COMMERCE DEPARTMENT

August 19, 2020

Will Seuffert
Executive Secretary
Minnesota Public Utilities Commission
121 7th Place East, Suite 280
St. Paul, Minnesota 55101-2147

RE: **Comments of the Minnesota Department of Commerce, Division of Energy Resources**
Docket No. E002/M-20-406

Dear Mr. Seuffert:

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

> 2019 *Annual Electric Service Quality Report* (Report) submitted by Northern States Power Company, d/b/a Xcel Energy (Xcel or the Company).

The 2019 Report was filed on April 1, 2019 by:

> Gail Baranko
> Manager, Regulatory Project Management Xcel Energy
> 414 Nicollet Mall
> Minneapolis, Minnesota 55401

Based on its review of Xcel's 2019 Report to date, the Department recommends that the Company provide further information; we intend to provide recommendations in further comments, subsequent to reviewing additional information from Xcel. The Department also provided its responses to the questions included in the Commission's April 20, 2020 Notice of Comments. The Department is available to answer any questions that the Commission may have.

Sincerely,

/s/ JOHN KUNDERT
Financial Analyst

JK/ar
Attachment

Before the Minnesota Public Utilities Commission

Comments of the Minnesota Department of Commerce
Division of Energy Resources

Docket No. E002/M-20-406

I. BACKGROUND

The Minnesota Department of Commerce, Energy Division (Department) appreciates the opportunity to provide comments regarding Northern States Power, d/b/a Xcel Energy's (Xcel, the Company) Annual Compliance with Annual Safety, Reliability, and Service Quality Metrics for 2019. The Department's comments are structured as follows:

1. Section A: the Department's Analysis and Attachment A address the Commission's questions and supporting documentation.
2. Section B contains our analysis of Xcel's Safety and Reliability information under the rules.
3. Section C contains the analysis Xcel's Safety and Reliability information required by Commission Orders.
4. Section D includes Xcel's Service Quality information under the Commission's rules.
5. Section E contains our analysis of Xcel's Service Quality information required by Commission Order.

The Company changed the filing's format this year to try to simplify it. The Department appreciates Xcel's efforts to streamline the filing by topic.

A. COMMISSION NOTICE AND TOPICS

In its Notice of Comment Period in this proceeding dated April 20, 2020 the Minnesota Public Utilities Commission (Commission) identified five topics that were addressed to the three rate-regulated investor-owned utilities (IOUs) are open for comment.[1]

1. Should the Commission accept Minnesota Power's, Otter Tail Power's, and Xcel Energy's Safety, Reliability and Service Quality Metrics reports?
2. Should the Commission approve Minnesota Power's, Otter Tail Power's and Xcel Energy's proposed transition from a rolling five year average to set reliability standards to benchmarking to the IEEE Reliability Working Group? Please discuss:
    a. Time lag of IEEE benchmarking data.
    b. Xcel's proposal to use a 5 year average of IEEE 2nd quartile results vs Otter Tail Power and Minnesota Power's proposals to use the prior year's benchmarking results, and keeping standards consistent between utilities.

[1] Minnesota Power and Otter Tail Power Company are the two additional IOU's covered under this Notice.

   c. The move from reporting reliability results for each work center, to the state as a whole, and whether utilities need a variance to Minn. Rules 7826.0500 Subp 1 A-C and Subp 2.
   d. The choice of using the IEEE working group vs. EIA data for benchmarking.

3. Feedback on utilities' proposed public facing summary of the annual reports. Please discuss:
   a. Whether the information is digestible for members of the general public
   b. If there is any additional content utilities should include in the documents
   c. Potential methods of distributing this information to customers.
4. Should the Commission grant Xcel Energy's requested variance to Minn. Rules 7825.0500 Subpart 1.G? Should the Commission vary this rule for all utilities?
5. Are there other issues or concerns related to this matter?

The Commission also asked several other questions specifically related to Xcel.

1. Please provide feedback on the staff proposal for locational reliability reporting (Attachment A). Please discuss:
   a. Whether the listed reporting requirements will allow for the development of a locational reliability metric?
   b. Whether any additional information is needed?
   c. How the information can best be presented to stakeholders and the public?
2. What are the appropriate pieces of data to collect to gauge locational customer service quality?
3. What are the appropriate pieces of information to overlay with reliability and customer service quality data to gauge equity? For example, the Minnesota Pollution Control Agency maintains a map showing areas of environmental concern that could be overlaid with data listed in Attachment A.
4. Are there other issues or concerns related to this matter?

The Department's responses to the Commission's questions follow in the order presented in the Notice.

B. PROCEDURAL CONTEXT

Minnesota Rules, Chapter 7826 were developed as a means for the Commission to establish safety, reliability and service quality standards for utilities "engaged in the retail distribution of electric service to the public" and to monitor their performance as measured against those standards. There are three main annual reporting requirements set forth in the rule:

- the annual safety report (Minnesota Rules, part 7826.0400);
- the annual reliability report (Minnesota Rules, parts 7826.0500, subp. 1 and 7826.0600, subp. 1); and
- the annual service quality report (Minnesota Rules, part 7826.1300).

In addition to the rule requirements, the Commission has requested additional information in its Orders in various dockets. For example, in its March 19, 2019 Order in Docket No. E002/M-18-239 the Commission directed Xcel to provide the following information in future annual reports:

A. Non-normalized SAIDI [System Average Interruption Duration Index], SAIFI [System Average Interruption Frequency Index], and CAIDI [Customer Average Interruption Duration Index] values;
B. SAIDI, SAIFI, and CAIDI values calculated using the [Institute of Electrical and Electronics Engineers] IEEE 2.5 beta method;
C. CEMI [Customer Experiencing Multiple Interruptions] – at normalized and non-normalized outage levels of 4, 5, and 6;
D. CELI [Customers Experiencing Lengthy Interruptions] – at intervals of greater than 6 hours, 12 hours, and 24 hours;
E. CELI;
F. Estimated restoration times;
G. IEEE benchmarking;
H. Performance by customer class; and
I. More discussion of leading causes of outages and mitigation strategies.

Further, the Commission required Xcel to provide, in its next annual report (the 2018 Report), "a discussion of how grid modernization initiatives could impact reliability metrics and what technologies are needed to advance tracking of additional metrics."

On May 14, 2019, the Commission issued its *Order Accepting Reports, Setting Filing Requirements, and Granting Withdrawal of Reconnect Pilot Proposal* in Docket Nos. E002/M-18-239, E017/M-18-247, and E015/M-18-250 requiring the utilities to provide additional information, but not until the 2020 report.

On January 28, 2020 the Commission issued its *Order Accepting Reports, Establishing Reliability Standards, and Requiring Additional Filings* in Docket Nos. E002/M-19-261, E017/M-19-260, and E015/M-18-254. The Commission required all three IOU's to "discuss the feasibility of the following metric, and if the utility does not think the metric is feasible, provide an alternative:

a. Provide a comparison of the reliability (SAIDI, SAIFI, CAIDI, MAIFI, normalized/non- normalized) of feeders with grid modernization investments, such as Advanced Metering Infrastructure (AMI) or Fault Location, Isolation, and Service Restoration (FLISR) to the historic 5-year average reliability for the same feeders before grid modernization efforts.

In that same *Order* the Commission also required the utilities to "discuss transitioning from a five year rolling average method of proposing SAIDI, SAIFI, and CAIDI standards, to standards that are similar to the second quartile rank of similarly sized investor-owned utilities under either the IEEE benchmarking study, or using United States Energy Information Administration (EIA) reliability data , and may propose and discuss other alternatives.

In addition, the Commission set Xcel's reliability Standards for 2019 and required the three IOU's to "develop a summary of their service-quality and reliability metrics that is digestible and useable for general audiences and file it as an attachment to their next annual report due April 1, 2020."

On April 1, 2019, Xcel filed a petition (2019 Report) to comply with Minnesota Rules Chapter 7826 and the Commission's Orders. In that filing the Company asked the Commission to accept its annual report for 2019 and proposed 2020 reliability standards, and grant the requested rule variance to Minn. R. 7826.0500 subpart 1.G.

II. DEPARTMENT ANALYSIS

The Department provides:

- responses to the Commission's questions;
- a summary of our review of Xcel's 2019 Safety, Reliability and Service Quality Reports;
- a summary of any applicable reporting requirements included in different applicable Commission Orders; and
- an analysis of Xcel's request for a variance to Minn. R. 7826.0500, Subpart 1.G .

A. RESPONSE TO COMMISSION QUESTIONS

1. Should the Commission Accept Xcel Energy's Safety, Reliability and Service Quality Metrics Reports?

Since we await further information from Xcel, the Department is not prepared to recommend the Commission accept Xcel's reports at this time. We ask that Xcel explain in its Reply Comments why the 2020 reliability goals for the following metrics and work centers changed relative to the 2019 goals:

- Metro East SAIDI goal increased from 89.78 to 89.95 minutes;
- Metro East CAIDI goal increased from 103.94 to 106.91 minutes;
- Metro West CAIDI goal increased from 100.37 to 100.55 minutes;
- Northwest SAIDI goal increased from 85.86 to 87.11 minutes;
- Northwest CAIDI goal increased from 113.01 to 115.72 minutes;

Xcel's proposed increases in these goals would result in less reliable service to customers; thus, the Company needs to explain why such changes are reasonable and appropriate.

In addition, in Section B below, as to Xcel's Safety and Reliability information under the rules, we also request additional information regarding Xcel's Annual Safety and Service Quality Reports. For example, on seeing that the Company's expenses related to property damage increased significantly in 2019, we request that Xcel indicate in its Reply Comments whether the Company expects to pay out larger claims with more frequency. In Section D of these Comments regarding the Company's Service Quality Report, the Department requests the Company to explain the 5 second increase (22 to 27 seconds) in the average answer speed for agent-only calls in 2019.

2. Proposed Transition to IEEE Reliability Working Group

The Department supports Xcel's proposed transition from a rolling five-year average to set reliability standards to benchmarking to the IEEE Reliability Working Group but only if the existing work-center, company-specific reporting protocol is maintained. The current approach allows the Commission to continue to monitor MP's, OTP's and Xcel's performances from a company-specific or longitudinal perspective. This perspective is important for assessing the different IOU's efforts regarding system reliability and it should not be discontinued. Rather, the IOU's should be required to provide the historical company-specific information and the IEEE benchmarking analysis.

The IEEE analysis is important in that it provides the Commission with a "comparable" group analysis for each of the utilities. This perspective has been lacking historically, so the Department supports the addition of this reporting requirement. As to reporting, the Department recommends that the Commission maintain its current April 1 date for the existing historical reporting information. We also support providing an analysis of that filing in a standard timeframe.

In addition, the Department supports a process in which the IOU's make a supplemental filing within 20 days of receiving the benchmarking data from IEEE. The Department and other interested parties would then have an opportunity to respond to that new information.

3. Xcel's proposal to use 5 year average of 2nd quartile results

Xcel proposes to use a 5 year average of IEEE 2nd quartile results exclusively. As noted previously, the Department's position is that Xcel should continue to provide the historical information that it currently provides in the existing format. In addition, the Company should provide the IEEE benchmarking data annually in the supplemental filing described above.

The Department also questions why Xcel decided that a second quartile benchmark is sufficient as a point of comparison. The Company regularly highlights its progressive efforts and high level of competency in various press releases. The Department recommends that the Commission set the IEEE benchmark at Xcel's NSP Minnesota operating company in the first quartile so that the Company's Minnesota ratepayers receive a higher-than-average level of service quality and reliability.

4. Reporting reliability results for each work center, to state as a whole, and the need for a variance from Minn. Rules 7826.0500 Subp 1 A-C, and Subp 2. and Choice of IEEE or EIA data

The Department disagrees with Xcel's proposal to aggregate the results for each work center to develop a state-wide number. This approach would allow utilities to deemphasize the areas in their service territories where service reliability is poor by combining them with areas in which service reliability is average or above average. This approach also appears to conflict with the Commission's interest in locational reliability and equity expressed in Docket No. E002/M-17-401. Thus, the Department does not recommend that the Commission grant a variance from Minn. Rules 7826.0500 Subp 1 A-C and Subp 2.

The Department does not have a strong preference for either IEEE or EIA as the source of the data used for benchmarking, so long as it is possible to verify the information. Given that Xcel has been participating in the IEEE benchmarking effort for several years, the use of IEEE for this comparison appears to be the simplest approach, but Xcel will need to make the data available.

5. Proposed Public Facing Annual Report Summary

Xcel provided its proposed public facing annual report summary in Attachment B of the filing. Attachment B includes information related to the Company's annual SAIFI, SAIDI, CEMI and CELI figures for 2018. This information is also presented in an understandable fashion. Based on its review, the Department concludes that the document fulfills the Commission's requirements of being "digestible and useable for general audiences".[2]

6. Variance to Minn. Rules 7826.0500 Subpart 1.G?

[2] Commission's January 20, 2020 Order at page 9 in Docket No. E002/M-10-261.

Xcel requested that the Commission grant a variance from Minn. R. 7826.0500, Subpart 1.G, which requires a copy of each report filed under Minn. R. 7826.0700.

Minn. R. 7826.0700 requires the Company to "promptly inform the commission's Consumer Affairs Office of any major service interruption." A major service interruption is a defined term in the rules as "an interruption of service at the feeder level or above and affecting 500 or more customers for one or more hours."[3]

Xcel's request for a variance would only apply to the reporting required under Subpart 1.G of Minn. R. 7826.0500 regarding the submission of copies of all reports previously provided to the Commission for any major service interruption. The Company states that it would continue to provide the required written report discussed under Subpart 2 of Minn. R. 7826.0700.

Xcel explains in the filing that the way it is complying with Minn. R. 7826.0500 subp. 1G and 7826.0700, subp. 2 is that "it is compiling emails that the Commission and the Department has already received from the Company" that cover the same information requirement in this rule requirement.[4]

Xcel's stated reason for the request for the variance is administrative costs. It provided specific information in the filing as to the number of pages of information and the effort required to ensure that the trade secret information included in that attachments is redacted correctly. The Company did not provide an estimate of the administrative costs savings if the Commission were to approve the variance.

In Information Request No. 20, the Department asked Xcel to provide an estimate of the annual cost associated with producing the information that it would cease to provide under the variance. The Company declined to provide a cost estimate but did provide historical information demonstrating that the development of Attachment D to the MN Electric Service Quality Report has averaged 1,060 pages over the past six years.[5] Assuming a cost of $50 per page, the average cost of preparing Attachment D would be approximately $53,000 annually. This amount is not a large expense from Xcel's perspective. Nor is this cost incremental; it is an expense that the Company has been incurring for some time.

The Department agrees that current process by which Xcel is complying with Minn. R. 7826.0500 subp. 1G and 7826.0700, subp. 2 is cumbersome, especially given the size of its system. Providing over one thousand pages of emails is not readily informative and doesn't appear to be what was intended by Minn. R. 7826.0500 subp. 1G, although it is understandable that Xcel has complied with the rules in this manner.

A more informative approach to comply with Minn. R. 7826.0500, subp. 1G would be for Xcel to file in its annual report summary information focusing on the key point of Minn. R. 7826.0700, subp. 2. Namely, it would be helpful for Xcel to provide a report discussing any operational changes the utility made, is considering or intends to make in the future to prevent the kinds of interruptions the utility

[3] Minn. R. 7826.0200 Subpart 7.
[4] Report at page 7.
[5] See Attachment A for a copy of the information request and Xcel's response.

experienced in the past year and any lessons learned on restoring service more quickly in the future. At the same time, Xcel should maintain on an ongoing basis copies of all individual reports provided to the Commission's Consumer Affairs Office.

To the extent that a rule variance would be needed for Xcel to comply with Minn. R. 7826.0500 subp. 1G, which requires a copy of each report provided in Minn. R. 7826.0700, subp. 2, the Department provides this analysis. First, strict enforcement of the rule requiring provision of each report provided to the Consumer Affairs Office, given the circumstances in Xcel's case, is burdensome to Xcel and not highly informative. Second, so long as Xcel maintains copies of the reports provided to the CAO, the information will be maintained if needed to address any issues with specific consumers. Third, granting the variance would not conflict with law.

7. Commission Staff Proposal for Locational Reliability Reporting

The Department supported the development of this metric in Docket No. E002/M-17-401 and looks forward to reviewing comments by other parties on this proposed performance metric. As warranted, we will address this topic in our supplemental comments.

Section B – Department Review of Xcel's Annual Safety and Reliability Reports under Commission Rules

The Department reviewed Xcel's 2019 Report to assess compliance with Minnesota Rules Chapter 7826, including trends in Xcel's performance.

A. ANNUAL SAFETY REPORT

The annual safety report consists of two parts:[6]

A. a summary of all reports filed with the United States Occupational Safety and Health Administration [OSHA] and the Occupational Safety and Health Division of the Minnesota Department of Labor and Industry (OSHD) during the calendar year; and

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.

Xcel provided summaries of 2019 data requested by the U.S. Department of Labor. This information reflects safety information on a random selection of the Company's plants and is therefore not necessarily comparable year to year.

Xcel reported three payments in compensation for injuries requiring medical attention resulting from downed wires or other electrical system failures in 2019. Table 1 below summarizes Xcel's most recent

[6] Minnesota Rules, part 7826.0400, available at: https://www.revisor.mn.gov/rules/?id=7826.0400

and past reports regarding property damage claims.[7]

The Department notes that property damage due to overhead conductors was the most common category in 2019 as often is the case. While the number of claims in 2019 didn't vary much from 2018 (81 versus 79), the amount paid in claims in 2019 increased significantly to $1,203,379.30 from $147,754.08 (714% increase). It appears that three unusually large claims cause this increase; removing these claims reduces the amounts paid for 2019 to be within a relatively consistent range. The Department requests that Xcel address this issue in Reply Comments by identifying the following:

- the circumstances surrounding these claims,
- whether Xcel has taken any action to prevent a reoccurrence of such circumstances,
- whether the Company expects to pay out larger claims with more frequency in future years, and
- any other information the Company believes is relevant.

Table 1: Property Damage Reimbursement

Year	Claims	Total Amount Paid
2010	107	$147,886.24
2011	128	$356,107.39
2012	88	$135,836.53
2013	110	$184,083.70
2014	92	$137,610.16
2015	90	$185,584.32
2016	47	$111,289.98
2017	50	$135,844.06
2018	79	$147,754.08
2019	81	$1,203,379.30

B. ANNUAL RELIABILITY REPORT

Minnesota Rules, part 7826.0500 requires each utility to file an annual report that includes the following information: [8]

1. reliability performance (subpart 1.A, 1.B and 1.C),
2. storm-normalization method (subpart 1.D),
3. action plan for remedying any failure to comply with reliability goals (subpart 1.E),
4. bulk power supply interruptions (subpart 1.F),
5. major service interruptions (subpart 1.G),
6. circuit interruption data (subpart 1.H),
7. known instances in which nominal voltages did not meet American National

[7] Department's calculations based on data provided in Attachment B of the Report.
[8] Minnesota Rules, part 7826.0500, available at: https://www.revisor.mn.gov/rules/?id=7826.0500

Standards Institute standards (subpart 1.I),
8. work center staffing levels (subpart 1.J), and
9. any other relevant information (subpart 1.K).

Minnesota Rules part 7826.0600 requires each utility to file proposed reliability standards in the form of numerical values for the SAIDI, SAIFI, and CAIDI for each of its work centers.

1. Reliability Performance

Xcel provided a table comparing its 2019 reliability performance with the goals the Commission set in Docket No. E002/M-19-261.[9] The Company noted that it met five of the Commission's twelve reliability goals (42 percent) identified in the Commission's Order dated January 28, 2020.

Table 2 below reflects the information provided by Xcel reflecting use of the IEEE 1366 storm normalization method.

Table 2: Xcel's 2019 Reliability Performance Compared with Goals[10]

		2019 Performance	2019 Proposed Goals
Metro East	SAIDI	80.56	89.78
	SAIFI	0.75	0.86
	CAIDI	**107.36**	103.94
Metro West	SAIDI	69.50	82.08
	SAIFI	0.70	0.82
	CAIDI	99.15	100.37
Northwest	SAIDI	**89.07**	85.86
	SAIFI	**0.78**	0.76
	CAIDI	**113.48**	113.01
Southeast	SAIDI	**129.10**	94.82
	SAIFI	**0.93**	0.76
	CAIDI	**138.99**	122.04

The numbers in bold in Table 2 indicate performance that did not meet its respective goal. Xcel indicated that adverse weather was the most significant contributing factor to the 2019 reliability results. The Department addresses Xcel's proposed action plan to improve reliability below.

Table 3 below shows Xcel's performance over the ten-year period of 2010 to 2019 under the Institute of Electrical and Electronics Engineers (IEEE) 2.5 beta method outlined in the IEEE publication 13666-2012.

[9] The reliability indices (CAIDI = Customer Average Interruption Duration Index, SAIDI = System Average Interruption Duration Index, and SAIFI = System Average Interruption Frequency Index) used in this section are defined under Minnesota Rules, part 7826.0200, subparts 4, 10 and 11, available at: https://www.revisor.mn.gov/rules/?id=7826.0200

[10] Table at page 6 of the 2019 Report.

Table 3: IEEE 1366 Performance 2012-2019

Work Center	Reliability Metric	Year 2012	2013	2014	2015	2016	2017	2018	2019
Metro East	SAIDI	105.74	85.05	79.73	93.73	95.52	76.22	103.69	80.56
	SAIFI	0.96	0.86	0.86	0.90	0.87	0.76	0.93	0.75
	CAIDI	110.03	99.33	92.46	104.25	109.70	100.48	111.74	107.36
Metro West	SAIDI	103.98	101.41	83.02	90.95	83.64	69.51	83.26	69.50
	SAIFI	0.98	0.96	0.84	0.84	0.82	0.71	0.87	0.70
	CAIDI	105.93	105.45	98.50	108.44	101.43	97.84	95.47	99.15
Northwest	SAIDI	95.05	97.43	82.80	75.58	85.81	75.77	109.34	89.07
	SAIFI	0.83	0.94	0.82	0.66	0.70	0.76	0.87	0.78
	CAIDI	115.16	103.70	101.02	115.39	122.38	100.28	126.05	113.48
Southeast	SAIDI	85.95	87.98	103.45	86.51	110.23	96.33	118.80	129.10
	SAIFI	0.67	0.73	0.80	0.75	0.85	0.84	0.92	0.93
	CAIDI	128.50	120.39	129.20	115.16	130.02	114.73	129.64	138.99

The Department acknowledges Xcel's fulfillment of the requirements of Minnesota Rules, part 7826.0500, subparts 1.A, 1.B, and 1.C.

2. Storm-Normalization Method

As noted above, the Company stated that it used the IEEE 1366 storm day threshold calculation procedures for its 2019 data. Using the previous five years of outage history for each region, Xcel identified the storm day threshold by:

- calculating the daily SAIDI;
- calculating the natural log of each daily SAIDI; and
- calculating the average and standard deviation of the natural logs.

A Major Event Day (MED) is one in which the outages met or exceeded the storm-day threshold. Xcel reported that its reliability data is normalized to account for major storms by removing outages that start on an MED.

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

3. Action Plan to Improve Reliability

As shown and noted in Table 2 above, Xcel met 42 percent or five of its twelve goals in its work centers in 2019.

Xcel repeated its assertion that by setting the standards on a rolling five-year average, the Company expects to achieve its target results 50 percent of the time and to miss the target 50 percent of the time.

Xcel also provided an analysis entitled "Near Miss Storm Days by Work Center" to support its assertion that a few days of bad weather can "move the work center above the standards set by the Commission."[11] The Company also included a reliability analysis by work center with a special emphasis on the Southeast work center. Attachment C of Xcel's filing reported on Xcel's Southeast Work Center related to staffing and reliability. Attachment D of the filing included a summary of Xcel's distribution system performance.

The information in Attachment C discussed the Company's efforts to improve system reliability in that troubled work center, whereas Attachment D provided a broader perspective on Xcel's efforts to pro-actively manage its distribution network. Xcel's report on the Southeast center indicates that the geographical area spans almost across southern Minnesota, "spanning from nearly the border with South Dakota on the west to the border with Wisconsin on the east."[12] Xcel indicated that one of the controllable causes of the poorer reliability performance was not keeping up to date on vegetation management.

As a result, Xcel stated that the Company will add six new employees, who "will be dispersed across the wide geographic area of the Southeast Work Center based on historical trends of requests for new service and maintenance needs."[13] Xcel also committed to providing quarterly reports to the Commission on the reliability metrics for the Southeast Work Center until the Commission meets to talk about this docket.

The Department acknowledges Xcel's fulfillment of the requirements of Minnesota Rules, part 7826.0500, subp. 1.E. The Department concludes that Xcel's action plan is a step in the right direction and looks forward to seeing the changes in metrics for this area. The Department also requests that Xcel provide an update in its Reply Comments on its progress in hiring new employees for the Southeast Work Center.

4. Bulk Power Supply Interruptions

Xcel reported that there were no generation outages on the Company's system that caused an interruption of service to firm electric customers in 2019. Xcel provided a table listing interruptions caused by transmission outages.[14] The table identifies the transmission line, date, time, duration, reasons for the interruption, comments, and remedial steps taken or planned.

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

5. Major Service Interruptions

Xcel reported that, in 2018, there were 214 outages on its system that met the definition of "major service interruption." As required, the Company provided copies of the notifications sent to the

[11] 2019 Report at page 20.
[12] Report at Attachment C, page 2.
[13] Id.
[14] Attachment F of the Report.

Commission's Consumer Affairs Office (CAO) for these outages.[15] Xcel stated that it continues to monitor and improve its internal processes regarding outage notification to the CAO. Table 4 below shows the number of outages not reported to the CAO and the total number of major service interruptions reported by Xcel.

Table 4: Unreported Major Service Interruptions

Year	Unreported Major Service Interruptions	Number of Major Service Interruptions	Percent Unreported
2006	51	196	26%
2007	23	373	6%
2008	41	288	14%
2009	6	164	4%
2010	15	351	4%
2011	4	214	2%
2012	5	252	2%
2013	2	605	<1%
2014	11	233	5%
2015	27	259	10%
2016	12	310	4%
2017	6	154	4%
2018	6	243	2%
2019	5	214	2%

The Company noted that each of the five unreported major service interruptions were due to human error.

Xcel reported that there were no major service interruptions in which ten percent or more of its Minnesota customers were without service for 24 hours or more in 2019.

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

6. Worst Performing Circuit

Xcel defines poor performing feeders as those with a System Average Interruption Frequency Index (SAIFI) exceeding three times the average feeder SAIFI value for the Company's Minnesota system or a SAIDI exceeding four times the average feeder SAIDI value. For this purpose, SAIDI and SAIFI are based on non-storm-normalized data and do not include planned outages or outages caused by public damage. Poor performing circuits are identified in September (based on data from the previous September through August time period) so that

[15] Attachment G of the Report.

Xcel can complete construction projects before the spring storm season.

Using this method, Xcel identified four to five poor performing feeders in each work center. For the remaining feeders on the worst performing list, Xcel's 2019 Report indicated that remedial actions were taken to improve the feeders' performance.

The Department acknowledges Xcel's fulfillment of the requirements of Minnesota Rules, part 7826.0500, subp. 1.H and of the Commission's April 7, 2006 Order.

7. Compliance with ANSI Voltage Standards

Xcel reported that it conducted 185 voltage investigations in 2019.[16] After investigation, approximately 14 percent of these instances were found to be caused by a specific voltage problem. In cases where the Company finds that the voltage is not within the acceptable range, actions are taken such as swapping transformers, upgrading transformers, or checking capacitor banks.

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

8. Work Center Staffing Levels

Xcel reported its 2019 staffing levels by work center. Table 5 below contains the Company's staffing levels for the past ten years.[17]

Table 5: Xcel's Historical Work Center Staffing Levels[18]

Year	Metro East	Metro West	Northwest	Southeast	Other	Total
2010	131	170	32	52	38	423
2011	135	174	31	52	37	429
2012	131	169	32	51	37	420
2013	128	173	32	53	41	427
2014	126	176	33	53	46	434
2015	128	179	33	51	45	436
2016	124	184	30	47	46	431
2017	119	176	31	46	46	418
2018	124	180	32	49	47	432
2019	123	177	30	49	45	424

The Company stated that, while it continues to deal with significant attrition, mostly through staff

[16] 2019 Report, p. 31.
[17] The figures for 2010 through 2018 were updated in Xcel's Compliance filing in docket no. E002/M-19-261 dated February 27, 2020.
[18] 2019 Report, p. 33.

retirements, its current staffing numbers has not had an impact on its day-to-day operations or performance levels.

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

9. Proposed 2020 Standards for SAIFI, SAIDI and CAIDI

Xcel provided two options for the proposed reliability standards. Option 1 sets the standards for 2020 using the 2.5 beta method outlined in IEEE 1366-2012. Option 2 set standards for all work centers on IEEE benchmarking data. Table 6 below summarizes that information.

Table 6: Comparison of 2019 Goals and Performance to 2020 Proposed Goals

		2019 Performance	2019 Goals	2020 Proposed Goals
Metro East	SAIDI	80.56	89.78	89.95
	SAIFI	0.75	0.86	0.84
	CAIDI	107.36	103.94	106.91
Metro West	SAIDI	69.50	82.08	79.37
	SAIFI	0.70	0.82	0.79
	CAIDI	99.15	100.37	100.55
Northwest	SAIDI	89.07	85.86	87.11
	SAIFI	0.78	0.76	0.75
	CAIDI	113.48	113.01	115.72
Southeast	SAIDI	129.10	94.82	94.82
	SAIFI	0.93	0.76	0.76
	CAIDI	138.99	122.04	122.04

The Department asks that Xcel explain in its Reply Comments why the 2020:

- Metro East SAIDI goal increased from 89.78 to 89.95 minutes;
- Metro East CAIDI goal increased from 103.94 to 106.91 minutes;
- Metro West CAIDI goal increased from 100.37 to 100.55 minutes;
- Northwest SAIDI goal increased from 85.86 to 87.11 minutes; and
- Northwest CAIDI goal increased from 113.01 to 115.72 minutes.

Section C – Department Review of Reliability Reporting Requirements Included in Commission Orders

In its Order addressing the reliability components of Xcel's 2017 filing, the Commission required Xcel to provide the following additional information in its next annual service quality filing.[19] The Commission reiterated those requirements and included a few more in its Order in the Company's 2018 filing.

- Additional reliability reporting measures;
- Estimated restoration times;
- IEEE benchmarking;
- Performance by customer class; and
- More discussion of leading causes of outages and mitigation strategies.

Additionally, the Commission required the Company to discuss how grid modernization initiatives could impact reliability metrics, what technologies are required for advanced tracking of various metrics and to develop an infographic.

The Department summarizes Xcel's compliance with each reporting requirement in turn.

A. INFOGRAPHIC *DEVELOPMENT*

Order Point 2 in the Commission's May 14, 2019 Order in Docket No. E002/M-18-239 and Order Point 12 in the January 28, 2020 Order in Docket No. E002/M-19-261 requires the Xcel to provide an infographic summarizing key customer-service quality and reliability metrics in a format for general audiences and consult with Commission staff on its development.

Xcel's Infographic in Attachment B of its filing indicates that:

- Xcel's average customer was without power for an hour and twenty-one minutesand experienced less than one outage in 2019,
- Two percent of Minnesota customers experience more than three outages, and
- Three percent of those same customers experienced an outage lasting longer than six hours in 2019.

B. GENERAL RELIABILITY MANAGEMENT

Order Point 3 in the Commission's December 12, 2014 Order in Docket No. E002/M-14-131 required the Company "to augment its next filing to include a description of the policies, procedures, and actions that it has implemented, and plans to implement, to assure reliability, including information on how it is demonstrating pro-active management of the system as a whole, increased reliability, and active contingency planning.

Order Point 3.1 in the Commission's March 19, 2019 Order in Docket No. E002/M-18-239 required the

[19] Commission's March 19, 2019 Order in Docket No E002/M-18-239.

Company to include more discussion of leading causes of outages and mitigation strategies.

The Company provided Attachment D to the filing in response to the first Ordering point listed. The second Ordering point identified is sufficiently generic to be included in this discussion as well. The information included in Attachment D was somewhat informative. For example, Xcel installed several automated switches for its Fault Location Isolation and Service Restoration (FLISR) pilot program in 2019. The Company has touted this technology as having the potential to reduce "the number of customers experiencing service interruptions". We hope to see some results in the Company's 2020 report.

Xcel has an aging distribution system in Minnesota, so reliability management is a challenge. However, Xcel stated that it is not necessary to replace its distribution system entirely, as "Many of these improvements do not require additional funding to implement, and are achieved via ongoing employee training and/or incorporation into standard work procedures."[20] Nonetheless, as Xcel makes improvements to its distribution system, it will be interesting to track changes in performance metrics.

C. RELIABILITY METRICS INCLUDED IN COMMISSION RULES AND ADDITIONAL INFORMATION REQUIRED BY COMMISSION ORDER

The Commission's Rules focus on three reliability metrics – SAIDI, SAIFI and CAIDI. The following Commission Orders relate to these metrics.

First, in Order Point 3.B of the Commission's February 9, 2018 Order in Docket No. E002/M-17-249, the Commission required the Company to discuss the ways the Commission looks at increased granularity:

- The utility's CAIDI for the calendar year, by work center and for its assigned service area as a whole,
- An explanation of how the utility normalizes its reliability data to account for major storms, and
- More Detailed Looks at the Company's SAIDI, SAIFI and CAIDI Performance.

Second, Order Points 1 and 2 from Attachment B of the Commission's January 28, 2020 Order in Docket No. E002/M-19-261 required the Company to provide non-normalized and normalized values for reliability metrics calculated using the IEEE 1366 method.

Third, Order Point 4 in the Commission's December 12, 2014 Order in Docket No. E002/M-14-131 required the Company to "incorporate into its next filing a summary table that allows the reader to more easily assess the overall reliability of the system and identify the main factors that affect reliability."

[20] Attachment D of the 2019 Report at pages 2 and 5.

Xcel provided information that appears to fulfill the first three of these requirements in its Table 3 at page 11 of the Report. Table 7 below shows these data for the previous five years.

Table 7: Non-normalized SAIDI, SAIFI, and CAIDI

		2015	2016	2017	2018	2019
Metro East	SAIDI	177.19	223.67	136.51	112.11	104.57
	SAIFI	1.04	1.08	0.95	0.96	0.85
	CAIDI	169.86	206.85	144.37	116.71	122.52
Metro West	SAIDI	229.78	198.25	148.58	88.23	79.92
	SAIFI	1.00	1.00	0.86	0.92	0.74
	CAIDI	229.92	198.86	173.27	95.70	107.38
Northwest	SAIDI	75.61	225.74	225.74	109.50	150.82
	SAIFI	0.66	1.07	0.98	0.87	0.94
	CAIDI	115.40	211.50	177.46	126.02	160.71
Southeast	SAIDI	98.23	249.05	96.37	353.32	374.19
	SAIFI	0.79	1.15	0.84	1.15	1.32
	CAIDI	125.51	217.15	114.75	307.95	283.40

Table 8 (below) provides the SAIDI, SAIFI and CAIDI values calculated using the IEEE 2.5 beta method for the previous five years.[21]

Table 8: IEEE 1366 Normalized SAIDI, SAIFI, and CAIDI

		2015	2016	2017	2018	2019
Metro East	SAIDI	93.73	95.52	76.22	86.05	80.56
	SAIFI	0.90	0.87	0.76	0.85	0.75
	CAIDI	104.25	109.70	100.48	101.31	107.36
Metro West	SAIDI	90.95	83.64	69.51	85.71	69.50
	SAIFI	0.84	0.82	0.71	0.84	0.70
	CAIDI	108.44	101.43	97.84	102.56	99.15
Northwest	SAIDI	75.58	85.81	75.77	83.48	89.07
	SAIFI	0.66	0.70	0.76	0.77	0.78
	CAIDI	115.39	122.38	100.28	107.83	113.48
Southeast	SAIDI	86.51	110.23	96.33	118.80	129.10
	SAIFI	0.75	0.85	0.84	0.92	0.93
	CAIDI	115.16	130.02	114.73	129.64	138.99

Xcel also provided "Historical Reliability & Storm Day Exclusions" calculated according to three different approaches – 1) All Days, 2) Minnesota Quality of Service Tariff methodology; and 3) Annual Rules methodology. In addition, the Company provided a graph that delineatedthe major causes of outages in 2019. This information appears responsive to the fourth requirement listed above.

[21] Report at page12.

Order Point 11 on Attachment B of the Commission's January 28, 2020 Order in Docket No. E002/M-19-261 requires the Company to provide reliability metrics by customer class or if that information is not available, a timeline by which the Company will be able to provide such data.

Xcel stated the following regarding its attempt to provide a view of reliability by customer class:[22]

> Presently we do not track customer class data by feeder. We did attempt to segregate feeders that were predominantly residential compared to feeders that were predominantly commercial. In 2017, we found that feeders primarily serving commercial customers in general had a SAIDI value that was significantly better than the feeders serving primarily residential customers. The 2018 data showed a similar result. Although not studied, this is likely due to several items including: less vegetation in industrial and commercial areas, shorter feeders due to higher load density resulting in less exposure to the environment, and higher percentage of customers with underground service.
>
> Because the Company cannot provide the data specifically requested by the Commission, it is working to develop a way to provide meaningful data responsive to the Commission's requirement more readily. The Company will be assessing the scope and cost of this requirement and will have more details in our next Annual Report.

The Department concludes that Xcel met the requirement and provided reasonable information regarding differences in providing service to commercial and residential customers.

D. OTHER RELIABILITY METRICS REQUESTED BY THE COMMISSION

In the Commission's September 2, 2013 Order in Docket No. E002/GR-12-961 at Order Point 32 the Commission required the Company to "provide additional reporting of its currently available Momentary Average Interruption Frequency Index (MAIFI) data, such as trend lines to the extent available."

In the Commission's February 9, 2018 Order in Docket Nos. E002/M-16-281 and E002/M-17-249 at Order Point 3.D, the Commission required the Company to provide "[a]n assessment of MAIFI data."

The Company provided MAIFI calculations by work center and for all of Minnesota for the 2010 through 2019 time period using three different calculation protocols. These included 1) with storms, all levels all causes, 2) QSP tariff IEEE approach, no transmission outages, and 3) Annual Rules IEEE all levels.[23]

The Metro West and Metro East work centers demonstrated incremental improvements over that 10-year period under the three different methods. The Northwest and Southwest work centers did not

[22] Report at page 14.
[23] Report at pages 34 through 41.

demonstrate those same trends. MAIFI appeared to increase on an annual basis in the Northwest work center under all three methods. It declined under the With Storms and the Annual Rules methods in the Southwest work center, but increased under the QSP method. The Department asks the Company to explain why the MAIFI results for the Northwest and Southwest Work Centers have shown so little improvement over the past decade.

Customers Experiencing Multiple Interruptions (CEMI)

In the Commission's March 19, 2019 Order in Docket No. E002/M-18-239 at Order Point 3.c, the Commission required the Company to provide "CEMI at normalized and non-normalized outage levels of 4, 5, and 6."

In Docket No. E002/M-19-261 in Attachment B, Order Point 5, the Commission required the Company to provide "[t]he highest number of interruptions experienced by any one customer (or feeder, if customer level is not available.)"

The Commission made these reporting requirements permanent in its January 28, 2020 Order in Docket No. E002/M-19-261 at Attachment B, Order Points 4 and 5.

Regarding CEMI, both normalized and non-normalized at outage levels of 4, 5, and 6, the Department notes that these data were provided by the Company at pages 41 through 46 of the Report. Both non-normalized and IEEE normalized CEMI at each of the different outage levels were smaller than the figures from 2018.

Additionally, the percentage of customers experiencing four, five or six outages on annual basis has incrementally decreased over the past decade on both a normalized and non-normalized basis. The Company also provided maps identifying the locations of the feeders that were experiencing these multiple outages. Finally, Xcel identified a customer that had 14 outages in 2019. The Company is working on improving its service quality on that feeder.

Customers Experiencing Lengthy Interruptions (CELI)

In the Commission's March 19, 2019 Order in Docket No. E002/M-18-239 at Order Point 3.D, the Commission required the Company to provide "CELI at intervals of greater than 6 hours, 12 hours and 24 hours."

In the Commission's January 28, 2020 Order in Docket No. E002/M-19-261 at Attachment B, Order Point 7, the Commission required the Company to provide "[t]he longest experienced interruption by anyone customer (or feeder, if customer level is not available.)"

Xcel provided CELI data for the past 10 years using an "All Levels -Normalized with IEEE 1366 New Annual Rules" approach and an "All Levels All Days" approach. Under both protocols, the CELI for the three different duration categories declined over the study period. The longest duration under the All

Levels Normalized approach was 57 hours and 50 minutes and affected three customers. The longest duration with storms was 95 hours and 8 minutes and affected 507 customers. The Department acknowledges Xcel's fulfillment of the requirements listed in the two Orders listed above.

The Company also provided information as required by a Commission Order dated March 19, 2019 in Docket No. E002/M-18-239. The Commission's Order bracketed outage duration into three categories – 1) 6 to 12 hours, 2) 12 to 24 hours and 3) longer than 24 hours.

The information developed using the IEEE 1366 New Annual Rules methodology showed a slight decline in the overall percentage of customers experiencing longer than 6 hours over the period from 2010 to 2019. A second graph developed using an All Levels All Days method showed a similar decline albeit from a higher starting point and with a significantly larger amount of annual variation in the percentage of customers that experience an outage longer than 6 hours.[24]

E. ESTIMATED RESTORATION TIMES

Order Point 3.D in the Commission's February 9, 2018 Order in Dockets Nos. E002/M-16-281 and E002/M-17-249 requires the Company to provide "[a] summary of the Company's estimated response time to customers and steps the Company is taking to measure and communicate more accurately the Company's estimated response time to customers. The Company has agreed to provide summary ERT data on a going-forward basis as part of these Annual reports and proposed the data would be summarized as to the accuracy of our ERT estimates for the calendar year."

Order Point 2 (Attachment B, item 9) in the January 28, 2020 Order in Docket No. E002/M-19- 261 also requires the Company to provide the estimated restoration time accuracy from 0 to +30 minute window.

The Company discussed estimated restoration times (ERTs) and the Company's measurement efforts, along with communication it has provided to its customers.[25]

Table 9 below shows the Company's performance related to its ERTs over the past four years.

Table 9: ERT Accuracy

Entity	Accuracy Criteria	2016	2017	2018	2019
NSPM	Within -90 to +0	45.9%	43.5%	43.6%	48.3%
MN Only	Within -90 to +0	45.7%	43.1%	43.5%	49.9%

The Company appears to be demonstrating some improvement in this metric.

[24] Report at pages 46 through 48.
[25] Report at pages 28 through 30.

F. IEEE BENCHMARKING

Order Point 10 in Attachment B in the Commission's January 28, 2020 Order in Docket No. E002/M-19-261 requires the Company to provide "IEEE Benchmarking Results for SAIDI, SAIFI, CAIDI and MAIFI from the IEEE benchmarking working group."

Xcel provided this information in a series of 3 graphs that compared the NSP-Minnesota operating company's results from 2014 through 2018 to the IEEE DRWG Benchmark for the Large Utilities Group > 1 million customers). Graph 2 provided NSPM's SAIDI. While the Department was not able to verify the data, the results apparently put NSPM in the second quartile for the four years studied. Graph 3 provided the same information for NSPM SAIFI. This information was provided in the Report at pages 14 through 17.

The results were similar – NSPM's annual results fluctuated between the first and second quartiles. Graph 4 provided the same information for CAIDI. It provided similar results. The Company noted that the IEEE Distribution Reliability Working Group does not benchmark CEMI or CELI; Edison Electric Institute (EEI) does benchmark CEMI, but these data are proprietary, however.

G. HOW GRID MODERNIZATION INITIATIVES COULD IMPACT RELIABILITY METRICS AND WHAT TECHNOLOGIES ARE REQUIRED FOR ADVANCED TRACKING OF VARIOUS METRICS

Order Point 3 of the Commission's January 28, 2020 required the Company to discuss the feasibility of the following metric, and if the utility does not think the metric is feasible, provide an alternative: "Provide a comparison of the reliability (SAIDI, SAIFI, CAIDI, MAIFI, normalized/non-normalized) of feeders with grid modernization investments such as Advanced Metering Infrastructure (AMI) or Fault Location Isolation and Service Restoration (FLISR), to the historic 5-year average reliability for the same feeders before grid modernization investments."

The Company stated the following regarding grid modernization and its impact on service quality:[26]

> Advanced Metering Infrastructure (AMI) is expected to provide improvements that will give the Company insight to customers' outages sooner, but during a storm scenario may not allow a faster response. In addition, we expect AMI to help identify nested outages improving response times . . . The Company's Fault Location Isolation and Service Restoration (FLISR) devices will be installed gradually on the system . . . thus improvements are expected to be a series of small step improvements. Based on this, the ability to gain data that is more representative will take many years to implement.
>
> An alternative metric for the Commission's consideration is to instead have the Company provide data on individual feeder level outages with feeder level data showing reductions in customers impacted by an event and the

[26] 2019 Report, pp. 18-19.

> estimated restoration time improvements due to sectionalizing and lower patrol time for three years after feeders have had FLISR devices installed for at least one year.

The Department appreciates Xcel's effort to develop an alternative metric, but we believe that Commission's original metric is worth pursuing over the long-term. Thus, we continue to support the Commission's proposed metric.

H. ACTION PLAN BY WORK CENTER

Order Point 12 from Attachment B of the Commission's January 28, 2020 Order in Docket No. E002/M-19-261 requires the Company to provide the causes of sustained outages, by work center.

The Company provided an analysis of "near-miss" storm days as a help to explain why certain work centers have worse results than the Commission's SAIDI, SAIFI and CAIDI standards.

The Department acknowledges Xcel's fulfillment of the requirements listed in the Order above, but notes that a focus on how random weather risk affects their reliability indices has limited use. Instead of this analysis, the Company should focus on improving factors within the Company's control.

I. WORST PERFORMING FEEDERS BY WORK CENTER

In the Commission's April 7, 2006 Order in Docket No. E002/M-05-551, the Commission increased the number of feeders that the Company includes in this portion of the report to 25 per work center, for a total of 100. The Commission's April 8, 2006 Order also directed by the Company to work with Commission Staff on the format of the Worst Performing Feeder portion of the Annual Report.
The Company provided this information in Attachment E of the Report. Xcel also provided additional information regarding four feeders that had also been designated as poor performing feeders in the 2018 report.

J. STAFFING

In Order Point 8, or Attachment B in the Commission's January 28, 2020 Order in Docket No. E002/M-19-261, the Commission required the Company to provide "separate information on the number of contractors for each work center."

Xcel provided this information in Table 7 on page 33 of the Report.

K. POTENTIAL CHANGE TO METHOD FOR CALCULATING ELECTRIC RELIABILITY STANDARDS

In the Commission's January 29, 2020 Order in Docket No. E002/M-19-261, at Order Point 4, the Commission required the Company to discuss transitioning from a five year rolling average method of proposing SAIDI, SAIFI, and CAIDI standards to standards that are similar to the second quartile rank of similarly sized investor-owned utilities under either the IEEE benchmarking study or using EIA reliability data, and may propose and discuss other alternatives.

Xcel discussed this issue at length on pages 68 through 74 of the Report. The Company is proposing two options for its 2020 Reliability Standards. The first consists of annual SAIDI, SAIFI, and CAIDI values by work center. The second uses the IEEE benchmarking data to provide identical standards for all of Xcel's work centers.

The Department supports Xcel developing both sets of reliability standards to benchmark its 2020 performance. The current approach allows the Commission to continue to monitor Xcel's performance from a company-specific or longitudinal perspective. This is an important perspective for assessing the Company's efforts regarding system reliability and it should be continued. The IEEE analysis is important in that it provides the Commission with a "comparable" group analysis for Xcel. This perspective has been lacking historically, so the Department supports the addition of this reporting requirement.

Section D – Department Review of Xcel's Annual Service Quality Report

Minnesota Rules, part 7826.1300 requires each utility to file the following information on or before April 1 of each year:[27]

- Meter Reading Performance (7826.1400);
- Involuntary Disconnection (7826.1500);
- Service Extension Request Response Time (7826.1600);
- Call Center Response Time (7826.1700);
- Emergency Medical Accounts Status (7826.1800);
- Customer Deposits (7826.1900); and
- Customer Complaints (7826.2000).

1. Meter Reading Performance

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

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

An annual average 99.85 percent of customer meters were read by utility personnel and 0.0004 percent were read by the customer in 2019.[28]

[27] The Department notes that the Company files combined electric and gas service quality metrics when appropriate (*e.g.*, call center response time, meter reading statistics).
[28] The Department's calculations are based on data provided in Table B, Attachment I, pp. 1-7 of the

Table 10 below summarizes the number of meters not read by utility personnel for 6-12 months, according to Xcel's past annual and supplemental reports.

Table 10: Meters Not Read for 6-12 Months[29]

Year	Residential	Commercial	Industrial	Other	Total
2010	3,506	1,076	338	100	5,020
2011	2,346	967	244	183	3,740
2012	3,967	1,232	248	106	5,553
2013	2,600	822	177	79	3,678
2014	5,237	1,178	260	123	6,798
2015	2,508	942	387	113	3,950
2016	2,268	772	167	75	3,282
2017	1,938	1,118	306	50	3,412
2018	2,313	1,222	489	50	4,074
2019	2,280	1,601	429	61	4,371

Table 11 below summarizes the number of meters not read by utility personnel for longer than 12 months, according to Xcel's past annual and supplemental reports.

Table 11: Meters Not Read for Longer than 12 Months[30]

Year	Residential	Commercial	Industrial	Other	Total
2010	1,149	366	263	71	1,849
2011	637	403	181	94	1,315
2012	661	450	112	89	1,312
2013	602	335	131	64	1,132
2014	620	304	92	68	1,084
2015	764	310	134	90	1,298
2016	551	240	109	63	963
2017	531	260	135	48	974
2018	580	481	283	44	1,388
2019	574	825	283	50	1,732

Minnesota Rules, part 7826.0900, subp. 1 requires that at least 90 percent of all meters must be read during the months of April through November and at least 80 percent must be read during the months of December through March. Xcel attained those requirements in all months of 2019.

Company's 2019 Report, dividing 85 meters read by customers by 21,469,482 total meters and Table 10 on page 50.

[29] Table C-1, Attachment I, pp. 2-4 of 7 of the 2019 Report.

[30] Table C-2, Attachment I, pp. 5-7 of 7 of the 2019 Report.

Minnesota Rules, part 7826.1400 (D) requires monthly data on meter-reading staffing levels, by work center or geographical area. Xcel provided that information by work center and stated that its current staffing levels are similar to 2018.[31]

The Department acknowledges Xcel's fulfillment of the requirements of Minnesota Rules, part 7826.1400 and 7826.0900.

2. Involuntary Disconnections

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

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

Table 12 below summarizes residential customer disconnection statistics reported by Xcel in its annual Report.

Table 12: Residential Customer Involuntary Disconnection Information[32]

Year	Customers Receiving Disconnect Notice	Customers Seeking CWR Protection	Customers Granted CWR Protection	% Granted	Customers Disconnected Involuntarily	Customers Restored within 24 Hours	Customers Restored by Entering Payment Plan
2008	1,175,953	86,092	86,092	100%	28,863	11,449	727
2009	1,186,057	140,862	140,862	100%	29,612	11,214	1,253
2010	1,218,073	173,440	173,440	100%	29,592	12,121	1,265
2011	1,282,576	188,091	188,271	100%	27,120	11,273	1,446
2012	1,207,842	279,713	279,713	100%	27,132	11,010	1,047
2013	1,217,049	126,477	126,477	100%	23,493	9,221	882
2014	1,166,978	105,561	105,561	100%	25,532	10,283	1,250
2015	1,042,775	151,956	151,956	100%	26,756	11,556	1,201
2016	870,665	130,052	130,052	100%	20,574	7,698	1,512
2017	747,409	140,943	140,943	100%	19,212	6,564	1,251
2018	559,011	115,472	115,472	100%	17,337	6,586	1,506
2019[33]	521,548	80,713	80,713	100%	16,693	6,318	4,250

[31] Report at pages 50 and 51.
[32] Table 12 at Report, page 53.
[33] 2019 Figures represent Minnesota-only customers. Prior Years included North and South Dakota.

Xcel also reported information on commercial involuntary disconnections. The Department asks that Xcel provide some additional information as to the significant increase in the number of customers entering payment plans in 2019 in its Reply Comments.

3. Service Extension Requests

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

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

Xcel stated that 307,460 customers requested service to a location previously served in 2019 and that such requests were responded to the next business day.[34] Xcel reported that 3,946 residential and 187 commercial customers requested service to a location not previously served by the Company in 2019.[35] The average interval between request/readiness date and installation date was 8.3 days for residential and 9.4 days for commercial customers.

The Department looks for any trends in overall response times and inquires as needed. Response times for residential and commercial customers in 2019 were significantly higher than data from 2009 - 2017. However, Xcel indicated that the 2019 Report is the second reflecting service extension request times as tracked by its new Systems, Applications, Processes (SAP) work management system and that during the second year of implementation the Company discovered it needed to provide further refinements and support to the groups that track this work and that the process is ongoing.

The Department acknowledges Xcel's fulfillment of the requirements of Minnesota Rules, part 7826.1600.

4. Call Center Response Time

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

In its November 2, 2017 *Order Approving Tariff Modifications and Granting Variance* in Docket No. E002/M-17-553, the Commission approved tariff modifications to enable Xcel to implement changes to its non-emergency call center hours of operation, among other requests. The Commission required

[34] 2019 Report, p. 55.
[35] Table 14 of 2019 Report, page 55.

Xcel to submit two years of annual compliance review in its 2019 and 2020 annual service quality reports covering 2018 and 2019.

Xcel provided monthly call volume and response time information. In 2019, an average of 80.5 percent of calls to the Company were answered within 20 seconds.[36]

The Company assumes that all calls handled by its Interactive Voice Response (IVR) system are answered within 20 seconds. For calls handled by Xcel's Agents, an average of 76.8 percent were answered within 20 seconds in 2019. In our comments in Xcel's 2019 Gas Service Quality Report (Docket No. G002/M-20-460) we noted that the average speed of answer for agent-only calls had increased from 22 seconds in 2018 to 27 seconds in 2019. The Department asked that Xcel explain that increase in its Reply Comments in that proceeding. We would ask that Xcel Electric provide that same information in this proceeding in its Reply Comments.

5. Emergency Medical Accounts

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

Xcel reported that 2,420 Minnesota customers requested Emergency Medical Account Status in 2018.[37] Approximately 80.4 percent of these customers were granted this status.

Table 13 below shows the historical numbers regarding Medical Accounts.

Table 13: Residential Customers Requesting Emergency Medical Account Status

Year	Requested Medical Acct. Status	Granted Medical Acct. Status	Percent Granted
2008	1,847	1,460	79.0%
2009	1,783	1,292	72.5%
2010	1,762	1,162	65.9%
2011	1,572	716	45.5%
2012	1,508	679	45.0%
2013	1,562	832	53.3%
2014	1,780	1,012	56.9%
2015	3,333	2,557	76.7%
2016	3,427	2,713	79.2%
2017	3,150	2,388	75.8%
2018	2,818	2,267	80.4%
2019	2,420	2,196	90.1%

The Department acknowledges that Xcel has fulfilled the requirements of Minnesota Rules, part 7826.1800.

[36] Department's calculations are based on data provided in Table 16, p. 59 of the Report.
[37] Attachment G of the Report.

6. Customer Deposits

Reporting on customer deposits must include the number of customers who were required to make a deposit as a condition of receiving service.

Table 14 below summarizes the number of accounts that Xcel has reported required deposits. The Department notes that the Company requests these deposits from residential customers who have filed for bankruptcy.

Table 14: Customer Deposits Required

Year	Number of Deposits
2008	805
2009	798
2010	657
2011	655
2012	622
2013	652
2014	606
2015	561
2016	362
2017	314
2018	394
2019	486

The Department acknowledges Xcel's fulfillment of the requirements of Minnesota Rules, part 7826.1900.

7. Customer Complaints

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

A. the number of complaints received;
B. the number and percentage of complaints alleging billing errors, inaccurate metering, wrongful disconnection, high bills, inadequate service, and the number involving service extension intervals, service restoration intervals, and any other identifiable subject matter involved in five percent or more of customer complaints;
C. the number and percentage of complaints resolved upon initial inquiry, within ten days, and longer than ten days;
D. the number and percentage of all complaints resolved by taking any of the following actions: (1) taking the action the customer requested; (2) taking an action the customer

and the utility agree is an acceptable compromise; (3) providing the customer with information that demonstrates that the situation complained of is not reasonably within the control of the utility; or (4) refusing to take the action the customer requested; and

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

Xcel reported that 756 complaints were handled by the Company's Customer Advocate Group in 2019, 370 of which were forwarded by the CAO.[38] Data provided by the Company showed that 14.1 percent of complaints in 2019 handled by Xcel's Customer Advocate Group were resolved upon inquiry.[39] The most frequent complaint category was "inadequate service." Xcel reported that 26.70 percent of these complaints in 2019 were resolved by taking the action the customer requested.[40]

Xcel also received 601,397 complaints in 2019 that were handled upon initial inquiry in the Company's Call Centers. Xcel reported that approximately 99.95 percent of these complaints were resolved by taking the action the customer requested. The complaint category with the largest volume for all customers was "billing errors." These figures are similar to those provided in past years' reports.

Xcel's report on customer complaints includes the required information. Table 15 contains a limited summary of Xcel's customer complaint history as received through the Company's Customer Advocate Group.

Table 15: Selected Summary of Customer Complaints[41]

Year	Number of Complaints	Inadequate Service	Wrongful Disconnect	Billing Error	Resolved Upon Initial Inquiry	Took Action Customer Requested
2010	693	44.90%	21.90%	18.20%	17.00%	29.10%
2011	627	49.10%	17.20%	16.70%	13.20%	28.20%
2012	613	53.50%	19.70%	17.30%	18.60%	27.41%
2013	745	55.80%	15.60%	13.80%	18.90%	38.26%
2014	770	53.20%	19.70%	14.80%	16.80%	51.30%
2015	789	52.50%	23.40%	13.30%	14.30%	29.50%
2016	547	52.10%	19.00%	14.60%	16.30%	32.70%
2017	572	53.50%	24.50%	10.50%	18.00%	27.10%
2018	664	58.10%	18.80%	11.60%	20.60%	26.70%
2019	756	59.70%	17.30%	11.10%	14.00%	26.70%

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

[38] Attachment L of the Report, pp. 1-4.
[39] Id.
[40] Id.
[41] Attachment J of the Report, p. 2.

Section E – Department Review of Xcel's Compliance with Various Service Quality-related Orders

A. SERVICE QUALITY PERFORMANCE FOR 2019

There are significantly fewer requirements based on Commission Orders for this topic than for service reliability.

B. METER READING, INVOLUNTARY DISCONNECTIONS, AND SERVICE EXTENSION RESPONSE TIMES

There are no additional Order based reporting requirements for these three items.

C. CALL CENTER RESPONSE TIMES

In the Commission's November 3, 2004 Order in Docket No. E002/M-04-511, at Order Point 6, the Commission required the Company to "include on a going forward basis, data regarding credit calls … in its calculation of call center response times."

In the Commission's November 2, 2017 Order in Docket No. E002/M-17-553, the Commission approved "the Company's requested change to the call center non-emergency hours and the associated customer bill form and tariff changes, and require[d] the Company to submit two years annual compliance review in its annual service quality reports for 2018 and 2019."

The Company explained that it included credit calls in its annual call center response time calculation and that the results of that calculation were consistent with the requirements in the Commission's rules. In addition, Xcel stated that it has not received any complaints about its changes to its hours of operation for non-emergency calls in 2018 and 2019. The Department acknowledges Xcel's fulfillment of the requirements listed in the two Orders listed above.

D. EMERGENCY MEDICAL ACCOUNT

In the Commission's May 14, 2019 Order in Docket No. E002/M-18-239, at Order Point 5, the Commission required the Company to "engage in a dialogue with Commission Staff and stakeholders on emergency-medical-account-status protection as outlined in Minn. Stat. 216B.098, subd. 5, and reported under Minn. R. 7826.1800" to examine the extent to which eligible Minnesotans are aware of this protection from disconnection.

Xcel explained that it is working with the state's other two investor-owned utilities and Energy Cents Coalition to develop an outreach plan that will target appropriate hospital personnel and medical equipment vendors. The Department acknowledges Xcel's fulfillment of the requirement listed in the Order listed above.

E. CUSTOMER COMPLAINTS

In the Commission's May 14, 2019 Order in Docket No. e002/M-18-239, at Order Point 3, the Commission required the Company to "examine the definition of "customer complaint" and provide a short summary of their observations and conclusions in their electric service-quality reports due April 1, 2020.

In the Commission's May 14, 2019 Order in Docket No. E002/M-18-239 at Order Point 4, the Commission required the Company to "further break down and explain the percentage of complaints they received that were not within the utilities' control (i.e., those related to energy-efficiency providers, solar installers, or other vendors/matters) and included a short summary in their electric service quality reports due April 1, 2020.

The Company provided some general information on the channels its uses to contact customers. As to the vendor question, Xcel does not track those as customer complaints although they do investigate those questions. The Department acknowledges Xcel's fulfillment of the requirements listed in the two Orders listed above.

F. PLANNED OUTAGE COMMUNICATIONS

In Docket No. E002/M-17-553, the Company requested Commission approval, among other things, to use express customer communication preferences in communicating planned outages to customers. The Commission approved the Company's request in an Order dated November 2, 2017. Xcel committed to providing the following information:

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

The Company reported that 1,730,064 customers have opted to receive outage notifications. These include 721,129 who would receive the notification via emails, 722,367 via Text/SMS messages and 286,568 to receive phone notification of the outage. Slightly over 20,625 customers have opted out of the preferences. The Company is not employing this system yet. Xcel provided no date when they believed it would be completed. The Department acknowledges Xcel's fulfillment of the requirement listed in the Order listed above.

G. CUSTOMER SATISFACTION

In Docket Nos. E002/M-16-281 and E002/M-17-249, at Order Point 3.E., dated February 9, 2018 the Commission required the Company to "provide the following information in its next annual service quality report: The Company's internal customer satisfaction goals and a comparison of the Company's actual performance to those goals, as well as an explanation of the basis for those customer satisfaction goals."

In Docket No. E002/M-18-239 in an Order dated May 14, 2019, the Commission required the Company to "provide refreshed information responsive to the Commission's February 9, 2018 order in future annual service-quality filings."

Xcel provided the internal goals information. The Company achieved one out of five (20 percent) of the annual customer satisfaction goals identified in 2019. Xcel also provided information from J.D. Power, which concluded that residential customers are generally satisfied with Xcel while its small/medium customers are not. The Department acknowledges Xcel's provision of the information required in the two Orders listed above.

III. CONCLUSIONS AND RECOMMENDATIONS

The Department recommends that the Commission accept Xcel's Reliability Report. We will provide our recommendations regarding its Annual Safety and Service Quality Reports after reviewing the data requested to be provided in Reply Comments.

The Department requests that Xcel provide the following in Reply Comments:

- justification for Xcel's proposed decreases in service quality for reflected in Xcel's proposed goals for the following work centers:
    - Metro East SAIDI goal increased from 89.78 to 89.95 minutes;
    - Metro East CAIDI goal increased from 103.94 to 106.91 minutes;
    - Metro West CAIDI goal increased from 100.37 to 100.55 minutes;
    - Northwest SAIDI goal increased from 85.86 to 87.11 minutes; and
    - Northwest CAIDI goal increased from 113.01 to 115.72 minutes;
- an explanation of the 5 second increase (22 to 27 seconds) in the average answer speed for agent-only calls in 2019,
- an explanation as to why the MAIFI results for the Northwest and Southwest work centers have shown so little improvement over the past decade, and
- regarding the significantly large payouts for property damage reimbursements in 2019:
    - the circumstances surrounding these claims,
    - whether Xcel has taken any action to prevent a reoccurrence of such circumstances,
    - whether the Company expects to pay out larger claims with more frequency in future years, and
    - any other information the Company believes is relevant,
- regarding Xcel's efforts to improve the performance in its Southeast Work Center, an update on Xcel's progress in hiring new employees.
- additional information on the number of customers entering payment plans in 2019 compared to 2018.

While the Department intends to provide further recommendations after reviewing the information in Xcel's Reply Comments, for now the Department recommends that the Commission:

- reject Xcel's proposed transition from a rolling five year average to set reliability standards to benchmarking to the IEEE Reliability Working Group.
- require Xcel to provide the historical company-specific information and the IEEE benchmarking analysis.
- require Xcel to develop a comparative analysis using IEEE benchmarking information on an annual basis.
- set Xcel's IEEE reliability goals as being in the first quartile.
- approve rule variance to Minn. R. 7826.0500, Subpart 1.G if needed to require, instead, that Xcel provide a report discussing any operational changes the utility made, is considering or intends to make in the future to prevent the kinds of interruptions the utility experienced in the past year and any lessons learned on restoring service more quickly in the future. At the same time, Xcel should maintain on an ongoing basis copies of all individual reports provided to the Commission's Consumer Affairs Office.

/ar

☐ **Not Public Document – Not For Public Disclosure**
☐ **Public Document – Not Public Data Has Been**
☒ **Excised Public Document**

Xcel Energy Information Request No. 20
Docket No.: 20-0406
Response To: MN Department of Commerce
Requestor: John
Kundert Date Received:
July 21,
2020

Topic: Request for Rule
Variance Reference(s):
Pages 6 through 8

Question:
The Company mentions the administrative costs associated with development of the information required under Minn. R. 7826.0200 Subpart 7 as being burdensome. Did Xcel develop an estimate of the costs it incurs to comply with this requirement? If so, please provide that cost estimate and all supporting documentation. If not, please explain why the Company did not attempt to quantify the administrative costs associate with the requirement.

Response:

The Company, in its April 1, 2020 Annual Report filing, specifically requested a rule variance of Minn. R. 7826.0500, subpart 1.G, which requires the Company to file, among other things, "a copy of each report filed under part 7826.0700" with the Consumer Affairs Office. As stated in the Annual Report, although the Company files all reports required under Minn. R. 7826.0700 with the Commission Consumer Affairs Office (CAO), filing such reports publicly is burdensome because the reports are lengthy (last year's comprised 1,162 pages), and nearly every page requires redactions about specific substation and feeder information or major customers.
Depending on the information to be redacted, the estimated time for each page can take up to ten minutes to review and insert the required non-public markings. As shown by the chart below, the size of last year's compilation of reports was not an aberration:

Year	Pages to Redact
2014	1,536
2015	640
2016	973
2017	1,339
2018	714
2019	1,162

The Company has not developed an estimate of the costs incurred in preparing this information, which previously has been filed as Attachment D to the MN Electric SQ Annual Report. We note, however, that the burden of preparing the information for public filing far outweighs its utility given that the information provided already is, and will continue to be, provided to the Consumer Affairs Office (CAO) and the Department each time an outage occurs, along with follow-up information if applicable, pursuant to Minn. R. 7826.0700. It is for this reason that the Company believes complying with Minn. R. 7826.0500, subpart 1.G is overly burdensome. If requested, or if the Commission denies our request for a variance, the Company will prepare and provide this information; however, we believe it is not in the best interest of time and service to our customers to spend the time it takes to prepare these documents doing so.

Preparer: Gail Baranko
Title: Manager, NSPM Regulatory
Affairs Department: NSPM Regulatory
Telephone: 612-330-6935
Date: July 31, 2020

CERTIFICATE OF SERVICE

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

Minnesota Department of Commerce
Comments

Docket No. E002/M-20-406

Dated this **19th** day of **August 2020**

/s/Sharon Ferguson

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