Annual Safety Reporting in Accordance With Minn. Administrative Rule 7826

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

Safety, Reliability and Service Quality Standards Report

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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.*

TABLE 1: OSHA REPORTABLE INJURIES

Number of Cases

Deaths	Total number of cases with days away from work	Job transfer or restriction	Other recordable cases
0	3	4	12

Number of Days

Days of job transfer or restriction	Days away from work
319	95

Injury and Illness Types

Injuries	Skin disorders	Respiratory conditions	Poisonings	All other illnesses
19	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 2019 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 Table 2 on Page 5.

TABLE 2: DAMAGE CLAIMS PAID 2019

Date of Claim	Cause of Damage	Paid
1/4/2019	Rental Vehicle Damage	$351.65
1/9/2019	Door Opener Damage	$427.00
2/21/2019	Vehicle Damage	$13,263.64
2/27/2019	Electrician's Invoice	$65.00
3/1/2019	Electrician's Invoice	$2,563.17
3/1/2019	Lawnmower Damage	$94.35
3/21/2019	Vehicle Damage	$786.04
3/26/2019	Window Damage	$207.80
4/23/2019	Dig In	$5,679.71
4/25/2019	Damaged Underground	$300.00
6/15/2019	Electrician's Invoice	$95.00
6/17/2019	Sprinkler Damage	$999.64
9/10/2019	Rented Truck Damage	$86,215.35
	Total Payments: $111,048.35	

Reliability Reporting Requirements: 7826.0500

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

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 were two excluded events in 2018, these values are different from the Major Event normalized values.

A. The utility's SAIDI for the calendar year by service area as a whole:

SAIDI (in minutes) **2019**	164.54

SAIDI calculated from Major Event Excluded data:

SAIDI (in minutes) **2019**	20.52

Major Event normalized using the IEEE 2.5 Beta method:

SAIDI (in minutes) **2019**	144.02

Non-Major Event normalized:

SAIDI (in minutes) **2019**	164.54

B. The utility's SAIFI for the calendar year by service area as a whole:

SAIFI (# of outages) **2019**	1.53

SAIFI calculated from Major Event Excluded data:

SAIFI (# of outages) **2019**	0.18

Major Event normalized using the IEEE 2.5 Beta method:

SAIFI (# of outages) **2019**	1.35

Non-Major Event normalized:

SAIFI (# of outages) **2019**	1.53

C. The utility's CAIDI for the calendar year by service area as a whole:

CAIDI (outage min/customer) **2019**	107.45

CAIDI calculated from Major Event Excluded data:

CAIDI (outage min/customer) **2019**	114.00

Major Event normalized using the IEEE 2.5 Beta method:

CAIDI (outage min/customer) **2019**	106.32

Non-Major Event normalized:

CAIDI (outage min/customer) **2019**	107.45

D. The utility's MAIFI for the calendar year by service area as a whole:

MAIFI (outage min/customer) **2019**	3.46

MAIFI calculated from Major Event Excluded data:

MAIFI (outage min/customer) **2019**	0.10

Major Event normalized using the IEEE 2.5 Beta method:

MAIFI (outage min/customer) **2019**	3.36

Non-Major Event normalized:

MAIFI (outage min/customer) **2019**	3.46

E. The utility's ASAI for the calendar year by service area as a whole:

ASAI (outage min/customer) **2019**	99.9686948%

ASAI calculated from Major Event Excluded data:

ASAI (outage min/customer) **2019**	0.0039413%

Major Event normalized using the IEEE 2.5 Beta method:

ASAI (outage min/customer) **2019**	99.97259893%

Non-Major Event normalized:

ASAI (outage min/customer) **2019**	99.9686948%

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

In 2019, there was one major event 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:

Event 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 the Outage Management System ("OMS"). That information, along with information from other sources, 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, data is assembled for the five most recent years of historical values of daily SAIDI. Any day with a SAIDI value of zero is discarded. Then, the natural log of each SAIDI value is computed and the average (alpha) and standard deviation (beta) of the natural logarithms is computed. 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. In the last five years, there was generally an average of 1-3 major events excluded. The year 2016 was an outlier in that it saw seven major storm events excluded.

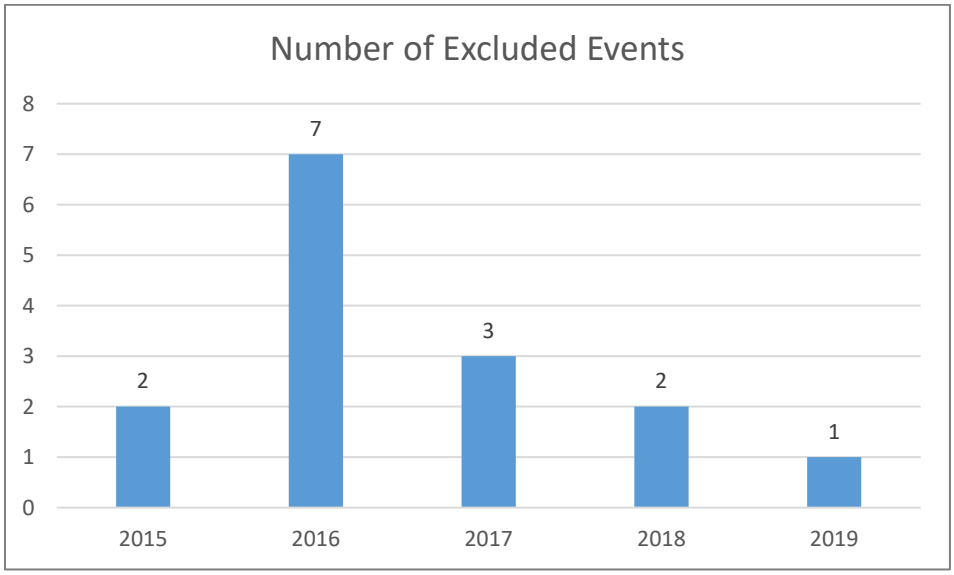


FIGURE 1: MAJOR EVENT TOTALS BY YEAR

G. *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 did not meet the MPUC thresholds for both SAIDI and SAIFI in 2019. The majority of the outages throughout 2019 were attributed to weather and equipment failure. Minnesota Power increased focus on distribution equipment maintenance and replacement in 2018 and will continue to develop these programs into the future. Two assistant engineers were hired in May 2017 to develop a trouble order tracking and remediation system which was put in place in Q4 of 2018. These assistant engineers also began implementation of a switch replacement blanket and commenced auditing of the Company's system in order to develop an asset management preventative maintenance program throughout the Company's service territory. This preventative maintenance program should increase the reliability of Minnesota Power's distribution assets going forward.

H. *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:*

January 2019

On January 3rd, 15th Ave W 230 locked out due to a damage overhead conductor. 344 customers were out of power 41 minutes, 848 customers out of power for 108 minutes, for an average outage length of 89 minutes. Overall this event contributed approximately 0.76 minutes to company SAIDI.

On January 4th, 31L, 32L and 33L lost power due to a slow operation of the 31L breaker during a fault. This caused the bus to lock out. 31 Line was locked out for 257 minutes, 32

Line for 97 minutes and 33 Line for 257 minutes. Overall this event contributed approximately 3.50 minutes to company SAIDI.

On January 7th, Lake Superior Paper 225 locked out due to a snow plow hitting a pad mount transformer. 666 customers out 35 minutes, 32 customers out 53 minutes, 93 customers out 95 minutes, 1030 customers out 126 minutes, for an average outage time of 90 minutes. Overall this event contributed approximately 1.20 minutes to company SAIDI.

On January 16th, a recloser on Wrenshall 411 locked out due to an unknown cause. Crews sectionalized the feeder to restore power to customers. 96 customers were out 178 minutes, 181 customers were out of power for 283 minutes. This outage also affected stepdown Wrenshall Riverside 6231 as well. This event contributed approximately 0.52 minutes to overall company SAIDI.

On January 27th, Gary 201 had primary fall to the ground due to the weather. This caused a momentary for 790 customers and a recloser opening up causing power to be out for 570 customers. Crews worked to isolate the downed lines and were able to restore 563 customers after 115 minutes with the remaining 6 customers being restored after 235 minutes. Overall this event contributed approximately 0.47 minutes to company SAIDI.

February 2019

On February 1st, Long Prairie 501, 527, 535 lost power due to a failed bus PT. 501 was out of power for 181 minutes on average, 535 was out of power for 139 minutes, and 527 was out of power for 151 minutes. This event contributed approximately 3.46 minutes to overall company SAIDI.

March 2019

On March 9th, Sawyer 6311 had recloser lock out due to a person cutting a tree into the primary lines. This caused 132 customers to be out of power for 196 minutes, 121 customers to be out of power for 262 minutes, for an average outage time of 228 minutes. Overall this event contributed approximately 0.40 minutes to company SAIDI.

On March 10th, Riverton 506 locked out due to a phase falling onto a crossarm. This caused Trommald 1, Deerwood County Stepdown, Deerwood 1 & 2, Cuyuna 1, and Cotton Tail Driver 1 to be out of power as well. Crew were able to switch around the fault restoring 1515 customers after 28 minutes, 21 customers after 47 minutes, 169 customers after 69 minutes, 20 customers after 99 mins, 1 customer after 201 minutes. This works out to be an average outage time of 34 minutes. Overall this event contributed approximately 0.46 minutes to company SAIDI.

On March 13th, Aurora 313 locked out due to a failed insulator on a stepdown. This outage affected Aurora 313, Laskin Energy Park, Hoyt Lakes 1 and Hoyt Lakes 2. The crews worked to switch in 1123 customers after 110 minutes, 814 customers after 112 minutes, 8 customers after 310 minutes, and the final 2 customers after 338 minutes. This event contributed approximately 0.96 minutes to overall company SAIDI.

Also on March 13th, 15th Ave W 230 locked out to an unknown cause. While crews switched in sections of feeders to find the issue 846 customers were restored after 30

minutes, 126 customers after 52 minutes, and 216 customers after 122 minutes. Overall this event contributed approximately 0.43 minutes to overall company SAIDI.

Also on March 13th, 4th Ave West 262 had a vault fill with water and causes a recloser to lock out from a cabinet that was submerged. 259 customers were out of power for 295 minutes while crews worked to switch out the issue. This event contributed approximately 0.54 minutes to overall company SAIDI.

Also on March 13th, Riverton 505 had a set of named fuses fail causing the Crosby Stepdown sub to out of power for 59 minutes while crews worked to fix the cutouts. Overall this event contributed approximately 0.45 minutes to company SAIDI.

On March 16th, Little Falls sub locked out due to a broken anchor rod swinging into 2 feeders. This caused all 4 feeders to be without power for various times. 525 had 1941 customers out for 148 minutes, 3 customers out for 260 minutes. 526 had 430 customers affected for 100 minutes, 3 customers affected for 494 minutes. 529 had all customers out of power for 153 minutes. 536 had all customers out of power for 276 minutes. This event contributed approximately 6.72 minutes to overall company SAIDI.

April 2019

On April 1st, Browerville had a prolonged outage due to a garbage truck breaking a pole. This outage affected 104 people for several hours while crews worked to replace the pole and restore the customers. Overall this event contributed approximately 0.38 minutes to overall company SAIDI.

On April 7th, Cloquet 406 locked out to and unknown cause. As crews patrolled they were able to restore 2634 customers after 58 minutes, and 526 customers after 196 minutes for an average outage time of 81 minutes. Overall this event contributed 1.83 minutes to overall company SAIDI.

On April 11th, Colbyville 242 locked out due to a storm event. As crews sectionalized and fixed the damage they were able to restore 1938 customers after 75 minutes, and the remaining 989 customers after 200 minutes for an average outage time of 108 minutes. Overall this event contributed 2.07 minutes to company SAIDI.

Also on April 11th, Akeley 543 locked out due to a broken pole. This affected the cities of Akeley and Walker, and due to an abnormal configuration the Ten Mile Lake step down as well. This affected all customers for 113 minutes. Overall this event contributed 2.37 minutes to overall company SAIDI.

On April 22nd, Blanchard 511 had a cutout fail causing 600 people to be out of power for about 2 hours. Overall this event contributed approximately 0.58 minutes to company SAIDI.

Also on April 22nd, Lind Greenway 334 locked out due to a failed insulator. This caused 990 customers to be out of power for 81 minutes while crews found and fixed the issue. This event contributed approximately 0.56 to overall company SAIDI.

May 2019

On May 3rd, Naswauk substation locked out due to a failed arrester in the sub. This affected 314, 318, 319, and step downs Taconite Village, Pengilly South, Pengilly North,

and Marble. This equates to about 1650 customer most of which were out 102 minutes when Nashwauk 319 was restored. Nashwauk 318 was restored after 107 minutes, and Nashwauk 314 was restored after 133 minutes. Overall this contributed approximately 1.18 minutes to company SAIDI.

On May 4th, Swan Lake Road 250 locked out due to failed cutouts. Crews were able to isolate and restore 3 customers 44 minutes, 511 customers after 53 minutes, 41 customers after 66 minutes, and the final 1964 customers after 107 minutes. This is an average outage time of 96 minutes. Overall this contributed approximately 1.75 minutes to company SAIDI.

On May 8th, a storm hit Minnesota Power's Central Service Area. This weather event caused many trees to fall and conductors to gallop. Several feeders were affected the major outages occurred on Upsala 1, Cloquet 409 and Ridgeview. Overall this event contributed approximately 4.26 minutes to company SAIDI.

On May 9th, the Blanchard Substation locked out due to an unknown cause. This affected 508, 511, 524 and 7 stepdown feeders. The substation feeds about 2900 customers and out times were 21 minutes for customers fed from 508, 107 minutes for 511 customers and 115 minutes for customers fed by 524. Overall this event contributed approximately 1.84 minutes to company SAIDI.

On May 19th, Haines Road 236 had an outage for 467 customers for 129 minutes due to a tree falling through the feeder. This event contributed approximately 0.42 minutes to overall company SAIDI.

On May 24th, lightning struck Platte River 547 this caused a midstream device to open up affected the city of Rice with an extended outage. All customers were out for 115 minutes. Overall this event contributed approximately 0.57 minutes to overall company SAIDI.

June 2019

On June 1st, a contractor broke a steel structure in 30 Line, this caused 30 Line from Virginia to lock out. This in turn affected the Giants Ridge feeders and the Aurora feeders, approximately 1560 customers for 330 minutes. Overall this event contributed approximately 3.64 minutes to company SAIDI.

On June 2nd, conductor damage cause Zemple 335 to lock out, affecting 816 customers. Crews were able to isolate and restore power to customers. 462 customers were out of power for 280 minutes, 354 customers were out of power for 291 minutes, and this is an average outage time of 285 minutes. This event contributed approximately 1.62 minutes to overall company SAIDI.

On June 4th, Little Falls 529 locked out due to weather, this affected the city of Little Falls. Crews were able to isolate the damage and restore power to 914 customers after 78 minutes, and then restore the remaining 2167 customers after 94 minutes for an average outage time of 90 minutes.

On June 9th, Nashwauk 319 locked out due to weather. This affected approximately 1600 customer for an average of 105 minutes. Crews were able to restore 1301 customer after 103 minutes and the damage to the feeder required 3 customers to be out of power for

365 minutes. This event contributed approximately 1.18 minutes to overall company SAIDI.

On June 11th, Blanchard 511was struck by lightning causing 658 customers to be out of power. Crews were able to restore 440 customers after 162 minutes, 166 customers after 181 minutes and the remaining 52 customers after 229 minutes for an average outage time of 173 minutes. Overall this event contributed approximately 0.79 minutes to company SAIDI.

On June 17th, Hibbing 310 locked out to and unknown cause. This outage affected the city of Hibbing, Chisholm, and Balkan. Crews worked to restore 2470 customer after 73 minutes, and the remaining 485 customers after 155 minutes for an average outage time of 87 minutes. Overall this event contributed approximately 1.92 minutes to company SAIDI.

On June 20th, Lake Superior Paper 225 locked out due to a bad breaker. As crews worked to figure out what was wrong with the feeder they restored power to 1816 customers after 79 minutes with the last customer being restore after 118 minutes for an average outage time of 80 minutes. This event contributed approximately 1.06 minutes to overall company SAIDI.

On June 23rd, Nashwauk 319 locked out due to an osprey next. As crews isolated the fault they restored power to 529 customers after 98 minutes, 525 customers after 122 minutes and the remaining 250 customers after 186 minutes for an average outage time of 125 minutes. Overall this event contributed approximately 1.13 minutes to company SAIDI.

On June 26th, Ten Mile Lake was taken out of power for planned maintenance. This took 315 customers out of power for 100 minutes, and 210 customers out of power for 129 minutes for an average of 112 minutes. Overall this event contributed approximately 0.41 minutes to company SAIDI.

On June 28th, a bird caused an outage for the Denham feeder. This locked the feeder out for 58 minutes while crews worked to bypass the damage. Overall this event contributed approximately 0.51 minutes to company SAIDI.

On June 30th, a storm hit most of Minnesota Power’s Service Territory. Causing several momentary and prolonged outages. Most of the outage resided up in the northern territory. This weather event affected over 6000 customers through long or momentary outages. This event overall contributed approximately 1.38 minutes to overall company SAIDI.

July 2019

On July 4th, Little Falls 529 locked out due to a broken insulator, this affected customers served off 529, Little Falls Hospital 1, Little Falls South 1, and Little Falls East 1. Crews found the broken insulator and switched the feeder back into service after 57 minutes. Overall this event contributed approximately 1.35 minutes to company SAIDI.

On July 10th, the Gary Substation locked out due to a failed switch within the sub. This caused 1496 customers to be out of power for 92 minutes, and 1407 customers to be out of power for 106 minutes. This event contributed approximately 2.04 minutes to overall company SAIDI.

On July 14th, there was a weather event that hit western in the Riverton area. The winds associated with this storm caused Riverton 506 and Eagle Valley 513 to lock out. This affected step downs Trommald 1, Deerwood County Hwy 12 Stepdown, Deerwood 1 & 2, Cuyuna 1, Cotton Tail Drive 1, and Clarissa 1 & 2. This event affected 3,680 customers for approximately an overall contribution to company SAIDI of 4.30 minutes.

On July 15th, Gary 201 had a regulator fail causing the feeder to lock out. Crews were able to isolate the faulty regulator and restore 1344 customers after only 41 minutes, and the final 16 customers after 81 minutes for an average out time of 42 minutes. Overall this event contributed approximately 0.41 minutes to company SAIDI.

On July 17th, the regulator that replaced the failed one also failed just a few hours after being installed. All customers were affected for 41 minutes. This event contributed approximately 0.40 minutes to overall company SAIDI.

On July 20th, a squirrel on Platte River 547 caused a high side set of fuses for Rice 1 to blow. This caused the Rice 1 stepdown to be out of power for 299 minutes. Overall this event contributed approximately 1.49 minutes to overall company SAIDI.

On July 27th, there was a fly hatch that congregated on an insulator causing the Little Falls 525 feeder to lock out. While crews were working to identify the issue they were able to restore 3 customers after 97 minutes, 587 customers after 204 minutes, and the final 65 customers after 249 minutes for an average outage time of 174 minutes. This lockout affected the Little Falls North Stepdown 1 & 2, and the Little Falls West 1 & 2 step downs. This event contributed approximately 2.35 minutes to overall company SAIDI.

August 2019

On August 1st, there was a planned outage for a road move that affected 539 customers on the Sebeka 1 feeder for about 140 minutes. Overall this event contributed approximately 0.53 minutes to overall company SAIDI.

On August 6th, the Sandstone stepdown locked out due to failed substation equipment. This caused 1250 customers to be out of power for 85 minutes while crews worked to bypass the failed equipment. Overall this event contributed approximately 0.74 minutes to company SAIDI.

On August 12th, the transformer at Meadowlands Substation failed causing 9 Line to lock out twice during the day. With 9 Line out of power the Burnett substation is affected also. Overall this outage affected 833 customers, Burnett customers were out for 74 minutes at first then an additional 7 minutes. While the Meadowlands customers were tied to the Floodwood feeder after a 206 minute outage. Crews ended up having to install the mobile substation to restore the feeder to a normal configuration. This event contributed approximately 0.84 minutes to company SAIDI.

Also on August 12th, there was a vehicle accident that caused the Hat Trick 321 feeder to lock out. This also affected the Eveleth 1 stepdown. Overall 1650 customers were affected initially, crews were able to restore power to 1013 customers after 80 mins, and restoring the remaining 636 customers after 240 minutes for an average outage time of 102 minutes. This event contributed approximately 1.17 minutes to company SAIDI.

On August 18th, the meadowlands feeder being fed by the mobile substation locked out due to feeder imbalance. While crews worked to fix the issue they were able to restore 5 customers after 190 mins and the remaining customers after 351 mins, this is an average outage time of 350 minutes. Overall this event contributed approximately 1.11 minutes to company SAIDI.

September 2019

On September 2nd, a tree fell due to the high winds causing the Royalton 1 feeder to lock out. This affected 663 customers for an average outage time of 181 minutes. This event contributed approximately 0.83 minutes to overall company SAIDI.

Also on September 2nd, Clarissa 1 locked out due to weather. Crews were able to restore 222 customer after 66 minutes and the remaining 224 customers after 162 minutes, for an average outage time of 115 mins. This event contributed approximately 0.39 minutes to overall company SAIDI.

On September 17th continuing into the morning of the 18th, there was a storm that rolled through our Western area and then blowing into the Central area. Some of the major feeders affected were Little Falls 526, Blanchard 511, and Bear Creek 198 L, among others. Overall this event contributed approximately 3.30 minutes to company SAIDI.

On September 21st, 15th Ave W 260 locked out due to weather affecting 969 customers. While crews worked to fix the storm damage they were able to restore 104 customers after just 27 mins, 56 customer after 49 mins, 1 customer after 61 mins, 759 customers after 88 mins, 3 customer after 98 mins, and the final customer after just 103 mins. This works out to be an average outage time of 79 mins. The event contributed approximately 0.53 minutes to overall company SAIDI.

On September 27th, Aurora 1 and 2 were taken out of power to repair a sub transmission structure that was damaged by an excavator a while ago. This outage took 493 customers on Aurora 1 and 727 customers on Aurora 2 for 189 minutes while crews fixed the damaged structure. Overall this event contributed approximately 1.60 minutes to company SAIDI.

Also on September 27th, a broken jumper caused Backus 1 to be out of power for 76 minutes. This affected 694 customers for the duration and contributed approximately 0.37 minutes to overall company SAIDI.

Also on September 27th, a vehicle accident on Harts Press 1 cause a recloser to open and remain open for 326 minutes for the 179 customers while crews worked to fix the damage caused by the accident. This event contributed approximately 0.41 minutes to overall company SAIDI.

October 2019

On October 7th, Colbyville 241 locked out due to a tree falling into the lines. Crews were able to isolate the damage and restore 587 customers after 45 minutes, and the remaining 1210 customers were restored after 158 minutes. Overall this event contributed approximately 1.59 minutes to overall company SAIDI.

On October 11th, Riverton 505 locked out due to a bad order arrester. This lockout affected the stepdown feeders Crosby 1 & 2, Ironton 1 and Black Hoof Lake 1 as well.

Crews were able to restore 606 customers after 136 minutes and the remaining 1048 customers after 141 mins. This outage contributed to overall company SAIDI approximately 1.67 minutes.

On October 20th, Canosia 413 locked out due to a tree falling into the lines. Crews worked to restore 511 customers after 99 minutes, 416 customers after 229 minutes, 23 customers after 247 minutes, 85 customers after 261 minutes, and 125 customers after 264 minutes. Overall this event contributed approximately 1.53 minutes to company SAIDI.

Also on October 20th, on Cloquet 409 had a conductor fall opening up at a mid-feed protection device causing 392 customers to be out of power for 281 minutes. This event contributed approximately 0.77 minutes to company SAIDI.

On October 21st, there was a weather event hit MP's service territory, all areas were affected. The larger outages took place in the Duluth area. This affected many feeders and the impacts ranged from single customer outage to full feeder lockouts. Overall this event 20.47 minutes to company SAIDI and is Storm Excluded. These outages spilled into the next day as well.

November 2019

On November 14th, the Meadowlands feeder 401, is being fed by a mobile substation and locked out due to an unknown cause. Crews were able to restore a single customer after 142 minutes, 399 customers after 146 minutes, 5 customers after 150 minutes. This event contributed approximately 0.46 minutes to overall company SAIDI.

On November 17th, Nashwauk 319 downstream of the mid-feed recloser Calumet F opened up due to a failed pole. Crews were able to restore 461 customers after 148 minutes, 9 customers after 209 minutes, and the final 59 customers after 588 minutes. Overall this event contributed approximately 0.73 minutes to company SAIDI.

On November 30th, 15th Ave W 260 feeder locked out due to broken overhead equipment caused by weather. Crews were able to restore 159 customers after 62 minutes, and the remaining 768 customers after 125 minutes. This event caused approximately 0.77 minutes to overall company SAIDI.

December 2019

On December 1st, another smaller winter storm rolled through the central area of MP's service territory. There were just a few feeder lockouts and momentary outages, but they were substantial. Overall this event contributed approximately 6.38 minutes to company SAIDI.

On December 29th, a small winter storm hit the western and central areas of MP's service territory. There was several inches of heavy wet snow and rain reported in areas. This caused several momentary outages, and a handful of prolonged outages ranging from singe customer outages to full feeder lockouts. This event contributed approximately 2.87 minutes to company SAIDI.

On December 31st, another small weather event hit the western service territory. This caused just a couple momentary and a couple sustained outages. The momentary outages were on Birch Lake 509, Akeley 543 and their 5 step downs. The sustained

outages were on Akeley 543 downstream of the Walker F affecting Walker Sub 3 Fdr, and Long Lake 542 and its step downs. Overall this event contributed approximately 0.83 minutes to company SAIDI.

I. *A copy of each report filed under part 7826.0700*;

These reports are provided as Appendix B to this Report.

J. *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. The following table clarifies the selections:

TABLE 3: WORST PERFORMING FEEDERS USING MAJOR EVENT NORMALIZED DATA

Criteria	Circuit	# of Customers	SAIDI	SAIFI	CAIDI
High Feeder SAIDI (Urban)	Fort Ripley 1	79	782.38	6.00	130.40
High Customer Outage Minutes (Urban)	Swan Lake 250	2593	168.56	1.70	99.15
High Feeder SAIDI (Rural)	Ten Mile Lake 1	245	1034.82	10.56	97.99
High Customer Outage Minutes (Rural)	Wrenshall 411	1251	634.45	3.26	194.62

Swan Lake 250

- On **May 4th,** Swan Lake Road 250 locked out due to failed cutouts. Crews were able to isolate and restore 3 customers 44 minutes, 511 customers after 53 minutes, 41 customers after 66 minutes, and the final 1964 customers after 107 minutes. This is an

average outage time of 96 minutes. Overall this contributed approximately 1.75 minutes to company SAIDI.

Ten Mile Lake 1

- On **June 26th,** Ten Mile Lake was taken out of power for planned maintenance. This took 315 customers out of power for 100 minutes, and 210 customers out of power for 129 minutes for an average of 112 minutes. Overall this event contributed approximately 0.41 minutes to company SAIDI.

Wrenshall 411

- On **January 16th,** a recloser on Wrenshall 411 locked out due to an unknown cause. Crews sectionalized the feeder to restore power to customers. 96 customers were out 178 minutes, 181 customers were out of power for 283 minutes. This outage also affected stepdown Wrenshall Riverside 6231 as well. This event contributed approximately 0.52 minutes to overall company SAIDI.

K. *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 8 reported instances of ANSI voltage violations in 2019.

TABLE 4: REPORTED INSTANCES OF ANSI VOLTAGE VIOLATIONS 2019

Account Number	Cause	Voltage
3540142156	MP Overhead Equipment	120/330/400
5410006515	Unknown	123 / 123 / 246
580116480	MP Overhead Equipment	121 1/2 1211/2 243
660090449	Load	112/111/223
6090203807	Unknown	118/118/236
1070122536	MP Overhead Equipment	125/125
9750064415	MP Overhead Equipment	122 / 122 / 244
5230045866	MP Underground Equipment	270 / 30
3540142156	MP Overhead Equipment	120/330/400

L. *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.*

In 2019, Minnesota Power had 13.68 full-time equivalent contractor positions and 99 lineworkers responsible for responding to trouble calls and for the operation and maintenance of distribution lines.

M. *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

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 options as targets not to exceed in 2019:

SAIDI	98.19
SAIFI	1.02
CAIDI	96.26

These targets follow the Commission's guidance in its January 28, 2020 Order in Docket No, E-015/M-19-254.

REPORTING METER-READING PERFORMANCE: 7826.1400

TABLE 5: METER EQUIPMENT AND PERCENTAGE DEPLOYED

Equipment	Percent in Use[1]	Description
Mechanical Meters	< 1%	Traditional electro-mechanical meter that records kWh usage.
AMR – Mechanical Hybrid	38.18%	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	1.54%	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	60.13%	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.

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.*

In 2019, Minnesota Power read an average of 98.95% of residential meters, 98.63% of commercial meters, 99.83% of industrial, 99.94% municipal pumping, and 99.98% lighting meters.

[1] As of 1/1/2020

TABLE 6: RESIDENTIAL METER READS – UTILITY 2019

Month	Co. Reads	Est	Total	% Read
Jan-19	128,105	1,583	129,688	**98.78%**
Feb-19	118,862	966	119,828	**99.19%**
Mar-19	139,349	731	140,080	**99.48%**
Apr-19	123,443	555	123,998	**99.55%**
May-19	137,188	683	137,871	**99.50%**
Jun-19	117,411	1,198	118,609	**98.99%**
Jul-19	142,259	834	143,093	**99.42%**
Aug-19	128,864	2,020	130,884	**98.46%**
Sep-19	116,780	1,351	118,131	**98.86%**
Oct-19	140,882	2,811	143,693	**98.04%**
Nov-19	115,211	2,885	118,096	**97.56%**
Dec-19	141,584	629	142,213	**99.56%**
Average	129,162	1,354	130,515	**98.95%**

In 2019, Minnesota Power read an average of 99.63% of commercial meters.

TABLE 7: COMMERCIAL METER READS – UTILITY 2019

Month	Co. Reads	Est	Total	% Read
Jan-19	21,180	18	21,198	**99.92%**
Feb-19	19,723	41	19,764	**99.79%**
Mar-19	22,124	36	22,160	**99.84%**
Apr-19	20,127	66	20,193	**99.67%**
May-19	21,962	50	22,012	**99.77%**
Jun-19	19,422	69	19,491	**99.65%**
Jul-19	22,676	24	22,700	**99.89%**
Aug-19	20,968	103	21,071	**99.51%**
Sep-19	19,398	103	19,501	**99.47%**
Oct-19	22,606	69	22,675	**99.70%**
Nov-19	19,350	209	19,559	**98.93%**
Dec-19	22,124	119	22,243	**99.47%**
Average	20,972	76	21,047	**99.63%**

In 2019, Minnesota Power read an average of 99.83% of industrial meters.

TABLE 8: INDUSTRIAL METER READS – UTILITY 2019

Month	Co. Reads	Est	Total	% Read
Jan-19	404	0	404	**100.00%**
Feb-19	384	0	384	**100.00%**
Mar-19	403	1	404	**99.75%**
Apr-19	386	0	386	**100.00%**
May-19	396	1	397	**99.75%**
Jun-19	383	0	383	**100.00%**
Jul-19	405	1	406	**99.75%**
Aug-19	391	0	391	**100.00%**
Sep-19	377	1	378	**99.74%**
Oct-19	397	1	398	**99.75%**
Nov-19	373	2	375	**99.47%**
Dec-19	395	1	396	**99.75%**
Average	391	1	392	**99.83%**

In 2019, Minnesota Power read an average of 99.94% of municipal meters.

TABLE 9: MUNICIPAL METER READS – UTILITY 2019

Month	Co. Reads	Est	Total	% Read
Jan-19	273	0	273	**100.00%**
Feb-19	270	0	270	**100.00%**
Mar-19	275	0	275	**100.00%**
Apr-19	271	1	272	**99.63%**
May-19	278	0	278	**100.00%**
Jun-19	268	0	268	**100.00%**
Jul-19	271	0	271	**100.00%**
Aug-19	277	1	278	**99.64%**
Sep-19	266	0	266	**100.00%**
Oct-19	278	0	278	**100.00%**
Nov-19	268	0	268	**100.00%**
Dec-19	272	0	272	**100.00%**
Average	272	0	272	**99.94%**

In 2019, Minnesota Power read an average of 99.98% of lighting meters.

TABLE 10: LIGHTING METER READS - UTILITY 2019

Month	Co. Reads	Est	Total	% Read
Jan-19	358	0	358	**100.00%**
Feb-19	337	0	337	**100.00%**
Mar-19	379	1	380	**99.74%**
Apr-19	345	0	345	**100.00%**
May-19	372	0	372	**100.00%**
Jun-19	345	0	345	**100.00%**
Jul-19	377	0	377	**100.00%**
Aug-19	360	0	360	**100.00%**
Sep-19	341	0	341	**100.00%**
Oct-19	380	0	380	**100.00%**
Nov-19	338	0	338	**100.00%**
Dec-19	384	0	384	**100.00%**
Average	360	0	360	**99.98%**

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

Customer reads averaged 0.04% of the system total in 2019, of those Minnesota Power received an average of 97.84% of reads.

Month	Cust Reads	Est	Total	% Read
Jan-19	59	2	61	**96.72%**
Feb-19	51	1	52	**98.08%**
Mar-19	69	1	70	**98.57%**
Apr-19	54	0	54	**100.00%**
May-19	69	0	69	**100.00%**
Jun-19	51	1	52	**98.08%**
Jul-19	75	0	75	**100.00%**
Aug-19	68	1	69	**98.55%**
Sep-19	56	1	57	**98.25%**
Oct-19	75	1	76	**98.68%**
Nov-19	49	4	53	**92.45%**
Dec-19	72	4	76	**94.74%**

Customer reads averaged 0.01% of the system total in 2019, of those Minnesota Power received an average of 100% of reads.

Month	Cust Reads	Est	Total	% Read
Jan-19	12	0	12	**100.00%**
Feb-19	12	0	12	**100.00%**
Mar-19	12	0	12	**100.00%**
Apr-19	12	0	12	**100.00%**
May-19	12	0	12	**100.00%**
Jun-19	12	0	12	**100.00%**
Jul-19	12	0	12	**100.00%**
Aug-19	12	0	12	**100.00%**
Sep-19	12	0	12	**100.00%**
Oct-19	12	0	12	**100.00%**
Nov-19	12	0	12	**100.00%**
Dec-19	12	0	12	**100.00%**

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.*

TABLE 11: METERS NOT READ 6-12 MONTHS 2019

Months Estimated	Company Read Service Points	% of Total	Not Read Reason	Customer Read Service Points	% of Total
6 Months	11	0.007%	No Access/AMR	0	0.000%
7 Months	6	0.004%	No Access/AMR	0	0.000%
8 Months	6	0.004%	No Access/AMR	0	0.000%
9 Months	7	0.005%	No Access/AMR	0	0.000%
10 Months	7	0.005%	No Access/AMR	0	0.000%
11 Months	7	0.005%	No Access/AMR	0	0.000%
12 Months	3	0.002%	No Access/AMR	0	0.000%
12+Months	0	0.000%	No Access/AMR	0	0.000%
Totals:	**47**			**0**	

Minnesota Rules 7820.3300 requires that meters are read annually. Customers with Company read meters that are not read for six to twelve months are left reminder notices at the home premise 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*

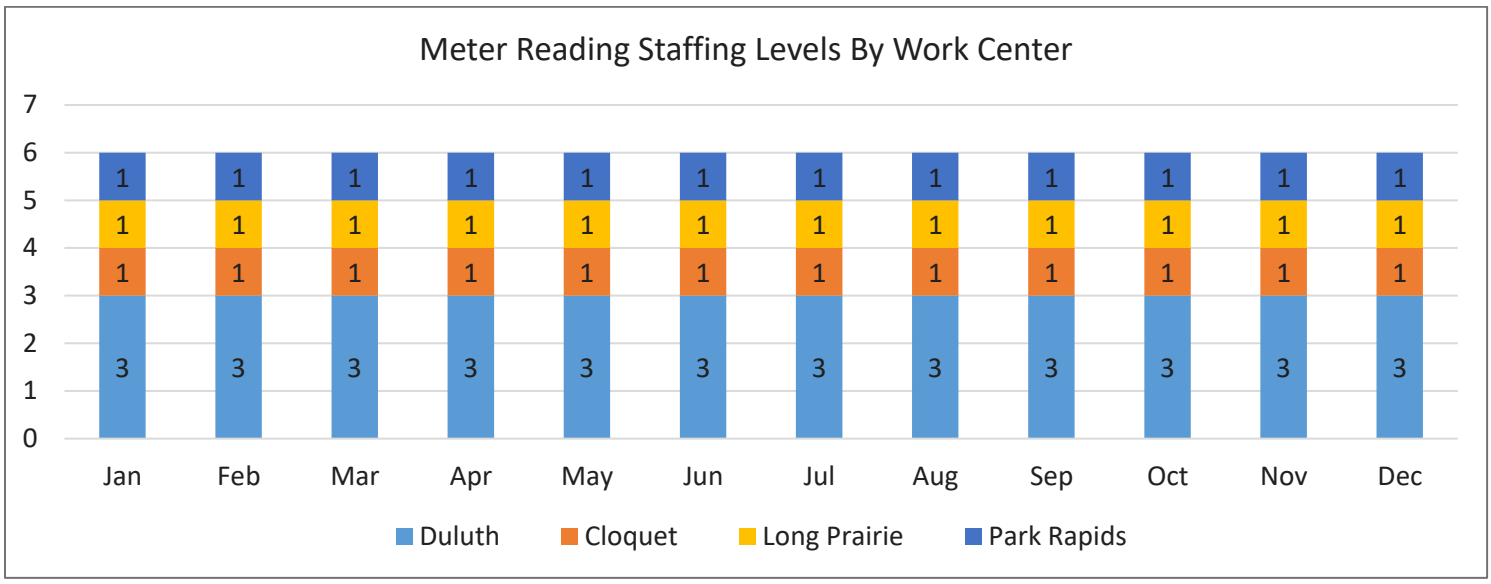
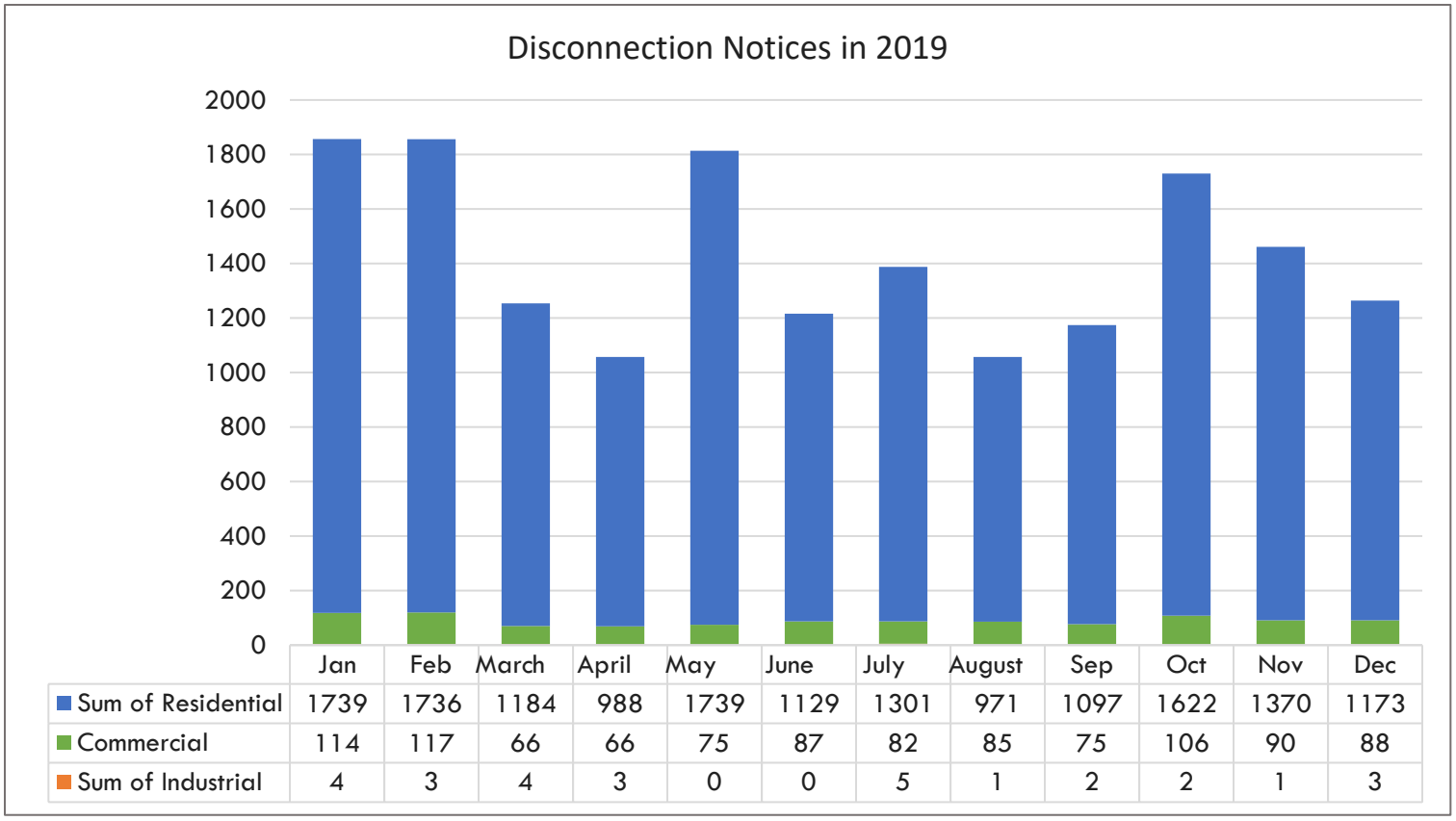


FIGURE 2: METER-READING STAFFING LEVELS BY WORK CENTER 2019

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;*



	Jan	Feb	March	April	May	June	July	August	Sep	Oct	Nov	Dec
Sum of Residential	1739	1736	1184	988	1739	1129	1301	971	1097	1622	1370	1173
Commercial	114	117	66	66	75	87	82	85	75	106	90	88
Sum of Industrial	4	3	4	3	0	0	5	1	2	2	1	3

FIGURE 3: DISCONNECTION NOTICES 2019

Total Disconnection Notices in 2019		
Residential	Commercial	Industrial
16,049	1,051	28

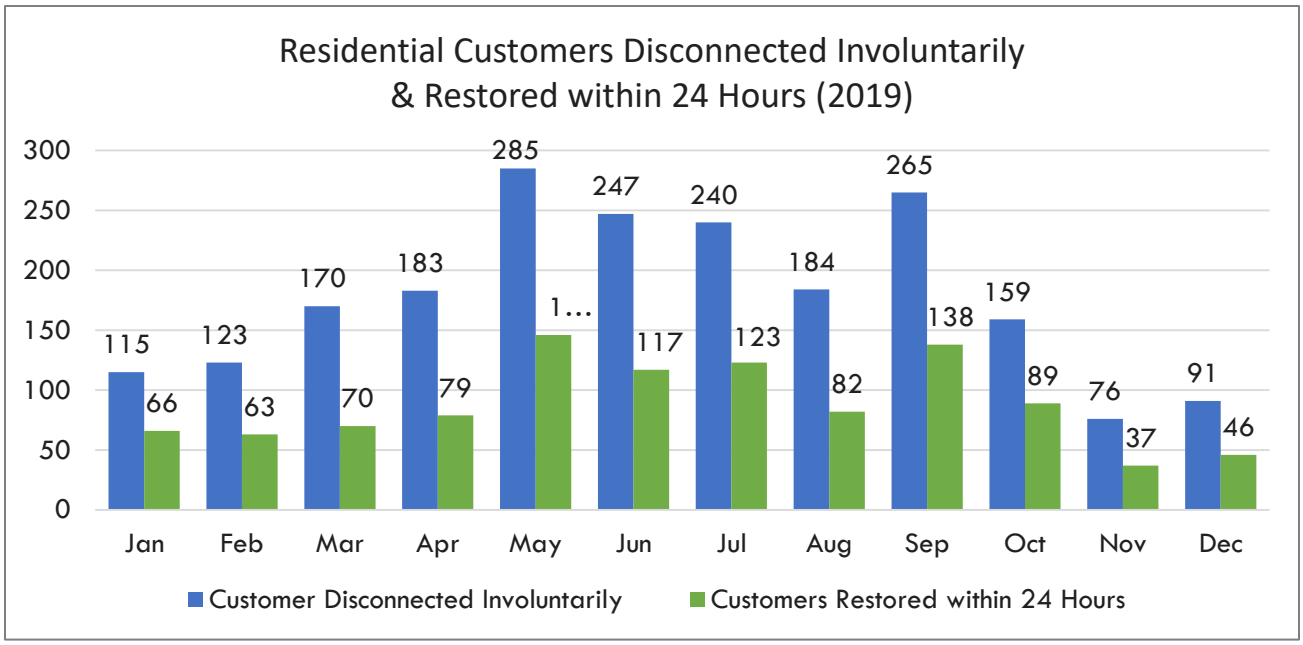
B. *The number of customers who sought cold weather rule protection under chapter 7820 and the number who were granted cold weather rule protection;*

FIGURE 4: CUSTOMERS WHO SOUGHT AND WERE GRANTED CWR PROTECTION 2019

Total Residential Customers Who Sought CWR Protection	Total Residential Customers Granted CWR Protection
4,232	4,232

Minnesota Power granted Cold Weather Rule protection to 100% of customers who requested protection.

C. *The total number of customers whose service was disconnected involuntarily and the number of these customers restored to service within 24 hours;*



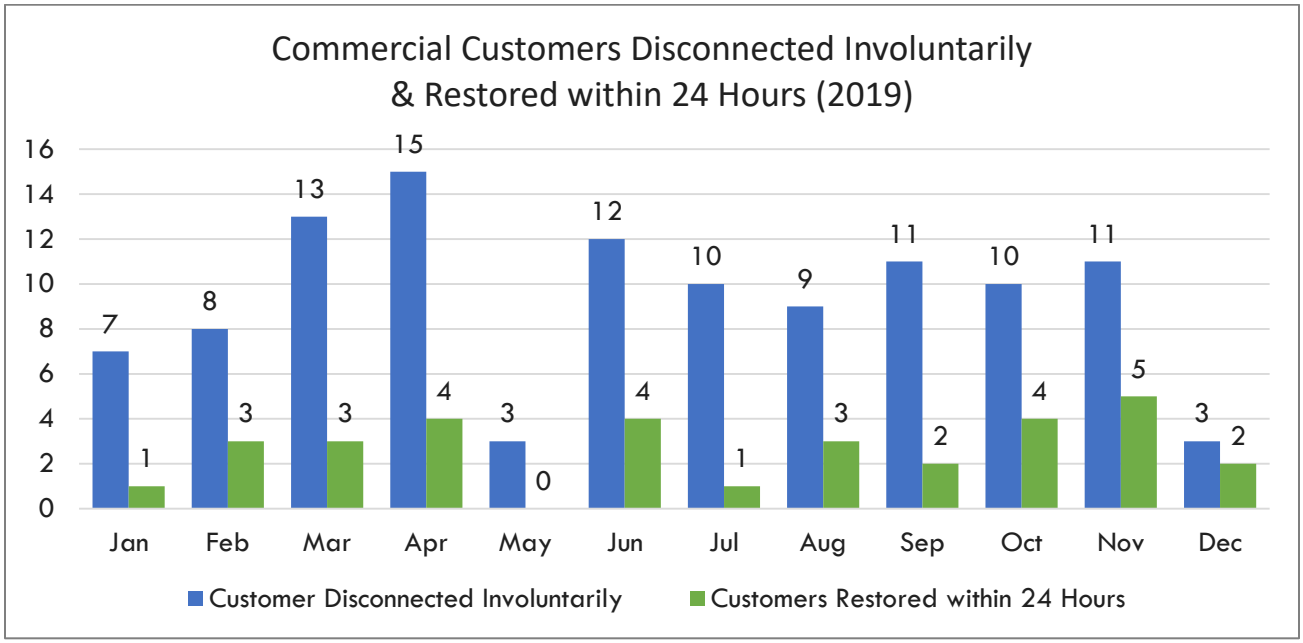


TABLE 12: CUSTOMERS DISCONNECTED INVOLUNTARILY AND RESTORED W/IN 24 HOURS 2019

Total Customer Disconnected Involuntarily			Total Customers Restored within 24 Hours		
Residential	Commercial	Industrial	Residential	Commercial	Industrial
2,138	112	1	1,056	32	0

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

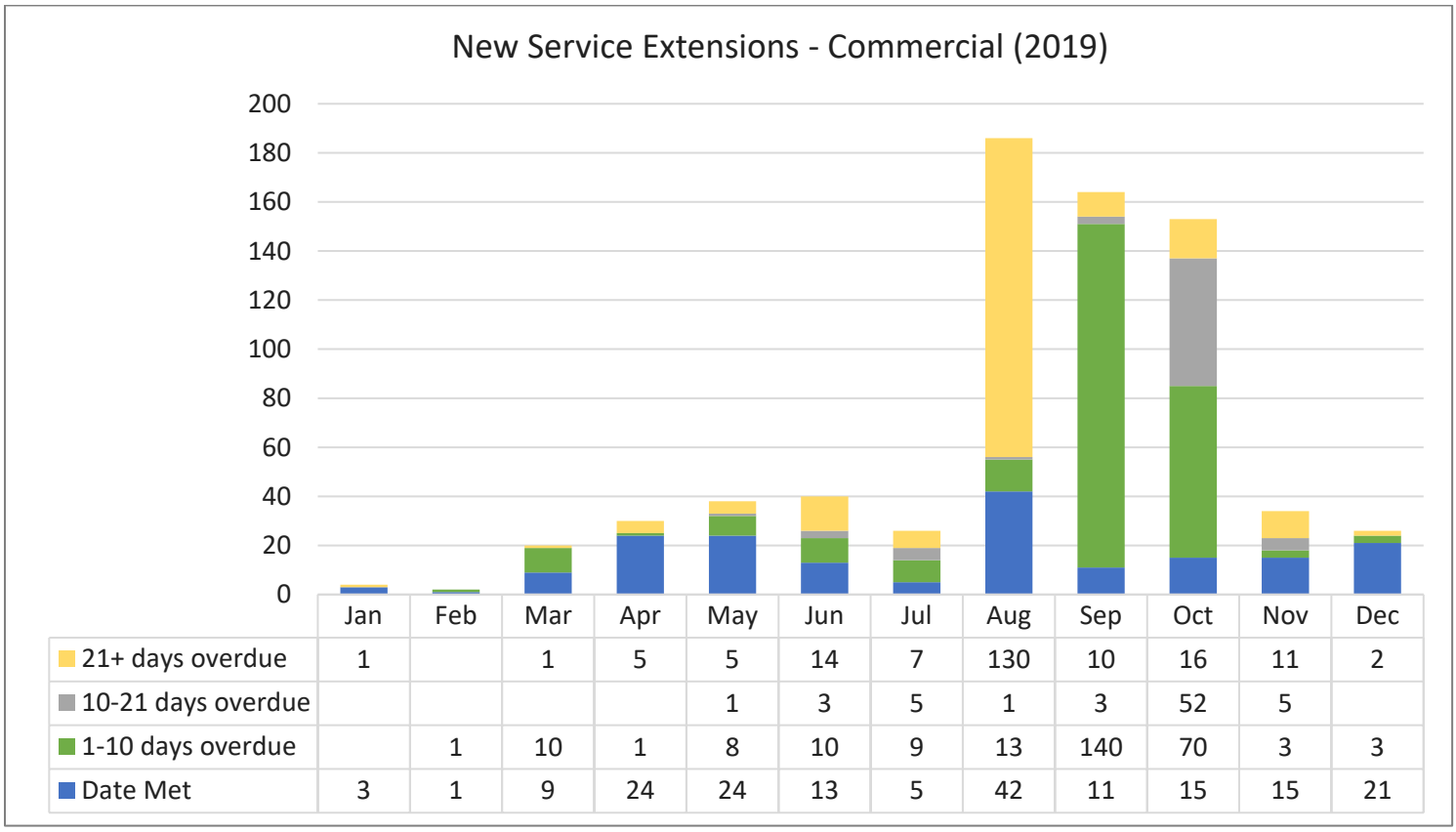
TABLE 13: CUSTOMERS RESTORED VIA PAYMENT PLAN 2019

Month	*Residential*	*Commercial*	*Industrial*
Jan	72	2	0
Feb	69	3	0
Mar	89	4	0
Apr	107	3	0
May	191	1	0
Jun	146	3	0
Jul	151	2	0
Aug	130	3	0
Sep	165	2	0
Oct	115	4	0
Nov	64	9	0
Dec	58	0	0

SERVICE EXTENSION REQUEST RESPONSE TIMES: 7826.1600

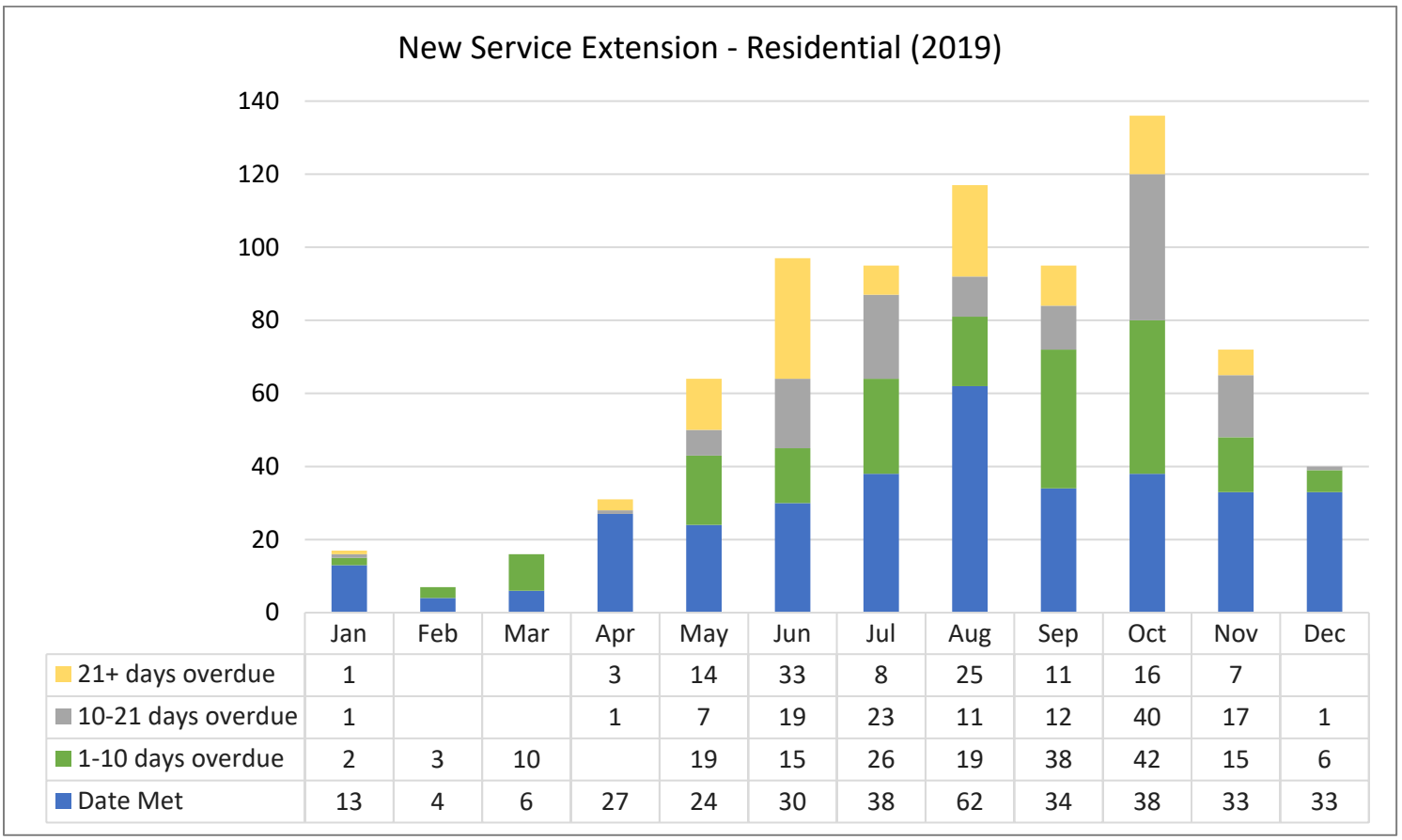
The annual service quality report must include a detailed report on service extension request response times, including, for each customer class and each calendar month:

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*.



	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
21+ days overdue	1		1	5	5	14	7	130	10	16	11	2
10-21 days overdue					1	3	5	1	3	52	5	
1-10 days overdue		1	10	1	8	10	9	13	140	70	3	3
Date Met	3	1	9	24	24	13	5	42	11	15	15	21

FIGURE 5: NEW SERVICE EXTENSIONS – COMMERCIAL 2019



	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
21+ days overdue	1			3	14	33	8	25	11	16	7	
10-21 days overdue	1			1	7	19	23	11	12	40	17	1
1-10 days overdue	2	3	10		19	15	26	19	38	42	15	6
Date Met	13	4	6	27	24	30	38	62	34	38	33	33

FIGURE 6: NEW SERVICE EXTENSIONS – RESIDENTIAL 2019

There were only 3 new industrial extensions completed in 2019 and all but one fell into the “1-10 Days Overdue” category.

The following chart 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:

The three largest, and most significant reasons, for a delay in meeting in-service date in 2019 were: Dates not updated (61.87%), customer not ready (17.73%), and weather (8.77%).

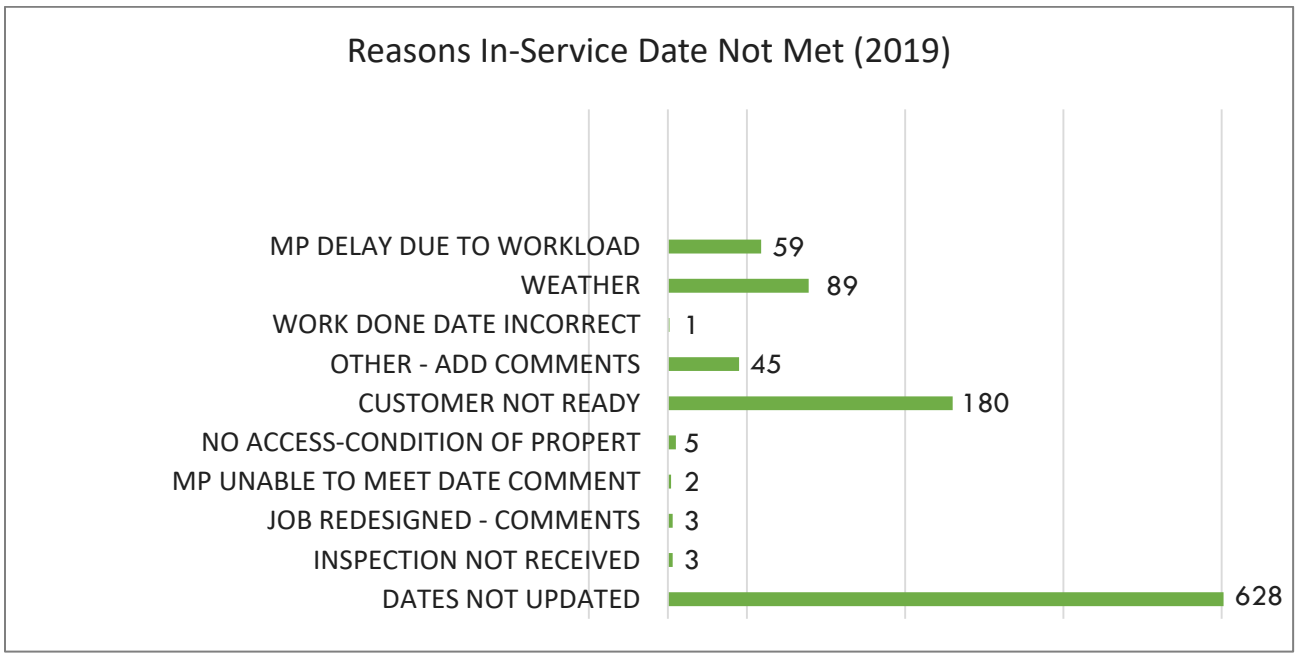
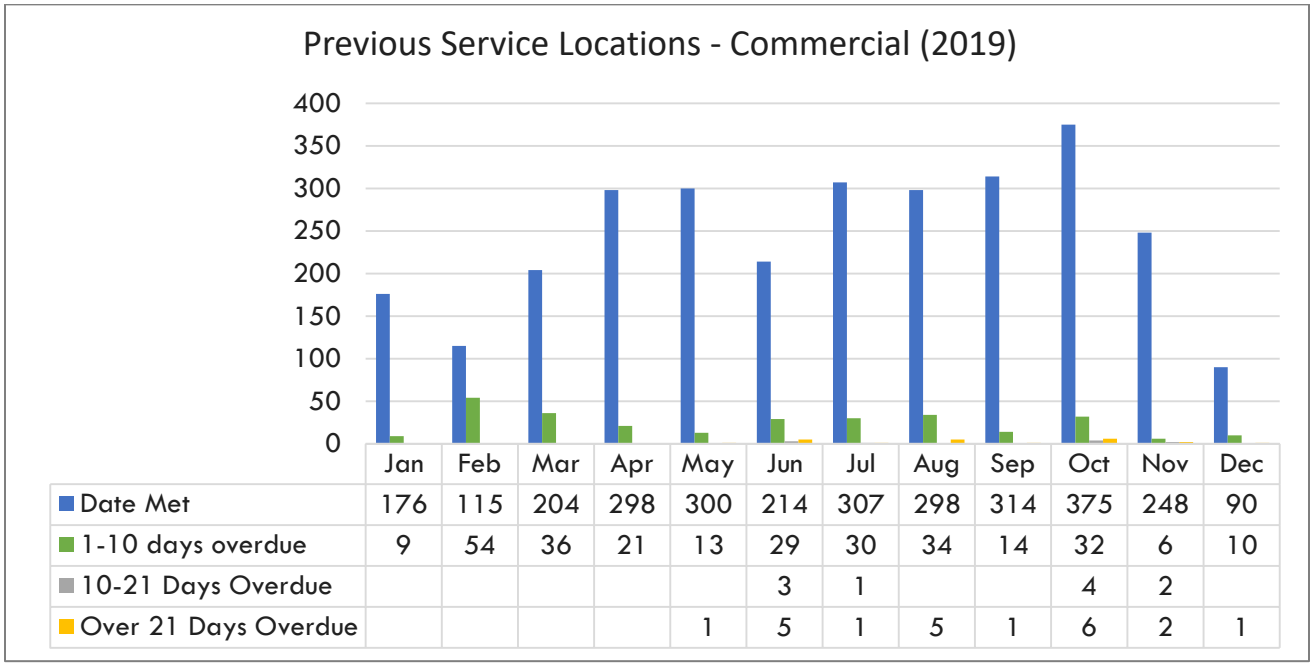


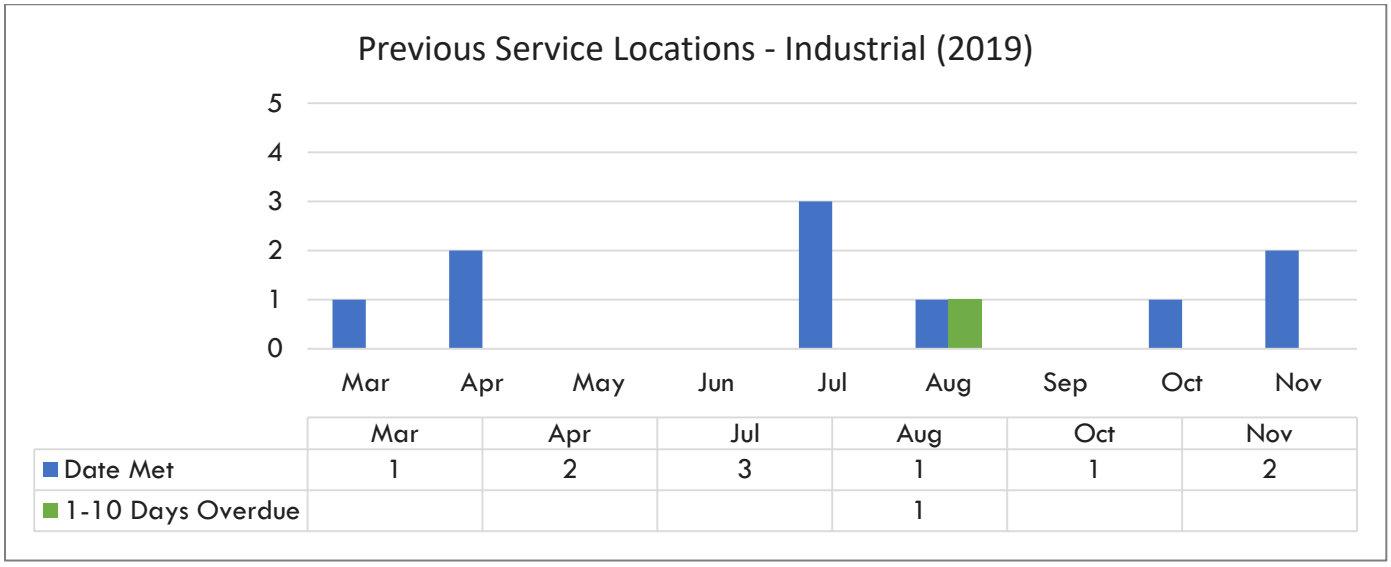
FIGURE 7: NEW SERVICE EXTENSIONS – REASONS DATES NOT MET 2019

The number of customers requesting service to a location previously served by 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.



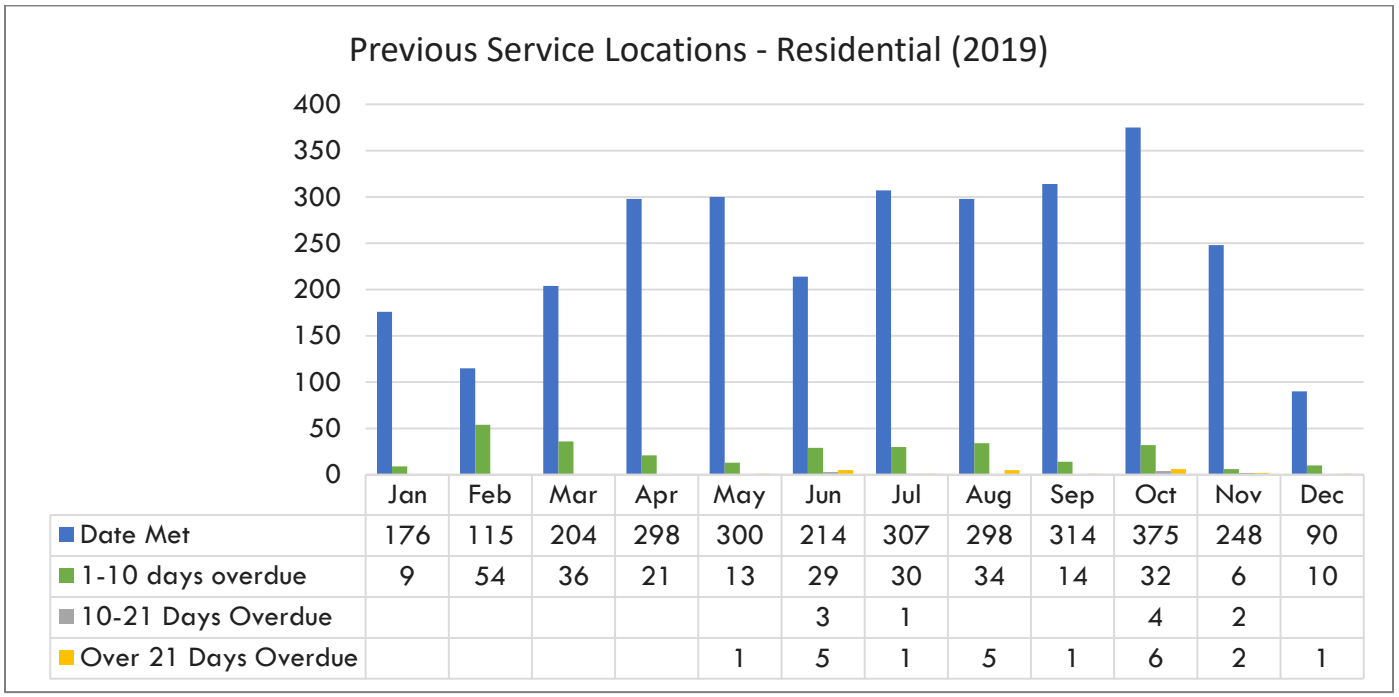
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Date Met	176	115	204	298	300	214	307	298	314	375	248	90
1-10 days overdue	9	54	36	21	13	29	30	34	14	32	6	10
10-21 Days Overdue						3	1			4	2	
Over 21 Days Overdue					1	5	1	5	1	6	2	1

FIGURE 8: PREVIOUS LOCATIONS - COMMERCIAL 2019



	Mar	Apr	Jul	Aug	Oct	Nov
Date Met	1	2	3	1	1	2
1-10 Days Overdue				1		

FIGURE 9: PREVIOUS SERVICE LOCATIONS – INDUSTRIAL 2019



	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Date Met	176	115	204	298	300	214	307	298	314	375	248	90
1-10 days overdue	9	54	36	21	13	29	30	34	14	32	6	10
10-21 Days Overdue						3	1			4	2	
Over 21 Days Overdue					1	5	1	5	1	6	2	1

FIGURE 10: PREVIOUS SERVICE LOCATIONS – RESIDENTIAL 2019

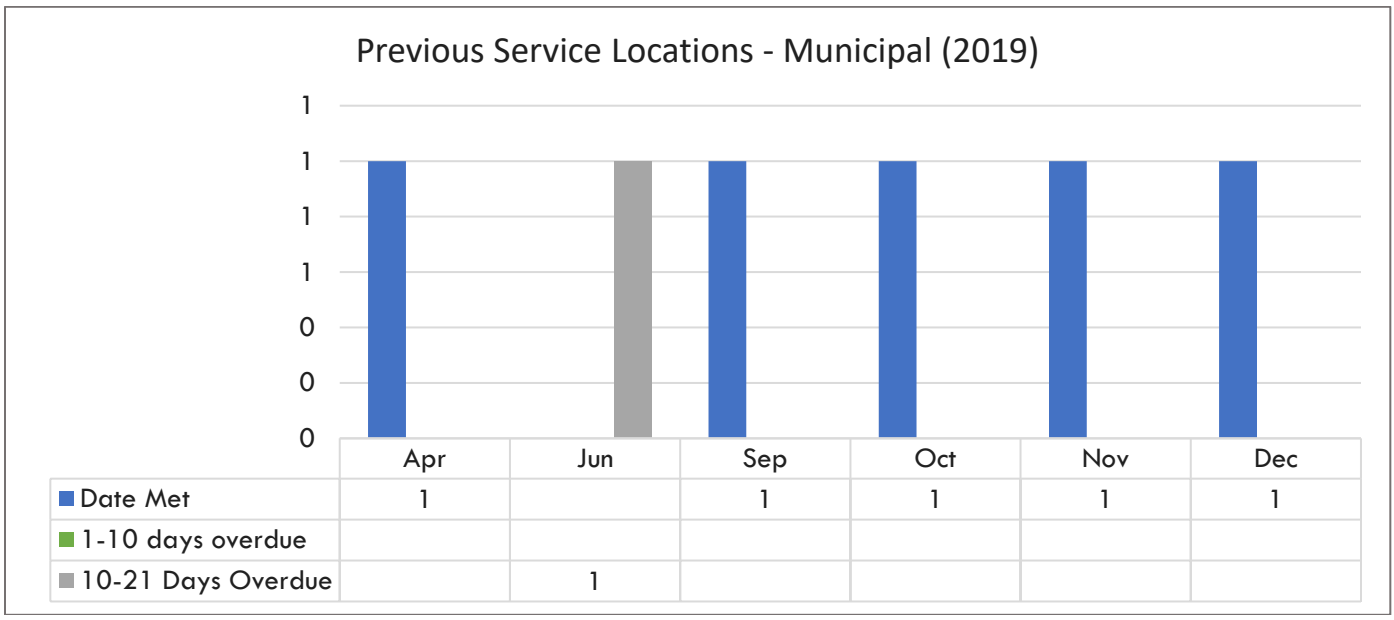


FIGURE 11: PREVIOUS SERVICE LOCATIONS – MUNICIPAL 2019

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**:**

The three largest, and most significant reasons for a delay in meeting in-service date in 2019 were: dates not updated for project (89.54%), Minnesota Power delay due to workload (2.04%), and weather (2.04%).

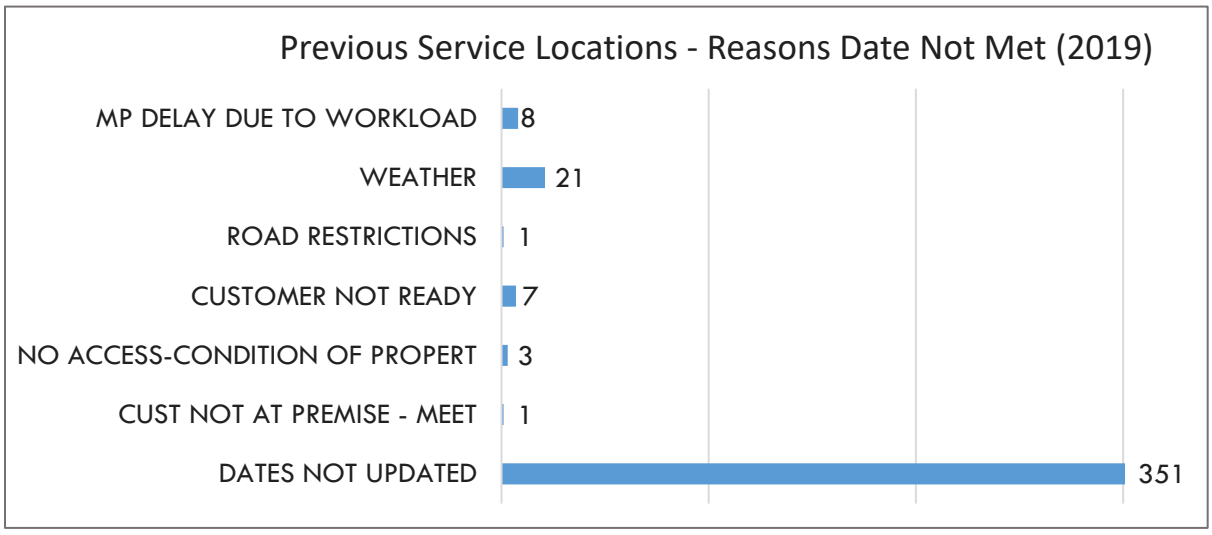


FIGURE 12: PREVIOUS SERVICE LOCATIONS – REASONS DATE NOT MET 2019

REPORTING CALL CENTER RESPONSE TIMES: 7826.1200 & 7826.1700

7826.1200:
Subpart 1. Calls to business office. On an annual basis, utilities shall answer 80 percent of calls made to the business office during regular business hours within 20 seconds. "Answer" means that an operator or representative is ready to render assistance or accept the information to handle the call. Acknowledging that the customer is waiting on the line and will be served in turn is not an answer. If the utility uses an automated call-processing system, the 20-second period begins when the customer has selected a menu option to speak to a live operator or representative. Utilities using automatic call-processing systems must provide that option, and they must not delay connecting the caller to a live operator or representative for purposes of playing promotional announcements.

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

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

7826.1700:
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.

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 Interactive Voice Response ("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; and there is an option 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.

Response Time:
Consistent with prior SRSQ reporting, Minnesota Power defines business hours as 7:00 am to 5:30 pm, Monday through Friday, excluding holidays. Minnesota Power answered 84 percent of calls in 2019 during business hours within 20 seconds, exceeding the annual goal of 80 percent, as defined in Minn. Rule 7826.1200. Minnesota Power met or exceeded the 80 percent goal threshold 10 out of 12 months of the year.

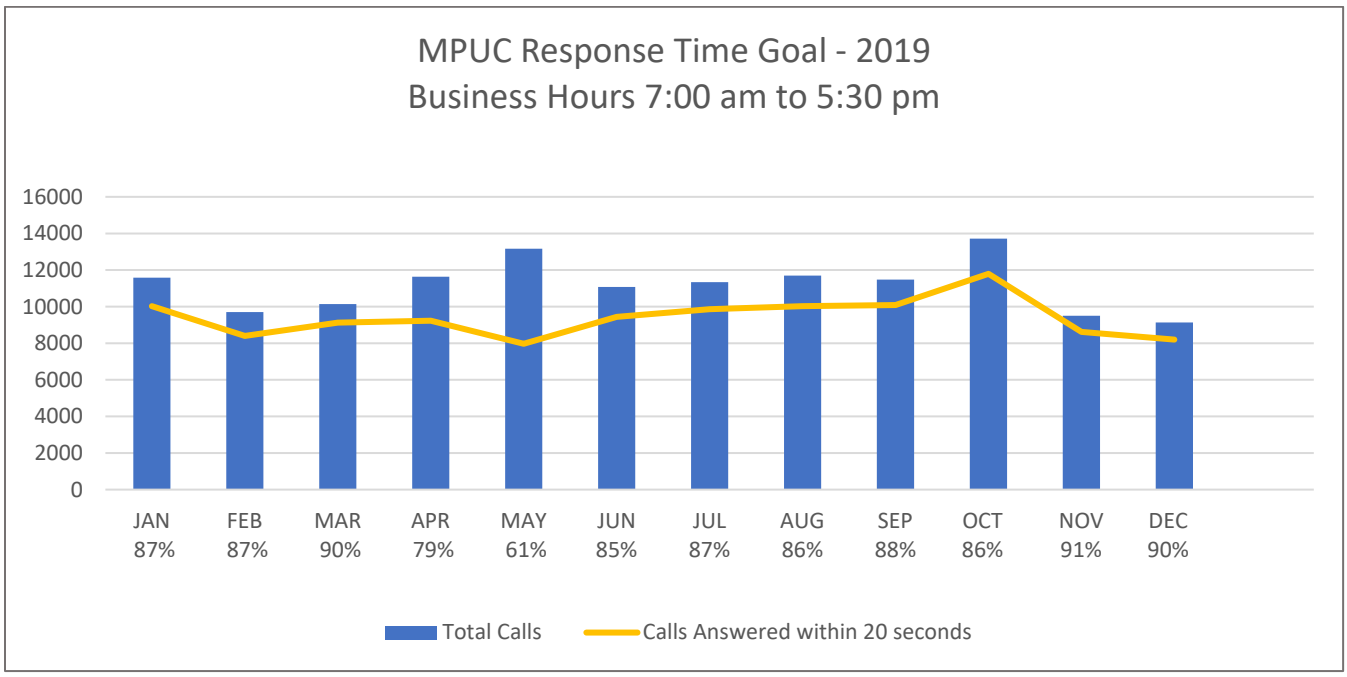


FIGURE 13: RESPONSE TIME – BUSINESS HOURS 2019

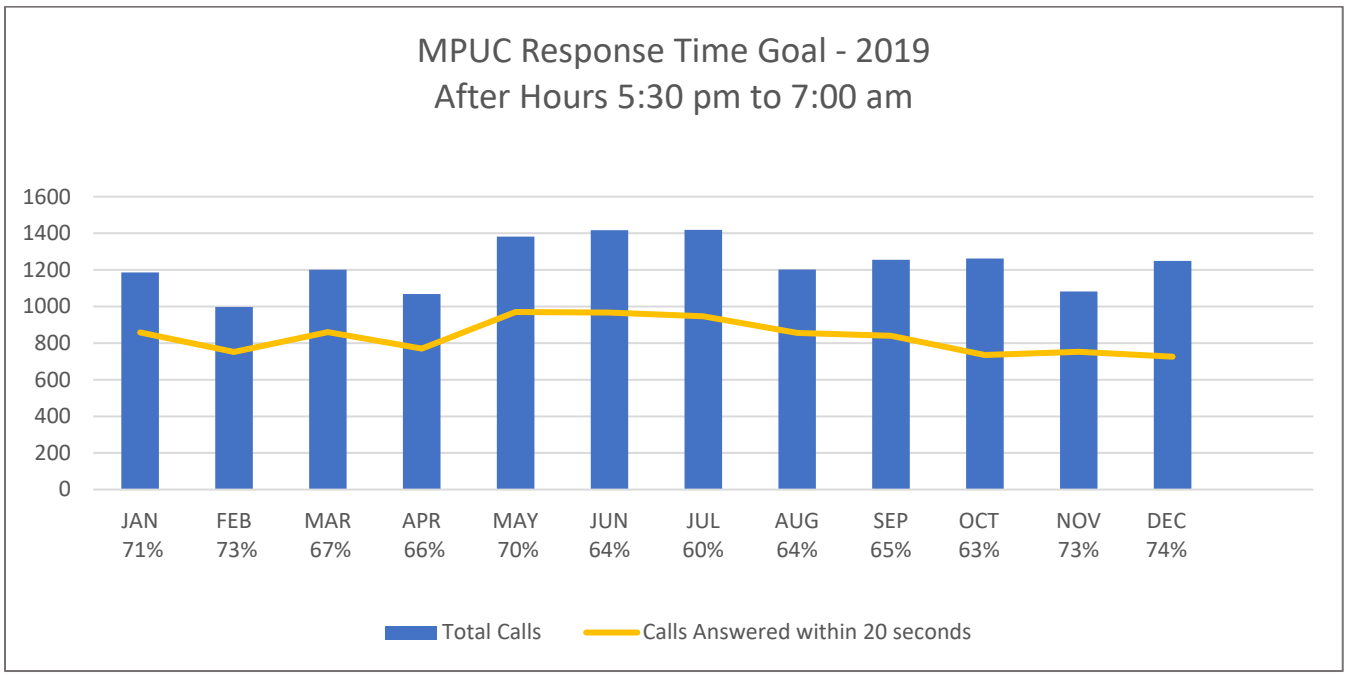


FIGURE 14: RESPONSE TIME - AFTER HOURS 2019

The figure below provides a breakdown of calls received in 2019 by subject matter category. This breakdown is based on the wrap codes that are used by representatives when closing and documenting a call. Calls may cover a range of topics, so the primary subject matter is determined subjectively by each representative. Please note that the total number of calls and the number of wrap codes do not reconcile as multiple representatives may handle a single call and each would choose a wrap code according to their role in addressing the customer inquiry. The Phone Transfer and Not Specified categories generally relate to calls where a representative with primarily operator responsibilities transferred the call or the caller requested to be transferred.

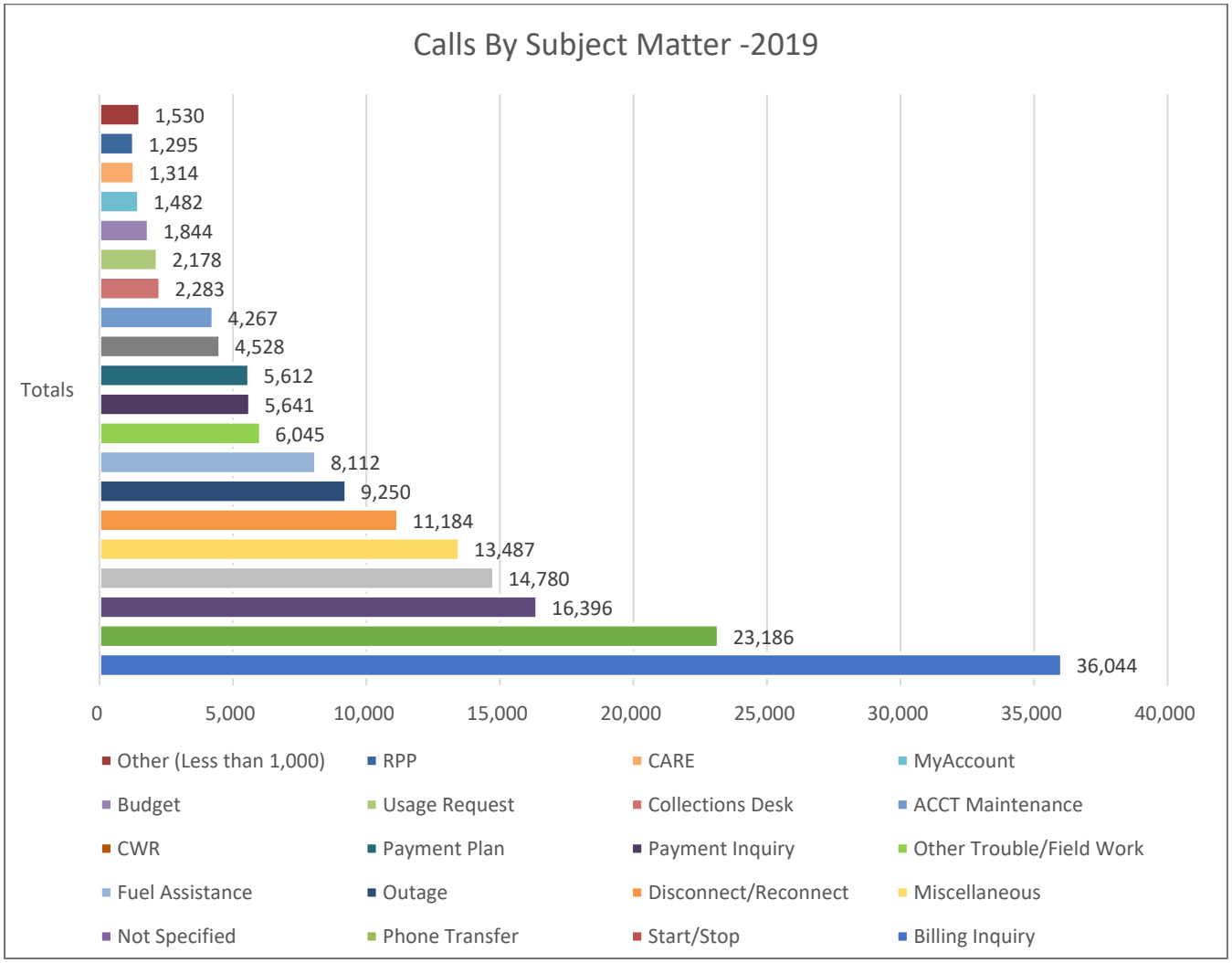


FIGURE 15: CALLS BY SUBJECT MATTER - 2019

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.

TABLE 14: EMERGENCY MEDICAL ACCOUNT STATUS COUNT 2019

DATE	REMOVE	RENEW	ADD	REFUSE
Jan	5	4	7	2
Feb	4	4	4	1
Mar	5	9	7	0
Apr	5	4	5	2
May	6	10	9	0
Jun	7	11	9	3
Jul	9	9	5	3
Aug	0	7	4	3
Sep	14	9	6	1
Oct	8	4	10	2
Nov	1	5	5	0
Dec	0	1	5	0
Totals:	64	77	76	17

In 2019, Minnesota Power had 234 customers request emergency medical account status. 217 requests were granted after customers provided Minnesota Power with the required signed physician documentation indicating need. All documentation is on file and available upon request. Seven customers were refused emergency medical account status due to the following reasons:

- January 2019: Generic. Requested specific information on letter.
- February 2019: Improper/unclear form submitted.
- April 2019: Customer not listed at premise on form, spoke with account holder and advised. Request submitted for hospital bed - not life sustaining equipment.
- June 2019: No letter from doctor - only receipt from medical supply store. Customer not in our system. Patient was not at premise and has "no clear plans for discharge at this point" Minnesota Power representative spoke with the customer and requested resubmittal when patient is to be discharged to premise.
- July 2019: Generic request. Requested specific information on letter and advised refrigerated medication isn't eligible. Minnesota Power representative called and left voicemail, no response. Refrigerated medication - Attempted to call but unable to reach or leave voicemail. No life support equipment listed
- August 2019: Generic. Requested specific information - Called and left voicemail, no response. Noted account; Address not found in Minnesota Power territory - attempted to call, left voicemail. No response. Request wasn't for medical equipment (transplant list - phone required).
- September 2019: Cannot locate account or minor child based on information provided.
- October 2019: Unable to locate customer in Minnesota Power's system.

When customers contact Minnesota Power indicating they have medical/life sustaining equipment, they are advised that to be eligible to participate in the program they should have their physician or medical supply company send the Company a signed letter identifying what type of life support equipment they or a family member are using and the duration prescribed. The letter is to be mailed or faxed to Minnesota Power's office (mailing/faxing information listed on mnpower.com). When the signed form is received, it is directed to a Customer Care and Support Representative ("CCSR") who updates the account with the Life Support flag and the form is then filed. The Life Support certification must be renewed annually. Approximately 30 days prior to a certificate expiring a CCSR sends a letter to the customer. If Minnesota Power does not receive a response, the Company attempts to reach the customer via phone. If a new letter is received, the account is updated for another year. If not, the Life Support flag is removed from the account.

The Company collaborated with representatives from Xcel Energy, OtterTail Power and the Energy CENTS Coalition in identifying ways to expand outreach efforts. Together, we are developing an outreach plan which will target hospital personnel who manage patient discharges and medical equipment vendors. These two groups are directly involved with the target group of customers and will be good points of contact to educate and provide resources to customers who would benefit from these protections.

REPORTING CUSTOMER DEPOSITS: 7826.1900

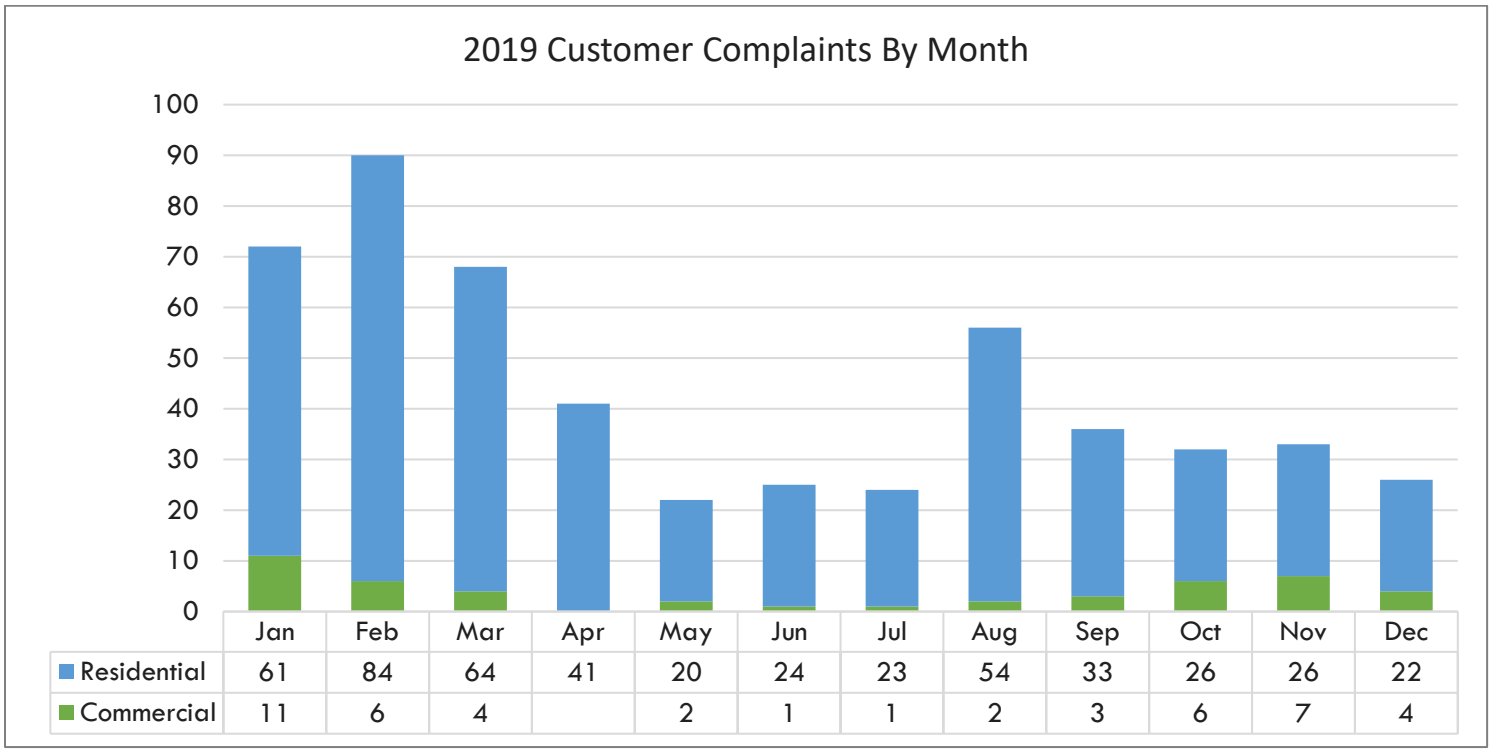
The annual service quality report must include the number of customers who were required to make a deposit as a condition of receiving service.

Minnesota Power refunded all deposits in 2014. Collection of deposits may be reconsidered in the future.

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

A. *The number of complaints received*.



	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Residential	61	84	64	41	20	24	23	54	33	26	26	22
Commercial	11	6	4		2	1	1	2	3	6	7	4

FIGURE 16: CUSTOMER COMPLAINTS BY MONTH 2019

Customer Class	Total	% of Total
Commercial	47	8.95%
Residential	478	91.05%
Total	**525**	**100.00%**

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.*

TABLE 15: RESIDENTIAL AND COMMERCIAL COMPLAINTS BY TYPE 2019

Complaint Description	Customer Class	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total	% of Total
Billing Error	Commercial	1	1				1			1	1			5	**0.95%**
Billing Error	Residential		7	7		1		2	1	1				19	**3.62%**
High Bill Complaint	Commercial	5	2	3		1		1	2	1	4	2	4	25	**4.76%**
High Bill Complaint	Residential	38	65	46	32	14	15	17	43	24	13	13	19	339	**64.57%**
Inadequate Service	Commercial											1		1	**0.19%**
Inadequate Service	Residential	5	2	4	1	1	4	1	2	2	3	5		30	**5.71%**
Incorrect Metering	Commercial	5	3	1		1				1	1	4		16	**3.05%**
Incorrect Metering	Residential	18	10	7	7	3	5	3	8	6	7	8	3	85	**16.19%**
Service Restoration	Residential										3			3	**0.57%**
Wrongful Disconnection	Residential				1	1								2	**0.38%**
Total		**72**	**90**	**68**	**41**	**22**	**25**	**24**	**56**	**36**	**32**	**33**	**26**	**525**	**100.00%**

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

TABLE 16: TIMEFRAME OF COMPLAINTS RESOLVED 2019

Days To Resolution	Customer Group	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total	% of Total
Greater Than 10 Days	Commercial	4		1		1			1		1	1	1	10	**12%**
Greater Than 10 Days	Residential	9	7	6	4	4	1	8	7	1	4	2	2	55	
Less Than 10 Days	Commercial	2	3				1			2	2	3	2	15	**27%**
Less Than 10 Days	Residential	21	16	16	13	7	5	4	13	13	7	5	8	128	
Same Day Resolution	Commercial	5	3	3		1		1	1	1	3	3	1	22	**60%**
Same Day Resolution	Residential	31	61	42	24	9	18	11	34	19	15	19	12	295	
Total		**72**	**90**	**68**	**41**	**22**	**25**	**24**	**56**	**36**	**32**	**33**	**26**	**525**	**100%**

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.*

TABLE 17: RESIDENTIAL COMPLAINTS RESOLVED 2019

Resolution Reason	Commercial	Residential	Total	% Resolved Contacts
Compromise	15	134	149	28.38%
Customer Request	13	60	73	13.90%
No Control	18	281	299	56.95%
Refuse	1	3	4	0.76%
Total	**47**	**478**	**525**	**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 40 complaints forwarded to the utility by the Commission's Consumers Affairs Office for further investigation and action in 2019.