1	0	0	3	1.00
March	7	0	0	0	7	-6.00
April	11	0	0	0	11	-5.73
May	21	5	0	0	26	-4.42
June	21	11	1	0	33	-0.82
July	23	3	1	2	29	-0.93
August	37	8	1	0	46	-6.96
September	29	6	0	2	37	-2.27
October	32	10	2	2	46	-1.24
November	29	16	2	4	51	2.06
December	18	6	0	3	27	2.89
Totals	242	67	7	13	329	-2.09

Industrial Locations not Previously Served						
2014 Month	**Request Date Met**	**1-10 Days**	**11-21 Days**	**Over 21 Days**	**Total**	**Response Time (Calendar Days)**
January	0	0	0	0	0	0.00
February	0	0	0	0	0	0.00
March	0	0	0	0	0	0.00
April	0	0	0	1	1	30.00
May	0	0	0	0	0	0.00
June	0	0	0	0	0	0.00
July	0	0	0	0	0	0.00
August	0	0	0	0	0	0.00
September	0	0	0	0	0	0.00
October	0	0	0	0	0	0.00
November	0	0	0	0	0	0.00
December	0	0	0	0	0	0.00
Totals	0	0	0	1	1	30.00

The following table lists the number and percentage of locations not previously served by Minnesota Power where the service was installed later than the in-service date requested by the customer or the date the premises were ready for service and the reason for the delay:

Delays due to Customer:			
Customer Site not ready:	60	0.251046	0.25
Inspection/Affidavit not received:	1	0.004184	<1%
Late Notification	13	0.054393	0.05

Delays Due to Utility:				
Bad Date Info		60	0.251046	0.25
Redesign Job		2	0.008368	<1%
Workload		67	0.280335	0.28

Other:				
Waiting on Permits		3	0.012552	0.01
Weather		33	0.138075	0.14

B. *The number of customers requesting service to a location previously served by the Minnesota Power, 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.*

Residential Locations Previously Served						
2012 Month	Request Date Met	1-10 Days	11-21 Days	Over 21 Days	Total	Response Time (Calendar Days)
January	89	7	0	0	96	-0.19
February	57	7	2	0	66	-0.21
March	80	5	0	0	85	0.01
April	132	4	1	1	138	0.12
May	186	9	0	1	196	-0.74
June	216	11	0	3	230	0.17
July	212	21	1	1	235	-0.25
August	218	7	1	1	227	0.09
September	197	17	1	1	216	-3.28
October	470	11	3	1	485	-1.30
November	116	14	1	0	131	-0.50
December	66	5	1	0	72	-0.32
Totals	2039	118	11	9	2177	-0.73

Commerical Locations Previously Served						
2012 Month	**Request Date Met**	**1-10 Days**	**11-21 Days**	**Over 21 Days**	**Total**	**Response Time (Calendar Days)**
January	5	0	0	0	5	-3.40
February	8	1	0	0	9	-1.78
March	9	0	0	0	9	-0.44
April	16	1	0	0	17	-3.76
May	11	1	0	0	12	-1.92
June	16	0	0	0	16	-4.50
July	19	4	0	0	23	-2.00
August	16	2	2	0	20	-1.15
September	19	1	1	0	21	-3.29
October	24	2	1	1	28	-0.68
November	17	3	0	0	20	-7.25
December	12	1	0	0	13	-3.62
Totals	172	16	4	1	193	-2.82

Industrial Locations Previously Served						
2012 Month	**Request Date Met**	**1-10 Days**	**11-21 Days**	**Over 21 Days**	**Total**	**Response Time (Calendar Days)**
January	0	0	0	0	0	0.00
February	0	0	0	0	0	0.00
March	1	0	0	0	1	0.00
April	0	0	0	0	0	0.00
May	1	0	0	0	1	0.00
June	0	0	0	0	0	0.00
July	1	0	0	0	1	-10.00
August	0	0	0	0	0	0.00
September	1	0	0	0	1	0.00
October	1	0	0	0	1	-1.00
November	0	0	0	0	0	0.00
December	0	0	0	0	0	0.00
Totals	5	0	0	0	5	-2.20

The following table lists the number and percentage of locations previously served by Minnesota Power where the service was installed later than the in-service date requested by the customer or the date the premises were ready for service and the reason for the delay:

Delays due to Customer:			
Customer Site not ready:	26	0.163522	0.16
Inspection/Affidavit not received:	4	0.025157	0.03
Late Notification	38	0.238994	0.24
Locked Door	35	0.220126	0.22
No Access	2	0.012579	0.01

Delays Due to Utility:			
Bad Date Info	27	0.169811	0.17
Workload	18	0.113208	0.11
Bad Scheduling	3	0.018868	0.02

Other:			
Weather	6	0.037736	0.04

REPORTING CALL CENTER RESPONSE TIMES

7826.1700

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.

Business Hours - 7:00 a.m. - 5:30 p.m.			
	2014	**Total Calls**	**Calls Answered within 20 seconds**
JAN	80%	16,355	13,046
FEB	83%	14,019	11,679
MAR	84%	14,800	12,413
APRIL	77%	16,279	12,551
MAY	74%	16,321	11,996
JUNE	78%	15,768	12,281
JULY	86%	16,354	14,001
AUG	84%	14,513	12,140
SEP	81%	15,743	12,803
OCT	83%	15,269	12,655
NOV	83%	11,637	9,702
DEC	85%	11,950	10,105
YTD	**82%**	**179,008**	**145,372**

After Hours - 5:30 p.m. - 7:00 a.m.			
	2014	**Total Calls**	**Calls Answered within 20 seconds**
JAN	64%	1,086	690
FEB	69%	905	621
MAR	66%	1,047	686
APRIL	60%	1,293	780
MAY	63%	1,156	732
JUNE	61%	1,038	633
JULY	56%	1,447	809
AUG	69%	950	654
SEP	64%	957	607
OCT	67%	999	669
NOV	72%	725	519
DEC	79%	717	566
YTD	**66%**	**12,320**	**7,966**

All calls to Minnesota Power – whether they relate to service interruption, line extension, billing inquiries or any other subject matter – are routed through the Company's IVR unit. Customers have a menu of options within the IVR to choose from in order to address the subject of their call. The first option is to report an outage by entering a trouble order; the fifth option is to speak directly to a Call Center representative.

Calls routed to outage reporting are handled immediately through the automated trouble-order system; calls that are directed to the Call Center are manually entered into the trouble-order system by the Call Center representative.

Minnesota Power is able to use IVR data to report the number of service interruption calls; however, the IVR is unable to track a response time on an individual contact type. Calls that go to a Call Center representative are also tracked by type of contact. Like the IVR calls, Minnesota Power is able to report the number of service interruption calls; however, is unable to track a response time on an individual contact type.

In summary, Minnesota Power's response time percentage is shown as an aggregate of all calls received through the IVR and the Call Center, and the calls are not broken out by type of call because Minnesota Power is currently unable to separate response time by contact type.

REPORTING EMERGENCY MEDICAL ACCOUNT STATUS

7826.1800

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

In 2014, Minnesota Power had 70 customers request emergency medical account status. All 70 requests were granted after each provided Minnesota Power with signed physician documentation indicating need. All documentation is on file and available upon request.

REPORTING CUSTOMER DEPOSITS

7826.1900

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

Minnesota Power refunded all deposits in 2014. Collection of deposits will be reconsidered after full implementation of the updated CIS system is complete.

REPORTING CUSTOMER COMPLAINTS

7826.2000

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.*

	2014													
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total	
Customer Class	**Complaint Totals**													**% of Total**
Commercial	12	9	5	6	3	1	4	5	5	5	2	7	64	5.77%
Residential	254	236	123	78	51	50	59	36	57	25	29	47	1,045	94.23%
Total	**266**	**245**	**128**	**84**	**54**	**51**	**63**	**41**	**62**	**30**	**31**	**54**	**1,109**	**100.00%**

(Any complaints for other customer classes are handled individually and as such not recorded in Minnesota Power's Customer Information System.)

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.*

		2014													
CC Types	**Customer Class**	**Number of Contacts**													
		Jan	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**	**Total**	**% of Total**
Billing Error	Residential	1	2			1		1					1	6	0.55%
Incorrect Metering	Commercial	1	1	3	1	2			1		1			10	0.91%
Incorrect Metering	Residential	26	63	35	30	24	13	7	5	2	2	7	4	218	19.89%
Wrongful Disconnection	Commercial	1												1	0.09%
Wrongful Disconnection	Residential		1	1			1	1		1				5	0.46%
High Bill Complaint	Commercial	10	8	2	5	1	1	4	3	3	4	2	5	48	4.38%
High Bill Complaint	Residential	216	165	83	45	24	34	46	31	50	20	20	42	776	70.80%
Inadaquate Service	Commercial								1	2			1	4	0.36%
Inadaquate Service	Residential	9	5	2		1	1	3		4	1	2		28	2.55%
Total		**264**	**245**	**126**	**81**	**53**	**50**	**62**	**41**	**62**	**28**	**31**	**53**	**1,096**	**100.00%**

The total number of complaints/contacts in this table is 1,096 whereas the total in Part A was 1,109. The difference is 13 complaints forwarded to Minnesota Power by the Commission's Consumer Affairs Office for further investigation and action in 2014.

C. *The number and percentage of complaints resolved upon initial inquiry, within ten days, and longer than ten days.*

2014														
Group of Days To Resolution	**Customer Class**	**Contact Count**												
		Jan	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**	**Total**
Greater Than 10 Days	Commercial		1					1		1	1			4
Greater Than 10 Days	Residential	7	5	2	1	1	1	1			1	1	3	23
Less Than 10 Days	Commercial				1		1			1			2	5
Less Than 10 Days	Residential	11	13	8	5	3	8	1		4	4		5	62
Same Day Resolution	Commercial	12	8	5	5	3		3	5	3	4	2	5	55
Same Day Resolution	Residential	236	218	113	72	47	41	57	36	53	20	28	39	960
Total	**Total**	**266**	**245**	**128**	**84**	**54**	**51**	**63**	**41**	**62**	**30**	**31**	**54**	**1,109**

D. *The number and percentage of all complaints resolved by taking any of the following actions: (1) taking the action the customer requested; (2) taking an action the customer and the utility agree is an acceptable compromise, (3) providing the customer with information that demonstrates that the situation complained of is not reasonably within the control of the utility; or (4) refusing to take the action the customer requested.*

2014				
	Commercial	**Residential**	**Total**	
Resolution				**% Resolved Contacts**
Customer Request	6	88	94	8.48%
Compromise	17	278	295	26.60%
No Control	39	640	679	61.23%
Refuse	2	39	41	3.70%
Total	**64**	**1,045**	**1,109**	**100.00%**

E. *The number of complaints forwarded to the utility by the Commission's Consumer Affairs Office for further investigation and action.*

Minnesota Power had 13 complaints (12 Residential/1 Commercial) forwarded to the utility by the Commission's Consumers Affairs Office for further investigation and action in 2014.

2014			
Customer Class	**CC Types**	**Month**	
Commercial	Fwdby MPUC	Dec	1
		Total - Commercial	**1**
Residential	Fwd by MPUC	Jan	2
Residential	Fwd by MPUC	Mar	2
Residential	Fwd by MPUC	Apr	3
Residential	Fwd by MPUC	May	1
Residential	Fwd by MPUC	Jun	1
Residential	Fwd by MPUC	Jul	1
Residential	Fwd by MPUC	Oct	2
		Total - Residential	**12**
		Total - All Classes	**13**

Form No. 6102 Rev. 7/10

Subject: HIB-308 Outage Notice: Final Notice

Distribution System Status Outage Notification

Feeder/Bus #: HIB-308

Date Out:	01/16/14	Date In:	1/16/2014
Time Out:	5:39 AM	Time In:	7:13 AM

Duration: 94 minutes

Number of Customers Affected: 596

For information about this alert, contact: Stefanie Hayes
218-720-2764
Stefanie Hayes@mnpower.com

For follow-up information or questions, contact: Stefanie Hayes, OCC

Communities Affected: Hibbing, Chisholm

Major Customers:

Cause: Bad Breaker inside the sub station

Follow-Up: crew on site replacing breaker

Form No. 6102 Rev. 7/10

Subject: FIF-223 Outage Notice: Final Notice

Distribution System Status Outage Notification

Feeder/Bus #: FIF-223

Date Out:	01/26/14	Date In:	01/26/14
Time Out:	5:00 AM	Time In:	6:13 AM

Duration: 1:13

Number of Customers Affected: 2012

For information about this alert, contact: Stefanie Hayes
218-720-2764
Stefanie Hayes@mnpower.com

For follow-up information or questions, contact: Stefanie Hayes, OCC

Communities Affected: Duluth

Major Customers:

Cause: Vehicle accident with pole

Follow-Up:

Form No. 6102 Rev. 7/10

Subject: SCH-420 Outage Notice: Final Notice

Distribution System Status Outage Notification

Feeder/Bus #: SCH-420

Date Out:	03/10/14	Date In:	03/10/14
Time Out:	1:58 PM	Time In:	3:28 PM

Duration: 1:30

Number of Customers Affected: 860

For information about this alert, contact: Stefanie Hayes
218-720-2764
Stefanie Hayes@mnpower.com

For follow-up information or questions, contact: Stefanie Hayes, OCC

Communities Affected: Cloquet

Major Customers:

Cause: Blown distribution transformer and phase to phase fault at Knife Falls Hydro.

Follow-Up: 3/12/14: Sent revised change to group: updated cause from ECC. BA

Form No. 6102 Rev. 7/10

Subject: 32 Line lockout Outage Notice: Final Notice

Distribution System Status Outage Notification

Feeder/Bus #: 32 Line

Date Out:	03/31/2014	Date In:	03/31/2014
Time Out:	8:16 PM	Time In:	10:30 PM

Duration: 2hr 14min

Number of Customers Affected: 851

For information about this alert, contact: Stefanie Hayes
218-720-2764
Stefanie Hayes@mnpower.com

For follow-up information or questions, contact: Stefanie Hayes, OCC

Communities Affected: Ely, Tower, Soudan

Major Customers: na

Cause: Unknonw, Possibly weather. Crew will follow up in daylight hours.

Follow-Up:

Form No. 6102 Rev. 7/10

Subject: FCS-214, FCS-215 Outage Notice: Final Notice

Distribution System Status Outage Notification

Feeder/Bus #: FCS-214, FCS-215

Date Out:	04/01/14	Date In:	04/01/14
Time Out:	3:53 PM	Time In:	5:50 PM

Duration: 1:57

Number of Customers Affected: 2614

For information about this alert, contact: Stefanie Hayes
218-720-2764
Stefanie Hayes@mnpower.com

For follow-up information or questions, contact: Stefanie Hayes, OCC

Communities Affected: Hermantown, Saginaw, Duluth

Major Customers:

Cause: Problem with substation equipment not owned by Minnesota Power

Follow-Up:

Form No. 6102 Rev. 7/10

Subject: .HIB-308 Outage Notice: Final Notice

Distribution System Status Outage Notification

Feeder/Bus #: HIB-308

Date Out:	04/01/14	Date In:	4/1/2014
Time Out:	3:59 PM	Time In:	7:29 PM

Duration: 210 minutes

Number of Customers Affected: 596

For information about this alert, contact: Stefanie Hayes
218-720-2764
Stefanie Hayes@mnpower.com

For follow-up information or questions, contact: Stefanie Hayes, OCC

Communities Affected: Hibbing

Major Customers:

Cause: 308 Breaker - Relay issue with the physical breaker

Follow-Up: C & M is there workingon the issue at this time but was able to temporarily swith the breaker

Form No. 6102 Rev. 7/10

Subject: CLQ-412 Outage Notice: Final Notice

Distribution System Status Outage Notification

Feeder/Bus #: CLQ-412

Date Out:	04/28/14	Date In:	04/28/14
Time Out:	14:39	Time In:	23:21

Duration: 522 MINUTES

Number of Customers Affected: 556

For information about this alert, contact: Stefanie Hayes
218-720-2764
Shayes@mnpower.com

For follow-up information or questions, contact: Stefanie Hayes, OCC

Communities Affected: cLOQUET

Major Customers: na

Cause: Tree, high wind.

Follow-Up: Correction: Documentation created adter reliability engineer determined feeder locked ou.

Form No. 6102 Rev. 7/10

Subject: SCH-420 Outage Notice: Final Notice

Distribution System Status Outage Notification

Feeder/Bus #: SCH-420

Date Out:	04/28/14	Date In:	04/28/14
Time Out:	14:39	Time In:	16:57

Duration: 138 MINUTES

Number of Customers Affected: 862

For information about this alert, contact: Stefanie Hayes
218-720-2764
Shayes@mnpower.com

For follow-up information or questions, contact: Stefanie Hayes, OCC

Communities Affected: Scanlon

Major Customers: na

Cause: Trees, wind.

Follow-Up: Correction: Documentation created adter reliability engineer determined feeder locked ou.

Form No. 6102 Rev. 7/10

Subject: RGV-252 Outage Notice: Final Notice

Distribution System Status Outage Notification

Feeder/Bus #: RGV-252

Date Out:	04/28/14	Date In:	04/28/14
Time Out:	16:49	Time In:	18:06

Duration: 77 MINUTES

Number of Customers Affected: 2825

For information about this alert, contact: Stefanie Hayes
218-720-2764
Shayes@mnpower.com

For follow-up information or questions, contact: Stefanie Hayes, OCC

Communities Affected: DULUTH

Major Customers: na

Cause: TREE ON PRIMARY; WIND.

Follow-Up: Correction: Documentation created adter reliability engineer determined feeder locked ou.

Form No. 6102 Rev. 7/10

Subject: RGV-251 Outage Notice: Final Notice

Distribution System Status Outage Notification

Feeder/Bus #: RGV-251

Date Out:	04/28/14	Date In:	04/28/14
Time Out:	4:49 PM	Time In:	6:06 PM

Duration: 77 Minutes

Number of Customers Affected: 2212

For information about this alert, contact: Stefanie Hayes
218-720-2764
Stefanie Hayes@mnpower.com

For follow-up information or questions, contact: Stefanie Hayes, OCC

Communities Affected: Duluth

Major Customers:

Cause: Tree took down overhead primary wire

Follow-Up:

Form No. 6102 Rev. 7/10

Subject: Feeder Lockout Outage Notice: Final Notice

Distribution System Status Outage Notification

Feeder/Bus #: FIF 220

Date Out:	05-16-2014	Date In:	05-16-2014
Time Out:	12:49am	Time In:	02:01am

Duration: 1hr 12mins

Number of Customers Affected: 2708

For information about this alert, contact: Stefanie Hayes
218-720-2764
Stefanie Hayes@mnpower.com

For follow-up information or questions, contact: Stefanie Hayes, OCC

Communities Affected: Duluth

Major Customers: na

Cause: Repair to underground cable

Follow-Up: na

Form No. 6102 Rev. 7/10

Subject: LFS-1 Outage Notice: Final Notice

Distribution System Status Outage Notification

Feeder/Bus #: LFS-1

Date Out:	5/31/14	Date In:	5/31/14
Time Out:	07:36 PM	Time In:	09:56

Duration: 2hrs, 20 minutes

Number of Customers Affected: 576

For information about this alert, contact: Stefanie Hayes
218-720-2764
Stefanie Hayes@mnpower.com

For follow-up information or questions, contact: Stefanie Hayes, OCC

Communities Affected: Little Falls

Major Customers: NA

Cause: UG Fault due to lightning

Follow-Up:

Form No. 6102 Rev. 7/10

Subject: 9 LINE

Outage Notice: Final Notice

Distribution System Status Outage Notification

Feeder/Bus #: 9 LINE

Date Out:	06/15/14	Date In:	06/15/14
Time Out:	15:32	Time In:	18:04

Duration: 212 MINUTES

Number of Customers Affected: 1223

For information about this alert, contact: Stefanie Hayes
218-720-2764
Shayes@mnpower.com

For follow-up information or questions, contact: Stefanie Hayes, OCC

Communities Affected: Floodwood, Meadowlands

Major Customers: na

Cause: Tree on transmission line.

Follow-Up: Correction: Documentation created adter reliability engineer determined feeder locked ou.

Form No. 6102 Rev. 7/10

Subject: AKE-544 Outage Notice: Final Notice

Distribution System Status Outage Notification

Feeder/Bus #: AKE-544

Date Out:	06/29/14	Date In:	06/29/14
Time Out:	15:30	Time In:	16:52

Duration: 82 MINUTES

Number of Customers Affected: 536

For information about this alert, contact: Stefanie Hayes
218-720-2764
Shayes@mnpower.com

For follow-up information or questions, contact: Stefanie Hayes, OCC

Communities Affected: AKELEY

Major Customers: na

Cause: Tree, storms.

Follow-Up: Correction; Documentation created after reliability engineer determined feeder locked out.

Form No. 6102 Rev. 7/10

Subject: INF-3 Outage Notice: Final Notice

Distribution System Status Outage Notification

Feeder/Bus #: INF-3

Date Out:	06/29/14	Date In:	06/29/14
Time Out:	18:03	Time In:	19:08

Duration: 65 MINUTES

Number of Customers Affected: 1070

For information about this alert, contact: Stefanie Hayes
218-720-2764
Shayes@mnpower.com

For follow-up information or questions, contact: Stefanie Hayes, OCC

Communities Affected: INTERNATIONAL FALLS

Major Customers: na

Cause: TREE, STORMS.

Follow-Up: Correction; documentation created after reliability engineer determined feeder locked out.

Form No. 6102 Rev. 7/10

Subject: TWN-2 Outage Notice: Final Notice

Distribution System Status Outage Notification

Feeder/Bus #: TWN-2

Date Out:	06/30/14	Date In:	06/30/14
Time Out:	11:36	Time In:	13:42

Duration: 126 MINUTES

Number of Customers Affected: 555

For information about this alert, contact: Stefanie Hayes
218-720-2764
Shayes@mnpower.com

For follow-up information or questions, contact: Stefanie Hayes, OCC

Communities Affected: Tower

Major Customers: na

Cause: Balsam on primary. Storms.

Follow-Up: Correction; Documentation created after reliability engineer determined feeder locked out.

Form No. 6102 Rev. 7/10

Subject: GARY-200,201 Outage Notice: Final Notice

Distribution System Status Outage Notification

Feeder/Bus #: GARY-200,201

Date Out:	7/14/14	Date In:	7/14/14
Time Out:	02:03	Time In:	03:37

Duration: 1HR 34MIN

Number of Customers Affected: 2727

For information about this alert, contact: Stefanie Hayes
218-720-2764
Stefanie Hayes@mnpower.com

For follow-up information or questions, contact: Stefanie Hayes, OCC

Communities Affected: WEST DULUTH, GARY, RIVERSIDE

Major Customers:

Cause: BAD BREAKER WITHIN SUB.

Follow-Up:

Form No. 6102 Rev. 7/10

Subject: Feeder lockout Outage Notice: Final Notice

Distribution System Status Outage Notification

Feeder/Bus #: SCH 420

Date Out:	7-18-14	Date In:	7-18-14
Time Out:	1:40pm	Time In:	3:31pm

Duration: 111 mins

Number of Customers Affected: 829

For information about this alert, contact: Stefanie Hayes
218-720-2764
Stefanie Hayes@mnpower.com

For follow-up information or questions, contact: Stefanie Hayes, OCC

Communities Affected: Cloquet/Scanlon

Major Customers: n/a

Cause: Possible cause is mechanical issue at Scanlon Hydro Station

Follow-Up: unknown

Form No. 6102 Rev. 7/10

Subject: FRR-275 Outage Notice: Final Notice

Distribution System Status Outage Notification

Feeder/Bus #: FRR-275

Date Out:	07/22/14	Date In:	07/22/14
Time Out:	1:53 AM	Time In:	3:58 AM

Duration: 2:05

Number of Customers Affected: 856

For information about this alert, contact: Stefanie Hayes
218-720-2764
Stefanie Hayes@mnpower.com

For follow-up information or questions, contact: Stefanie Hayes, OCC

Communities Affected: Duluth

Major Customers:

Cause: Trees took down overhead primary

Follow-Up:

Form No. 6102 Rev. 7/10

Subject: NPS-1 Outage Notice: Final Notice

Distribution System Status Outage Notification

Feeder/Bus #: NPS-1

Date Out:	07/22/2014	Date In:	07/22/2014
Time Out:	00:45	Time In:	17:52

Duration: 1127 MIN

Number of Customers Affected: 549

For information about this alert, contact: Jill Feriancek
218-355-2797
jFeriancek@mnpower.com

For follow-up information or questions, contact: Stefanie Hayes, OCC

Communities Affected: NISSWA, GULL LAKE

Major Customers: na

Cause: Many poles snapped and conductors down. Severe damage to feeder; storms in area.

Follow-Up: Correction: Documentation created adter reliability engineer determined feeder locked ou.

Form No. 6102 Rev. 7/10

Subject: SLA-250 Outage Notice: Final Notice

Distribution System Status Outage Notification

Feeder/Bus #: SLA-250

Date Out:	07/22/14	Date In:	07/22/14
Time Out:	1:24 AM	Time In:	2:57 AM

Duration: 1:33

Number of Customers Affected: 2498

For information about this alert, contact: Stefanie Hayes
218-720-2764
Stefanie Hayes@mnpower.com

For follow-up information or questions, contact: Stefanie Hayes, OCC

Communities Affected: Duluth

Major Customers:

Cause: Tree on wire near Highland Pumps 88

Follow-Up:

Form No. 6102 Rev. 7/10

Subject: VRG-311 Outage Notice: Final Notice

Distribution System Status Outage Notification

Feeder/Bus #: VRG-311

Date Out:	07/22/2014	Date In:	07/22/2014
Time Out:	01:03	Time In:	08:07

Duration: 424 MINUTES

Number of Customers Affected: 910

For information about this alert, contact: Jill Feriancek
218-355-2797
jFeriancek@mnpower.com

For follow-up information or questions, contact: Stefanie Hayes, OCC

Communities Affected: EVELETH

Major Customers: na

Cause: Tree tore down 3 phase, storms in area.

Follow-Up: Correction: Documentation created adter reliability engineer determined feeder locked ou.

Form No. 6102 Rev. 7/10

Subject: VRG-311 Outage Notice: Final Notice

Distribution System Status Outage Notification

Feeder/Bus #: VRG-311

Date Out:	07/27/14	Date In:	07/27/14
Time Out:	5:48 AM	Time In:	8:01 AM

Duration: 2:13

Number of Customers Affected: 908

For information about this alert, contact: Stefanie Hayes
218-720-2764
Stefanie Hayes@mnpower.com

For follow-up information or questions, contact: Stefanie Hayes, OCC

Communities Affected: Mountain Iron, Iron, Eveleth

Major Customers: United Taconite

Cause: Tree branch

Follow-Up:

Form No. 6102 Rev. 7/10

Subject: HIB-308 Outage Notice: Final Notice

Distribution System Status Outage Notification

Feeder/Bus #: HIB-308

Date Out:	08/07/14	Date In:	08/07/14
Time Out:	15:35	Time In:	18:34

Duration: 179 MIN

Number of Customers Affected: 597

For information about this alert, contact: Jill Feriancek
218-355-2797
jFeriancek@mnpower.com

For follow-up information or questions, contact: Stefanie Hayes, OCC

Communities Affected: Stuntz, Spudville

Major Customers: na

Cause: Report of 2 phase down.

Follow-Up: Correction: Documentation created adter reliability engineer determined feeder locked ou.

Form No. 6102 Rev. 7/10

Subject: LFL-526 Outage Notice: Final Notice

Distribution System Status Outage Notification

Feeder/Bus #: LFL-526

Date Out:	08/24/14	Date In:	08/24/14
Time Out:	5:18 AM	Time In:	6:46 AM

Duration: 1:28

Number of Customers Affected: 893

For information about this alert, contact: Jill Feriancek
218-355-2797
jferiancek@mnpower.com

For follow-up information or questions, contact: Jill Feriancek, OCC

Communities Affected: Pierz, Little Falls, Lastrup

Major Customers:

Cause: Lightning

Follow-Up:

Form No. 6102 Rev. 7/10

Subject: 23 LINE Outage Notice: Final Notice

Distribution System Status Outage Notification

Feeder/Bus #: 23 LINE

Date Out:	09/04/14	Date In:	09/04/14
Time Out:	07:52	Time In:	10:03

Duration: 131

Number of Customers Affected: 720

For information about this alert, contact: Jill Feriancek
218-355-2797
jFeriancek@mnpower.com

For follow-up information or questions, contact: Stefanie Hayes, OCC

Communities Affected: Askov, Kerrick

Major Customers: na

Cause: Broken cross arm, storms in area.

Follow-Up: Correction: Documentation created adter reliability engineer determined feeder locked ou.

Form No. 6102 Rev. 7/10

Subject: BAX-534 Outage Notice: Final Notice

Distribution System Status Outage Notification

Feeder/Bus #: BAX-534

Date Out:	09/04/14	Date In:	09/04/14
Time Out:	06:46	Time In:	12:27

Duration: 341 MIN

Number of Customers Affected: 1316

For information about this alert, contact: Jill Feriancek
218-355-2797
jFeriancek@mnpower.com

For follow-up information or questions, contact: Stefanie Hayes, OCC

Communities Affected: Baxter, Gull Lake

Major Customers: na

Cause: Broken insulator and tree on feeder. Partial restore of 341 min, storms in area.

Follow-Up: Correction: Documentation created adter reliability engineer determined feeder locked ou.

Form No. 6102 Rev. 7/10

Subject: BRD-504 Outage Notice: Final Notice

Distribution System Status Outage Notification

Feeder/Bus #: BRD-504

Date Out:	09/04/14	Date In:	09/04/14
Time Out:	06:57	Time In:	15:18

Duration: 502 MIN

Number of Customers Affected: 530

For information about this alert, contact: Jill Feriancek
218-355-2797
jFeriancek@mnpower.com

For follow-up information or questions, contact: Stefanie Hayes, OCC

Communities Affected: Brainerd, Sylvan

Major Customers: na

Cause: Conductors down, trees on 504.

Follow-Up: Correction: Documentation created adter reliability engineer determined feeder locked ou.

Form No. 6102 Rev. 7/10

Subject: Feeder Lockout Outage Notice: Final Notice

Distribution System Status Outage Notification

Feeder/Bus #: FCS 214

Date Out:	10/7/14	Date In:	10/7/14
Time Out:	9:30am	Time In:	10:35am

Duration: 1hr 5mins

Number of Customers Affected: 1358

For information about this alert, contact: Stefanie Hayes
218-720-2764
Stefanie Hayes@mnpower.com

For follow-up information or questions, contact: Stefanie Hayes, OCC

Communities Affected: Canosia, Pike Lake, Air Park

Major Customers: na

Cause: Vehicle accident, struck power pole w/3phase lines on it.

Follow-Up: na

Form No. 6102 Rev. 7/10

Subject: HIB-308 Outage Notice: Final Notice

Distribution System Status Outage Notification

Feeder/Bus #: HIB-308

Date Out:	10/13/14	Date In:	10/13/14
Time Out:	05:08	Time In:	08:14

Duration: 186 MIN

Number of Customers Affected: 597

For information about this alert, contact: Jill Feriancek
218-355-2797
jFeriancek@mnpower.com

For follow-up information or questions, contact: Stefanie Hayes, OCC

Communities Affected: EVELETH

Major Customers: na

Cause: Tree downstream of Inter-City Gas 77

Follow-Up: Correction: Documentation created adter reliability engineer determined feeder locked ou.

Form No. 6102 Rev. 7/10

Subject: SCH-420 Outage Notice: Final Notice

Distribution System Status Outage Notification

Feeder/Bus #: SCH-420

Date Out:	10/30/14	Date In:	10/31/14
Time Out:	22:31	Time In:	01:06

Duration: 155 MIN

Number of Customers Affected: 862

For information about this alert, contact: Jill Feriancek
218-355-2797
jFeriancek@mnpower.com

For follow-up information or questions, contact: Stefanie Hayes, OCC

Communities Affected: Scanlon

Major Customers: na

Cause: Beaver took down tree between Thomson and Fon du Lac power houses..

Follow-Up: Correction: Documentation created adter reliability engineer determined feeder locked ou.

Form No. 6102 Rev. 7/10

Subject: TMS HE-412 Outage Notice: Final Notice

Distribution System Status Outage Notification

Feeder/Bus #: TMS HE-412

Date Out:	10/30/14	Date In:	10/31/14
Time Out:	22:31	Time In:	00:14

Duration: 197 MIN

Number of Customers Affected: 545

For information about this alert, contact: Jill Feriancek
218-355-2797
jFeriancek@mnpower.com

For follow-up information or questions, contact: Stefanie Hayes, OCC

Communities Affected: Thomson

Major Customers: na

Cause: Beaver took tree down between Thomson and Fon du Lac power houses.

Follow-Up: Correction: Documentation created adter reliability engineer determined feeder locked ou.

Form No. 6102 Rev. 7/10

Subject: Feeder Lockout Outage Notice: Final Notice

Distribution System Status Outage Notification

Feeder/Bus #: SCH 420, TMS 412

Date Out:	11/08/2014	Date In:	11/08/2014
Time Out:	01:42am	Time In:	03:35am

Duration: 1hr 53mins

Number of Customers Affected: 1450

For information about this alert, contact: Jill Feriancek
218-355-2797
jFeriancek@mnpower.com

For follow-up information or questions, contact: Stefanie Hayes, OCC

Communities Affected: Scanlon, Cloquet, Thomson

Major Customers: na

Cause: unknown

Follow-Up:

Form No. 6102 Rev. 7/10

Subject: Feeder Lockout Outage Notice: Final Notice

Distribution System Status Outage Notification

Feeder/Bus #: RGV-254

Date Out:	12/20/14	Date In:	12/20/14
Time Out:	06:50	Time In:	07:57

Duration: 67 minutes

Number of Customers Affected: 2119

For information about this alert, contact: Jill Feriancek
218-355-2797
jFeriancek@mnpower.com

For follow-up information or questions, contact: Jill Feriancek, OCC

Communities Affected: East Duluth Hillside area

Major Customers: N/A

Cause: Regulator fire at the 10th ave E and 3rd st. (St Lukes Hospital)

Follow-Up:

STATE OF MINNESOTA	)	AFFIDAVIT OF SERVICE VIA
	) ss	E-FILING AND
COUNTY OF ST. LOUIS	)	FIRST CLASS MAIL

Susan Romans, of the City of Duluth, County of St. Louis, State of Minnesota, says that on the **1st** day of **April**, **2015**, she e-filed Minnesota Power's Annual Safety, Reliability and Service Quality Report to the Minnesota Public Utilities Commission ("MPUC") and Minnesota Department of Commerce ("DoC") via electronic filing. The remaining parties on the attached service list were served as indicated.

Susan Romans

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_Minnesota Power_MP's SRSQ Serv Lst
Sharon	Ferguson	sharon.ferguson@state.mn.us	Department of Commerce	85 7th Place E Ste 500 Saint Paul, MN 551012198	Electronic Service	No	GEN_SL_Minnesota Power_MP's SRSQ Serv Lst
Tiffany	Hughes	Regulatory.Records@xcelenergy.com	Xcel Energy	414 Nicollet Mall FL 7 Minneapolis, MN 554011993	Electronic Service	No	GEN_SL_Minnesota Power_MP's SRSQ Serv Lst
Allen	Krug	allen.krug@xcelenergy.com	Xcel Energy	414 Nicollet Mall-7th fl Minneapolis, MN 55401	Electronic Service	No	GEN_SL_Minnesota Power_MP's SRSQ Serv Lst
Douglas	Larson	dlarson@dakotaelectric.com	Dakota Electric Association	4300 220th St W Farmington, MN 55024	Electronic Service	No	GEN_SL_Minnesota Power_MP's SRSQ Serv Lst
John	Lindell	agorud.ecf@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_Minnesota Power_MP's SRSQ Serv Lst
David	Moeller	dmoeller@allete.com	Minnesota Power	30 W Superior St Duluth, MN 558022093	Electronic Service	No	GEN_SL_Minnesota Power_MP's SRSQ Serv Lst
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_Minnesota Power_MP's SRSQ Serv Lst
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_Minnesota Power_MP's SRSQ Serv Lst