COMMERCE DEPARTMENT

June 14, 2024 **PUBLIC DOCUMENT**

Will Seuffert
Executive Secretary
Minnesota Public Utilities Commission
121 7th Place East, Suite 350
St. Paul, Minnesota 55101-2147

RE: **PUBLIC Comments of the Minnesota Department of Commerce**
Docket No. E002/M-24-27

Dear Mr. Seuffert:

Attached are the **PUBLIC** comments of the Minnesota Department of Commerce (Department) in the following matter:

> 2023 *Annual Electric Safety, Reliability, and Service Quality Report* (Report) submitted by Northern States Power Company, d/b/a Xcel Energy (Xcel or the Company).

Xcel filed the Report on April 1, 2024.

As discussed in the attached Comments, the Department provides its responses to the Commission's April 26, 2024, Notice of Comments.

The Department recommends the Minnesota Public Utilities Commission (Commission) accept:

- Xcel's 2023 Safety Report;
- Xcel's 2023 Service Quality Report; and
- the Equity analysis the Company provided.

The Department also recommends the Commission approve Xcel's proposal to use targeted outreach to lower disconnection rates in the high percent People of Color (POC) neighborhoods and report on its efforts in its 2025 Service Reliability Service Quality Report or another docket if the Commission prefers.

The Department will provide comments in response to the Supplemental Filing including the 2023 Institute of Electrical and Electronic Engineers (IEEE) Benchmarking Results Xcel will file later in 2024.

The Department will also provide a recommendation on the Reliability section of the Report at that time.

The Department asks Xcel to provide additional information on the following topics in its reply comments:

- Provide an estimate of the costs and benefits of upgrading its current website platform such that it would allow for a "direct submit" option for the Medically Necessary Equipment and Emergency Certification Form (or commit to providing that information in its 2024 Report).
- Whether the Company has complied with the Commission's requirement that its "Summary of Key Customer-Service Quality and Reliability Metrics" is on the Company's home page or one click away.
- Additional information on the increases in reported and unreported Major Service Interruptions in 2023 and any efforts the Company could take to improve those results.
- A discussion of how Xcel could determine whether the higher level of disconnections in high percent POC neighborhoods is due to the differential application of disconnection policies or to a difference in non-payment rates.

The Department also included summary information for 2023 for Xcel's Quality of Service Plan (QSP) tariff. The QSP provides another perspective on the Company's service quality and reliability.

The Department is available to answer any questions the Commission may have in this matter.

Sincerely,

/s/ Dr. Sydnie Lieb
Assistant Commissioner of Energy Regulatory Analysis

JK/ar
Attachment

Before the Minnesota Public Utilities Commission

PUBLIC Comments of the Minnesota Commerce Department

Docket No. E002/M-24-27

I. INTRODUCTION

The Minnesota Department of Commerce (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 2023 (Annual Report, Report or SRSQ).

A. COMMISSION NOTICE AND TOPICS

In its Notice of Comment Period in this proceeding dated April 26, 2024, the Minnesota Public Utilities Commission (Commission) identified four topics for comment.

1. Should the Commission accept Minnesota Power's, Otter Tail Power's, and Xcel Energy's 2023 Annual Safety, Reliability, and Service Quality Metrics Reports?
2. Should the Commission accept Minnesota Power's, Otter Tail Power's, and Xcel Energy's proposed reliability standards for 2024?
3. Did Xcel Energy fully report the metrics regarding its Emergency Medical Account as ordered in Docket no. 23-333?[1]
4. Are there other issues or concerns related to this matter?

B. EXECUTIVE SUMMARY AND RESPONSE TO COMMISSION QUESTIONS

1. Should the Commission Accept Xcel's 2022 Safety, Reliability and Service Quality Reports?

The Department recommends the Commission:

- Accept Xcel's 2023 Annual Safety report.
- Accept Xcel's 2023 Service Quality report.
- Wait until the Department and other interested parties have had a chance to review additional information regarding the Service Reliability portion of Xcel's 2023 filing before deciding. The Company will be supplementing its filing sometime in the fall of 2024. That supplement will include the 2023 reliability benchmarks developed using the IEEE Distribution Reliability Group methodology and will allow a comparison of Xcel's 2023 actuals to those newly identified 2023 benchmarks. The Department plans to file supplemental comments regarding its review soon after Xcel files that information.

[1] Docket 23-333 Commission Order, March 22, 2023, Order Point 5. Pp. 12-13.

1. Should the Commission accept Xcel's proposed reliability standards for 2024?

Yes, the Department recommends the Commission continue the current process of using the IEEE Distribution Reliability Group 's annual benchmarks for Xcel's 2024 Reliability Standards.

2. Did Xcel Energy fully report the metrics regarding its Emergency Medical Account as ordered in Docket No. 22-233?

In its ORDER APPROVING PETITION AS MODIFIED AND REQUIRING FILINGS in Docket No. E002/M-22-233, the Commission required Xcel revise its procedures for implementing Minn. Stat. § 216B.098, subd. 5 as follows at Order Point 4:

A. Revise the Company's Medically Necessary Equipment & Emergency Certification Form to included nurse practitioners and physician assistants among the medical personnel who can provide written certification that failure to reconnect or continue service would impair or threaten the health or safety of a resident of the customer's household.
B. Remove the Medical Verification check boxes from the form and replace them with broad language that recognizes that cognitive impairments may qualify as a medical emergency under the statute.
C. Add an email address to the form to allow qualified medical professionals to email a completed and scanned form to the Company's Personal Account Representative team to be entered into Xcel Energy's system.
D. Provide 30 calendar days for a customer – whether a new or renewing customer – to obtain written certification that failure to connect or continue service would impair or threaten the health or safety of a resident of the customer's household.
E. Meet with or present information about the medical registry to organizations identified by AARP, OAG, and Energy CENTS Coalition.
F. Send additional information about the medical registry to organizations identified by AARP, OAG, and Energy CENTS Coalition.

At ORDER POINT 5(H) the Commission required Xcel to report on its progress in its 2023, 2024, and 2025 SRSQ's regarding the creation of a direct link on its website to submit the Medically Necessary Equipment and Emergency Certification Form.

The Company filed a compliance filing on April 20, 2023, in which it stated it had made the required changes to A, B, and C on the Medically Necessary Equipment & Emergency Certification Form. In addition, Xcel stated it had modified processes to comply with the 30-day requirement included in D and that it was in the process of setting up meetings with the various parties listed in E and would provide those parties with the necessary information. The Company also mentioned this topic in its annual bill insert that was sent to all customers in September.

Xcel revisited that information in the SRSQ on pages 31 through 33. After reviewing the compliance filing and the information included in the Report, the Department concludes that the Company has complied with the Commission requirements identified in Order Point 4.

Turning to ORDER POINT 5(H), Xcel explained that its "current website platform doesn't allow a "direct submit" option, but that the Company does allow an applicant to email or fax the Medically Necessary Equipment & Emergency Certification Form to the Personal Accounts department".

While the Department acknowledges that Xcel didn't discuss how it is progressing on adding a direct link to its website in the SRSQ, the Company did make several changes to the Medically Necessary Equipment & Emergency Certification Form and the internal processes required to administer the Emergency Medical Account offering. The Department also notes the number of customers requesting Emergency Medical Accounts (EMA) status and the number approved were 20 and 29 percent higher in 2023 than the 10-year average respectively. Considering the change from 2022 to 2023 in the number of customers requesting EMA status and the number approved, the number of customers requesting EMA status increased by 100%.

It appears that the Company is working to expand the program and is also succeeding. Considering those efforts, the Department is supportive of Xcel's statement regarding its progress on adding a direct link to its website for the 2024 SRSQ. The Department asks that Xcel provide an estimate of the costs and benefits of upgrading its current website platform such that it allows for a "direct submit" option in its reply comments or commit to providing that information in its 2024 Report.

3. Are there other issues or concerns related to this matter?

The Department has no specific additional issues or concerns. We would like to provide the Commission with some summary statistics on Xcel's service quality and service reliability metrics however and will use the response to this question to present that information.

The Department ranks meter reading, involuntary disconnections, and customer complaints as the three most important service quality concerns. Due to Xcel's meter replacement efforts which began in 2022, and the effects of COVID-19 policies on involuntary disconnections and customer complaints, the Department considers data the Company provided to be inconsistent with past years. Thus, the Department cannot provide a well-supported analysis of these metrics for 2023.

The Department didn't include any information in this summary regarding AMI Disconnect/Reconnect reporting requirements since there is no historical information on those metrics. The Department does support the Company's request to continue the temporary variance to Minn. R. 7820.2500 for residential and small general customers which we discuss at length later in these comments.

While Xcel's 2023 results for its service quality metrics showed some improvement, but couldn't be considered exceptional, the Department recommends the Commission accept the Company 2023 Service Quality report. Xcel is simultaneously trying to work through significant customer arrearages resulting from policies adopted during the Covid-19 Pandemic and installing a new AMI system. Those are two factors may be stressing the Company vis-à-vis its service quality metrics. Specific information regarding those metrics is included in Attachment A.

Turning to the service reliability section of the Report, SAIDI, SAIFI and CAIDI are the centerpieces of the Company's reliability efforts. The most important comparison in the service reliability section is Xcel's 2023 actuals for those reliability metrics compared to the Commission-approved benchmarks for 2023. This is a comparison all parties are still waiting to see.

Many of the other topics included in this section of the Report provide a perspective on system reliability but are more related to providing additional context or detail on that concept and are identified in Attachment B. The Department's review of this section of the SRSQ concluded the Company provided adequate information relative to the Commission's reporting requirements for this area, although the Department did request Xcel provide additional information on the increases in reported and unreported Major Service Interruptions in 2023 and any efforts the Company could take to improve those results in its reply comments.

The Department's review concludes that Xcel's reliability metrics for 2023 were good when compared to the 2022 IEEE benchmarks. IEEE will likely release the 2023 benchmarking data around the end of July of 2024. Shortly after that information is published, Xcel will make a supplemental filing in this docket that provides the information. The Department will submit supplemental comments regarding the 2023 IEEE Benchmarking results shortly after the Company provides the information and will provide a recommendation regarding the Company's Service Reliability report at that time.

A new analysis, the Equity analysis was included in the Report for the first time in 2023. It is not clear whether the reporting requirements relative to this analysis will become recurring or not. If they do, then the Department will include this section in its comments consistent with the Commission's requirements.

That said, the Department:

- Asks that Xcel include a discussion of how it could determine whether the higher level of disconnections in high percent POC neighborhoods are due to the differential application of disconnection policies or to a difference in non-payment rates in its reply comments. This issue was the initial driver for this discussion. It still doesn't appear to have been explained adequately.
- Recommends the Commission approve Xcel's proposal to use targeted outreach to lower disconnection rates in the high percent POC neighborhoods and report on its efforts in its 2025 SRSQ Report or another docket if the Commission prefers.
- Concludes that Xcel has complied with the reporting requirements regarding the topic of equity identified earlier.

C. PROCEDURAL CONTEXT

Minnesota Rules Chapter 7826 was 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. The rules included in this chapter set forth three main annual reporting requirements:

- The annual safety report (Minnesota Rules 7826.0400).
- The annual reliability report (Minnesota Rules 7826.0500, subp. 1 and 7826.0600, subp. 1); and

- The annual service quality report (Minnesota Rules 7826.1300).

In addition to the rule requirements, the Commission requested additional information in its Orders in various dockets. The Department will respond to the various Order-based reporting requirements by topic.

On April 1, 2024, Xcel filed a petition with the intent to comply with Minnesota Rule Chapter 7826 and relevant Commission Orders. In that filing, the Company asked the Commission to accept its annual report for 2023 and its proposed 2024 reliability standards.

II. ANALYSIS

The Department's analysis is structured as follows:

1. Section A contains our review of Xcel's Safety information under the Commission rules.
2. Section B contains our analysis of Xcel's Service Quality information required by Commission Rules. In a change from previous year's comments, the analysis of information required by Commission Order for service quality is also included in this section.[2]
3. Section C contains the review of Xcel's Reliability information required by Commission Rules, as well as the analysis of information required by Commission Order for service reliability.
4. Section D summarizes the Commission ordered Equity study covering certain service quality and service reliability metrics.

A. ANNUAL SAFETY REPORT

a. Summary of Minnesota Safety Standards

Minnesota Rules 7826.0400 requires the utility to file annual safety information including:

i. Summaries of all reports filed with the U.S. Occupational Safety and Health Administration (OSHA) and the Occupational Safety and Health Division of the Minnesota Department of Labor and Industry for the calendar year.

ii. A description of all incidents during the calendar year in which an injury requiring medical attention or property damage resulting in compensation occurred because of downed wires or other electrical system failures and all remedial action taken because of injuries or property damage.

Xcel provided summaries of 2023 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.

[2] This structure is consistent with the one Xcel used in the filing which should allow for a more efficient review by interested parties.

b. OSHA Safety Information

Historically, the information Xcel provides in Attachment A regarding the number of employees affected by the different categories of injuries or illnesses didn't vary all that much. The number of employees with respiratory conditions in 2023 declined from 16 in 2021 and 19 in 2022 to 1 in 2023.

In its 2022 Comments, the Department asked about the drivers for this increase in respiratory illnesses in 2021 and 2022. Xcel explained that the increases were directly related to COVID-19 and OSHA's mandated recording of all cases deemed to have a work-related exposure. This appears be another area of Xcel's business that was affected by the pandemic in 2021 and 2022 but seems to have returned to normal in 2023.

c. 2022 Safety Performance

Table 1 below summarizes Xcel's most recent and past reports regarding property damage claims.[3]

TRADE SECRET Table 1: Property Damage Reimbursement 2013 -2022

Year	Claims		Total Amount Paid	Average Claim ($)	
2014	92		$137,610.16	$1,495.76	
2015	90		$185,584.32	$2,062.05	
2016	47		$111,289.98	$2,367.87	
2017	50		$135,844.06	$2,716.88	
2018	79		$147,754.08	$1,870.30	
2019	81		$1,203,379.30	$14,856.53	
2020	66		$274,049.00	$4,152.26	
2021	65		$178,419.30	$2,744.91	
2022	77		$397,768.40	$5,165.82	
10 Yr. Avg	75.7		$295,578	$4,159	
2023	78	**[TRADE SECRET DATA HAS BEEN EXCISED]**			
2023 Var. %	3%				

The number of claims in 2023 was 3 percent above the 10-year average. The amount paid in claims in 2023 was **[TRADE SECRET DATA HAS BEEN EXCISED]** the 10-year average. The 2023 variance in the amount paid compared to the long-term average was **[TRADE SECRET DATA HAS BEEN EXCISED]**. [4]

[3] Department's calculation based on data provided in Attachment B of the Report.

[4] Minnesota Statutes § 13.37, subdivision 1(b) defines trade secret data as information "(1) that was supplied by the affected individual or organization, (2) that is the subject of efforts by the individual or organization that are reasonable under the circumstances to maintain its secrecy, and (3) that derives independent economic value, actual or potential, from not being generally known to, and not being readily ascertainable by proper means by, other persons who can obtain economic value from its disclosure or use." The Department fails to see how the data Xcel marked as "trade secret" in this filing meets the statutory criteria. As the Commission is the responsible authority for this record, the Department requests that the Commission review Xcel's data classification and make any changes it determines necessary.

Based on its review of Xcel's 2023 Safety Report, the Department concludes the Company fulfilled the requirements of Minnesota Rules 7826.0400.

B. ANNUAL SERVICE QUALITY REPORT

Minnesota Rules 7826.1300 requires each utility to file the following information on or before April 1 of each year:[5]

- 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).
- Customer Complaints (7826.2000).

a. Meter Reading Performance

(a) Reporting Under Commission Rules

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 of 99.8% of customer meters were read by utility personnel in 2023. Table 2 summarizes this information. The 2023 results are well above the 10-year historical average and improved compared to the 2022 results.

The same figure for customer read meters, which represent a very small portion of Xcel's meters, was 0.0005% which lower than the 10-year average of 0.0007%.[6]

[5] 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).
[6] The Department's calculations are based on data provided in Tables A and B, Attachment C of the Company's 2023 Report.

Table 2: Company Read Meters 2013 – 2022 Average and 2023 Results

Line No.	Year	Company Read	Total Avg Meters	Annual Percentage
1.	2013	1,647,254	1,705,800	96.6%
2.	2014	1,695,377	1,740,895	97.4%
3.	2015	1,695,993	1,729,417	98.1%
4.	2016	1,682,472	1,741,814	96.6%
5.	2017	1,698,451	1,756,195	96.7%
6.	2018	1,546,505	1,772,358	87.3%
7.	2019	1,786,389	1,789,124	99.8%
8.	2020	1,805,656	1,808,598	99.8%
9.	2021	1,828,863	1,834,673	99.7%
10.	2022	1,741,969	1,855,248	93.9%
11.	**10 Year Avg**	**1,712,893**	**1,773,412**	**96.6%**
12.	2023	1,873,274	1,877,408	99.8%

The Department welcomes the improvement in the Company's meter reading performance in 2023.

Table 3 below summarizes the number of meters not read by utility personnel for 6-12 months. The Department calculated the 4-year average by class and the variance in percentage of the 2023 results from that 4-year average.

Table 3: Meters Not Read for 6-12 Months 2019 – 2022 Average and 2023 Results[7]

Year	Residential	Commercial	Industrial	Other	Total
2019	1,678	874	139	11	2,702
2020	1,794	953	386	13	3,146
2021	2,325	809	250	4	3,388
2022	11,765	1,196	163	11	13,135
4 Yr. Average	4,391	958	235	10	5,593
2023	16,857	2,366	175	4	19,402
% Var	284%	147%	-25%	-59%	247%

The number of residential meters not read for 6 to 12 months continued to increase in 2023 for the residential and commercial customer classes. Yet, the number of meters not read for 6 to 12 months declined for the industrial and other customer classes. The Department was surprised by these results given that the Company had read a very high percent of its meters in 2023 compared to 2022. As in past years, Xcel referred to supply chain issues as a driver for these results.

Table 4 below summarizes the number of meters not read by utility personnel for longer than 12 months.

[7] The Department's calculations are based on data provided in Table C-1, Attachment C of the Company's 2023 Report.

Table 4: Meters Not Read for Longer than 12 Months 2019 – 2022 Average and 2023 Results[8]

Year	Residential	Commercial	Industrial	Other	Total
2019	582	606	310	50	1,548
2020	773	684	371	40	1,868
2021	639	674	722	20	2,055
2022	2,112	784	591	25	3,512
4 Yr. Average	1,027	687	499	34	2,246
2023	3,444	1020	142	14	4,620
% Variance	236%	48%	-72%	-59%	106%

The number of commercial meters not read for over a year increased 48%. That same figure for the residential class was a 236% increase. The same percentage figure for the industrial class was a 72% decrease in Table 4, like the one noted in Table 3. The Other customer class results registered a 59% decrease in meters not read for 6 to 12 months in Table 3 and a 59% decrease for meters not read for more than 12 months in Table 4.

Minnesota Rules 7826.1400(D) requires monthly data on meter-reading staffing levels, by work center or geographical area. Xcel provided information by work center and stated that its meter reading staff was combined with field representative staff. This allowed for the creation of a larger team that could then be cross-trained. Table 5 provides this information and compares it to the previous 3 years.

Table 5: Meter Reading Staff Levels 2020 – 2022 Average and 2023 Results[9]

Year	Metro East	Metro West	Northwest	Southeast	Other	Total
2020	2	9	1	2	1	15
2021	2	14	0	0	2	18
2022	4	12	0	0	5	21
3-yr Avg	2.7	11.7	0.333	0.7	2.7	18.0
2023	6.8	8.3	3.0	4.3	6.4	28.9
Var.	156%	-29%	800%	550%	141%	61%

Except for the Metro West Work Center, the four remaining work centers had significant increases in the number of meter reading staff in 2023. This result would be consistent with the Company changing the meter reading function from being provided by a third-party vendor to owning and reading the meters internally.

The Department acknowledges Xcel fulfilled the requirements of Minnesota Rules 7826.1400.

[8] The Department's calculations are based on data provided in Table C-2, Attachment C of the Company's 2023 Report.
[9] The Department's calculations are based on data provided in Table C-2, Attachment C of the Company's 2023 Report.

(b) Reporting Requirements Included in Commission Orders

i. Investigation into Xcel Energy's Inaccurate Gas Meters, Recalculation of Bills and Related Issues (Docket No. G002/CI-08-871) and Service Rules Tariff Modification (Docket No. E,G002/M-09-22)

In the Commission's November 30, 2010, Order in Docket Nos. G002/CI-08-871 and E,G002/M-09-224, at Order Point 2, the Commission directed the Company to file the following information with its annual electric service quality reports filed pursuant to Minnesota Rules 7826.0500:

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

The Company provided this information in Attachment D to the filing. It appears the total amount of field orders decreased from 9,376 in 2022 to 7,824 in 2023 or 17%. The average days for those orders increased from 3.54 in 2022 to 7.05 in 2023.

The Department acknowledges Xcel fulfilled the requirements in the Order listed above.

b. Involuntary Disconnections

Minnesota Rules 7826.1500 requires the following information for reporting on involuntary disconnection of service by customer class and calendar month:

1. the number of customers who received disconnection notices.
2. 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.
3. the total number of customers whose service was disconnected involuntarily, and the number of these customers restored to service within 24 hours; and
4. the number of disconnected customers restored to service by entering a payment plan.

In 2023, Xcel sent 774,507 disconnection notices to residential customers and 61,575 notices to commercial customers.[10] The Commission ordered a suspension of disconnections for residential customers facing financial hardship on August 13, 2020, in Docket No. E,G999/CI-20-375. The Commission then issued an Order on May 26, 2021, allowing for the resumption of disconnections on August 2, 2021. The COVID-19 pandemic was the driver for both those Orders. The current reporting year (2023) is the second full

[10] See Attachment E of the Company's Report. Note, these two amounts sum to 836,082 disconnection notices sent in 2023.

calendar year in which Xcel was disconnecting customers for non-payment since 2019. The information for 2020 and 2021 in Table 6 reflect those Commission actions.

The Department developed a three-year average for Table 6 given the change to the data in 2019 noted in footnote 11.[11] While all three of the years included in the average were significantly affected by the COVID-19 pandemic and its aftermath, the average does provide some limited amount of context.

The number of customers receiving disconnection notices increased 16 percent from 2022 to 2023. The 2023 number of disconnect notices was 86 percent higher than the 2020 – 2022 three-year average.

The number of customers seeking and granted Cold Weather Rule (CWR) protection increased 5 percent in 2023 compared to 2022 and 50 percent compared to the three-year average. Thus it appears Xcel is providing customers with information on the CWR as well as enrolling them in the program.

The number of customers being involuntarily disconnected also increased significantly in 2023 relative to 2022 (190 percent) and was 320 percent above the three-year average. The number of involuntary disconnects in 2023, was significantly higher than the same figure between 2016 and 2022 even with a smaller number of customers in the calculation since 2019.

[11] 2019, 2020, 2021 and 2022 figures represent Minnesota-only customers. Prior Years included North and South Dakota.

Table 6: Residential Customer Involuntary Disconnection Information 2014 – 2022 and 2023[12]

Year	Customers Receiving Disconnect Notice	Customers Seeking CWR Protection	Customers Granted CWR Protection	Percentage Granted	Customers Disconnected Involuntarily	Customers Restored within 24 Hours	Customers Restored by Entering Payment Plan
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	521,548	80,713	80,713	100%	16,693	6,318	4,250
2020	222,803	58,225	58,225	100%	2,820	1,610	969
2021	357,851	80,143	80,143	100%	6,292	3,466	3,889
2022	668,855	126,910	126,910	100%	8,538	3,197	5,533
3 year average	416,503	88,426	88,426	100%	5,883	2,758	3,464
2023	774,507	132,831	132,831	100%	24,722	11,126	12,248
Compared to 3 yr avg	86%	50%	50%	0%	320%	303%	254%
One year change	16%	5%	5%	0%	190%	248%	121%

The number of customers restored within 24 hours increased 248 percent from 2022 to 2023 and 303 percent when compared to the three-year average. Xcel attributed this change to its new AMI system. The final column in Table 6, which identifies the number of customers restored to electric service by entering a payment plan, also significantly increased compared to the three-year average (254 percent). The number of customers restored to service via entering a payment plan in 2023 was 121 percent higher than the three-year average.

The Department acknowledges Xcel fulfilled the requirements of Minnesota Rules 7826.1500.

c. Service Extension Requests

(a) Reporting Under Commission Rules

Minnesota Rules 7826.1600 requires the following information is required for reporting on service extension request response times by customer class and calendar month:

1. 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.
2. 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.

[12] Information in Table 6 sourced from Attachment E of the filing.

Xcel reported 8,256 residential and 925 commercial customers requested service to a location the Company had not previously served in 2023.[13] The average interval between request/readiness date and installation date was 23.2 days for residential and 18.8 days for commercial customers.

The "average number of days to complete" for residential customers in 2023 was 63% higher than the 2020 – 2022 three-year average and 83% higher than the 2022 figure. That same metric for commercial customers in 2023 was 174% higher than the three-year average, and the number of commercial installations increased 311% higher than the three-year average. Xcel added the highest number of new residential and commercial customers in 2023 since at least 2009 and perhaps since 2003. Table 7 provides a summary of this information.

The residential and commercial average number of days to complete in 2023 were the highest the Company had provided since at least 2009 (23.2 days and 18.8 days respectively). Xcel attributed at least part of the increases in response times to supply chain issues and inflation.

Table 7: Service Extension Requests 2019 – 2022 and 2023

Year	Residential		Commercial	
	# of installations	Avg # of days to complete	# of installations	Avg # of days to complete
2019	3,946	8.3	187	9.4
2020	5,887	5.5	607	4.0
2021	5,346	5.7	218	12.0
2022	4,521	12.0	225	16.6
3 year average	5,060	7	337	8
2023	8,256	23.2	925	19
3 Yr Variance %	63%	257%	174%	122%
1 Yr Variance %	83%	93%	311%	13%

Xcel stated 211,630 customers requested service to a location previously served in 2023. This represents a slight decrease from 2022, and the Company responded to all requests by the next business day.

The Department acknowledges Xcel fulfilled the requirements of Minnesota Rules 7826.1600.

(b) Reporting Requirements Included in Commission Orders

(i) *Cooperation between Consumer Affairs Office (CAO) and Xcel Energy's Advocacy Team – New Service Installations (Docket No. E002/M-23-73)*

In the Commission's December 5, 2023, Order in Docket No. G002/M-23-73, it directed Xcel to train the Xcel Energy Advocacy Team to work with the CAO on new service installation efforts and required Xcel to report on this effort in its 2023 service quality report. The Commission Order also required Xcel to

[13] 2023 Report, p. 9.

provide a response to the CAO and customers regarding new service installations within two business days.

The Company noted in the filing that 12 complaints were filed in 2023 and that all have been resolved and that the Xcel Advocacy team training has been completed.

The Department acknowledges Xcel fulfilled the requirements in the Order listed above.

d. Call Center Response Times

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.

(a) Reporting Under Commission Rules

Minnesota Rules 7826.1200, subp. 1 requires utilities to answer 80% of calls made to the business office during regular business hours and 80 percent of all outage calls within 20 seconds. Minnesota Rules 7826.1700 requires utilities to provide information on call center response times and monthly information.

Xcel provided monthly call volume and response time information in Attachment F. In 2023, an average of 83.4% of calls to the Company were answered within 20 seconds.[14] Table 8 summarizes this information below.

The Company assumes all calls handled by its Interactive Voice Response (IVR) system are answered within 20 seconds for both calls made during business hours and calls related to service interruptions. For outage calls handled by Xcel's customer service agents, an average of 61.8% were answered within 20 seconds in 2023. In 2021 and 2022 respectively, the same calculation resulted in 51.3% and 58.9%. The Department notes that the inclusion of Interactive Voice Response outage calls usually pushes the total outage call percentages above the 80% threshold. That mechanism held true again in 2023 with Xcel calculating 83.4% of customer calls being answered within 20 seconds. This result was slightly better than 2022.

Xcel's call centers experienced significant absenteeism in 2021 due to COVID as well as a large amount of staff turnover. This led to a decrease in these metrics for that period.

[14] Department's calculations are based on data provided in Xcel's Attachment F and may differ from Xcel's numbers.

Table 8 – Call Center Response Summary for 2023

		2023		
Line No.	**Category**	**Calls - Agents**	**Answered within 20**	**%**
1.	Residential	830,902	473,517	56.99%
2.	BSC	54,029	33,139	61.34%
3.	Credit	271,202	214,766	79.19%
4.	PAR	43,812	19,700	44.96%
5.	Total	1,199,945	741,122	61.76%
		Calls - IVR	**Answered within 20**	**%**
6.	Nonbilling/Nonoutage	401,062	401,062	100.00%
7.	Billing	1,244,194	1,244,194	100.00%
8.	Outage	266,586	266,586	100.00%
9.	Total	1,510,780	1,510,780	100.00%
		Outage calls	**Answered within 20**	**%**
10.	Agents	174,110	107,536	61.76%
11.	IVR	255,586	255,586	100.00%
12.	Total	429,696	363,122	84.51%
	Xcel	**All calls**	**Answered within 20**	**%**
13.	Line 5 + Line 8	1,466,531	996,708	67.96%
14.	Line 5 + Line 7 + Line 11	2,699,725	2,251,902	83.41%
	Department	**All calls**	**Answered within 20**	**percent**
15.	Line 5 + Line 6 + Line 8 + Line 12	3,274,897	2,749,500	83.96%

The Department acknowledges Xcel fulfilled the requirements of Minnesota Rules 7826.1200 and 7826.1700, subp. 1

(b) Reporting Requirements Included in Commission Orders

i. Order Accepting Annual Safety, Reliability, and Service Quality Reports, Approving 2004 Reliability Standards, Granting Variances and Clarifying Requirements (Docket No. E002/M-04-511)

The Commission clarified in this Order at Order Point 6 that Xcel shall include, on a going forward basis, data regarding credits calls, but not calls from C&I customers in its calculation of call center response times.

The Company complied with this Commission Order in the calculation included in Attachment F of the Report.

e. Emergency Medical Accounts

(a) Reporting Under Commission Rules

Minnesota Rules 7826.1800 requires reporting on emergency medical accounts (EMAs) that 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 as of January 2023, 1,698 Minnesota customers had requested and received Emergency Medical Account status.[15] This figure is 14 percent lower than the number the Company identified in its 2021 Annual Report (1,977).

In 2022, a higher number of households requested Emergency Medical Account status than 2021, but a slightly lower percentage were granted this status (88.3%).

Table 9 shows the historical numbers regarding EMAs.

Table 9: Residential Customers Requesting Emergency Medical Account Status 2013 – 2022 and 2023

Year	Requested Medical Acct. Status	Granted Medical Acct. Status	Percent Granted
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%
2020	986	935	94.8%
2021	1,084	971	89.6%
2022	1,222	1,079	88.3%
10-year avg	2,178	1,695	77.8%
2023	2,614	2,193	83.9%
10-yr variance	20%	29%	
Annual Variance	100%	100%	

[15] 2022 Report, p. 10 – 11. The Medical Account status must be requested and approved annually.

The number of customers requesting EMA status and the number approved were 20 and 29 percent higher in 2023 than the 10-year average respectively. The number of customers requesting EMA status and the number approved in 2023 were both 100 percent higher than the same figures in 2022.

The Department acknowledges Xcel fulfilled the requirements of Minnesota Rules 7826.1800.

(b) Reporting Requirements Included in Commission Orders

i. Order dated October 20, 2023, in Docket No. E002/M-22-162 Requiring Xcel to Continue to Report on its Emergency Medical Accounts

The Department concluded that the Company complied with this Commission Order after completing its review.

f. 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 under Minnesota Rules 7826.1900.

Table 10 summarizes the number of accounts for which Xcel reported required deposits. The Department notes the Company requests these deposits from residential customers who have filed for bankruptcy. The 2023 number of deposits required was 16 percent below the 10-year average. The same figure was 73 percent higher when compared to the number of deposits required in 2022.

Table 10: Customer Deposits Required 2013 – 2022 and 2023

Year	Number of Deposits
2013	652
2014	606
2015	561
2016	362
2017	314
2018	394
2019	486
2020	678
2021	583
2022	237
10 -year Average	487
2023	409
10-year Variance %	-16%
1-year Variance %	73%

The Department acknowledges Xcel fulfilled the requirements of Minnesota Rules 7826.1900.

g. Customer Complaints

This is an important category for service quality, perhaps the most important.

a) Reporting Under Commission Rules

a. Summary Report

Pursuant to Minnesota Rules 4826.500, the Company is required to provide a report on customer complaints that include the following information by customer class and calendar month:

(1) the number of complaints received.
(2) 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.
(3) the number and percentage of complaints resolved upon initial inquiry, within ten days, and longer than ten days.
(4) the number and percentage of all complaints resolved by taking any of the following actions:
    a) taking the action, the customer requested;
    b) taking an action the customer and the utility agree is an acceptable compromise;
    c) providing the customer with information that demonstrates that the situation complained of is not reasonably within the control of the utility; or
    d) refusing to take the action the customer requested; and
    e) the number of complaints forwarded to the utility by the CAO for further investigation and action.

In 2023, Xcel reported the Company's Customer Advocate Group handled 759 complaints, 35 of which were forwarded by the CAO.[16] The Company provided data showing 26.4 percent of residential complaints Xcel's Customer Advocate Group handled in 2023 were resolved within 10 days.[17] The most frequent complaint category was "billing error" at 33.7 percent.[18]

Xcel's report on customer complaints includes the required information. Table 11 contains a limited summary of Xcel's customer complaint history as received through the Company's Customer Advocate Group.

Given the selective nature of the information included in Table 11, the Department did not develop summary statistics.

The Department notes that as the number of formal complaints increased from 635 in 2022 to 759 in 2023, the number of complaints received in the Company's call center also increased over that same period from 22,792 to 33,732. Xcel customers filed more complaints in 2023 than 2022, although slightly less than in 2021.

[16] Attachment G of the Report.
[17] Id.
[18] Id.

Historically, the complaint category with the largest volume for all customers was "inadequate service." That category was sub-divided into four different customer categories to provide more detail in the 2023 report. Interestingly, the sum of those four customer categories was only 32 percent in 2023 compared to 52 percent in 2022. The two complaint categories that had large increases in 2023 compared to 2022 were "Wrongful Disconnect" and "Billing Error". Wrongful Disconnect increased from 4.7 percent in 2022 to 22.2 percent in 2023. Billing Error increased from 23.0 percent in 2022 to 33.7 percent in 2023.

The Department notes that the 759 complaints Xcel received in 2023 exceeded the allowable performance standard in the Company's Quality of Service tariff. Hence, Xcel will be paying a $1,000,000 penalty for failing to meet that performance standard in the QSP in 2023. The Company submitted a proposal for how it proposes to utilize the underperformance penalty in its Service Quality Tariff Report, filed May 1, 2024. The Commission issued a Notice of Comment in Docket Nos. E,G002/CI-02-2034 and E, G002/M-12-383 on May 10, 2024, regarding the allocation of the $1,000,000 penalty. Initial Comments are due June 28th, and reply comments are due July 12, 2024.

Table 11: Selected Summary of Customer Complaints[19]

Year	Number of Complaints	Inadequate Service	Wrongful Disconnect	Billing Error
2013	745	55.8%	15.6%	13.8%
2014	770	53.2%	19.7%	14.8%
2015	789	52.5%	23.4%	13.3%
2016	547	52.1%	19.0%	14.6%
2017	572	53.5%	24.5%	10.5%
2018	664	58.1%	18.8%	11.6%
2019	756	59.7%	17.3%	11.1%
2020	430	57.2%	3.7%	16.3%
2021	484	56.6%	7.4%	16.5%
2022	635	51.7%	4.7%	23.0%
2023	759	32.0%	22.2%	33.7%

The Department acknowledges Xcel fulfilled the requirements of Minnesota Rules 7826.2000.

b) Reporting Requirements Included in Commission Orders

i) Order Approving the Elimination of the Standalone Annual Summary of Customer Complaints docket (YY-13) and Requiring Utilities to include complaint data from Minnesota Rules 7820.0500 in their Annual Service Quality Reports with data filed as part of Minnesota Rules 7826.2000. (Docket No. E002/M-22-162), issued January 18, 2023

These requirements are procedural in nature. Xcel provided the information identified in Attachment G of the filing.

[19] Id.

The following three Orders included directions and new reporting requirements.

ii) The Commission's December 18, 2020, Order in Docket No. E002/M-20-406 at Order Point 16.
iii) The Commission's December 2, 2021, Order in Docket No. E002/M-21-237 at Order Point 6.
iv) The Commission's November 9, 2022, Order in Docket No. E002/M-22-162 at Order Point 7.

Consistent with the Commission's directive in the 20-406 docket, parties met several times between March 2021 and March 2022 to discuss improving the then-current complaint categories in use by each of the utilities and the CAO.[20] The Parties agreed to separate the category of Inadequate Service into four sub-categories, as was noted previously. The Parties began using those new sub-categories in the 2023 SRSQ. The sub-categories include: 1) Inadequate Service – Field/Operations; 2) Inadequate Service – Customer Service; 3) Inadequate Service – Programs and Services, and 4) Inadequate Service – Cold Weather Rule Protection.

The Order in the 21-237 docket included an additional requirement that Xcel include a complaint category for Distributed Energy Resources (DER). Commission staff and Xcel have agreed to eight complaint sub-categories under the large topics of billing, interconnection, and other. The Company noted it logged 21 DER complaints in 2023.

At Order Point 7 in the November 9, 2022, Order in the 22-162 docket, the Commission "required Xcel to document response duration in days, beginning form the date of initial customer contact to the date of Company reply, for inquiries, complaints, or disputes related to DERs and/or the interconnection process that are received through Xcel's call center, email, or otherwise. Information shall be shared in a .xlsx format in the Company's 2023 service quality filing and in the temporary annual report in Docket No. E999/CI-16-521."

Xcel provided that information in Attachment G-2. The summary statistics for that information identified the "Average Response Duration in Business Days" as being equal to 2.3 days. The Company also identified the number of DER Customer Complaint Calls that were handled by Xcel's Personal Account Representatives (PAR) in 2023 as 21 with an "Average Response Duration in Business Days" of 8.

In the Commission's December 5, 2-23 Order in Docket No. E002/M-23-73, it directed the Executive Secretary to address billing issues associated with AMI implementation for AMP customers. The Commission issued a Notice of Comments on this issue in December of 2023. One party, the Minnesota Department of Commerce, responded to the Notice of Comment. The issue was closed via the Commission's consent agenda process.

The Department's review concludes Xcel met the reporting requirements in the three Commission Orders listed above.

h. Electronic Customer Contacts

[20] The Parties included Commission Staff, Xcel Energy, Minnesota Power, Otter Tail Power, and the Department of Commerce.

One recent Commission Order includes the reporting requirements regarding this topic.

i. *Order Accepting Otter Tail Power, Minnesota Power, and Xcel Energy's 2021 Safety, Reliability and Service Quality Reports, issued December 2, 2021, in Docket No. E002/M-21-237*

At Order Points 2, 3, and 4, the Commission required certain new information be filed regarding electronic utility-customer interactions beginning with the April 2023 report.

2. *Required the Company to provide:*
   a) *Percentage uptime to the second decimal;*
      i. *General website*
      ii. *Payment services*
      iii. *Outage map and/or outage information page*
   b) *Error rate percentage to the third decimal;*
      i. *Payment services.*
3. *Provide the percentage uptime and error rate percentage information in their annual reports for the next three-year reporting cycles to build baselines for web-based service metrics.*
4. *Required the Company to continue to provide the information on electronic utility-customer interaction such that baseline data are collected:*
   a. *Yearly total number of website visits;*
   b. *Yearly total number of logins via electronic customer communication platforms;*
   c. *Yearly total number of emails or other customer service electronic communications received; and*
   d. *Categorization of email subject, and electronic customer service communications by subject, including categories for communications related to assistance programs and disconnection as part of reporting under Minn. R. 7826.1700.*

Xcel included a discussion addressing Order Point 14 of the Commission's December 2020 Order on pages 21 through 23 of its Report.

The Company provided monthly page views of its website, Facebook, MyAccount, as well as the number of mobile app installations. Table 12 provides the 3-year average for each category from 2020-2022 and the 2023 results.

Table 12: Xcel Energy 2020 - 2022 Page Views and App Installations Totals and 2023 Results

Line No.	Year	Website Visits	MyAccount, Mobile App	Emails or Other
1.	2020	12,981,427	19,432,738	235,210
2.	2021	11,098,531	14,626,676	121,679
3.	2022	10,669,980	14,458,009	83,952
4.	3-yr Average	11,583,313	16,172,474	146,947
5.	2023	10,087,594	13,810,662	101,131
6.	3-yr Variance	-13%	-15%	-31%
7.	1-yr Variance	-5%	-4%	20%

The Department notes the number of website visits and logins via electronic customer communications (MyAccount, Mobile App) were lower than the three-year average and the 2022 results. For the emails or other customer service electronic communications received, the 2023 results were higher than the 2022 figure, but lower than the three-year average.

a. AMI Disconnect/Reconnect Reporting

The Commission ordered several reporting requirements in its ORDER APPROVING PETITION AS MODIFIED AND REQUIRING FILINGS, dated March 22, 2023, in Docket E002/M-22-233. In addition, the Commission approved a one-year variance to Minn. R. 7820.2500 for customers subscribed to Residential Service, Residential Time-of-Day Service, Small General Service, or Small General Time of Day Service. At Order Point 4, the Commission listed several procedures related to service to places where residents have medical needs that require utility the Company to revise those procedures. Those revisions included:

I. *Revise the Company's Medically Necessary Equipment & Emergency Certification Form to include nurse practitioners and physician assistants among the medical personnel who can provide written certification that failure to reconnect or continue service would impair or threaten the health or safety of a resident of the customer's household.*
II. *Remove the Medical Verification check boxes from the form and replace them with broad language that recognizes that cognitive impairments may qualify as a medical emergency under the statute.*
III. *Add an email address to the form to allow qualified medical professionals to email a completed and scanned form to the Company's Personal Account Representative team to be entered into Xcel Energy's system.*
IV. *Provide 30 calendar days for a customer – whether a new or renewing customer – to obtain written certification that failure to connect or continue service would impair or threaten the health or safety of a resident of the customer's household.*
V. *Meet with or present information about the medical registry to organizations identified by AARP, OAG, and the Energy CENTS Coalition.*
VI. *Send additional information about Xcel Energy's medical registry to all Minnesota customers once a year.*

The Company filed a Compliance on April 20, 2023, regarding the requirements listed in Order point 4.

At Order Point 5 the Commission required Xcel to file a report on several metrics in its service quality reports for 2023, 2024 and 2025:

A. *Meter-related complaints for advanced metering infrastructure.*
B. *The percentage of customers flagged for disconnection who pay their disconnection amount in full in the current process versus after the variance has been implemented.*
C. *The number of visits required when the Company is unable to reach the customer (speaking to the customer or leaving a voicemail).*
D. *The length of time for reconnecting each customer, and the method for reconnecting the customer.*
E. *Re-analysis of actual costs for disconnection/reconnection requiring in-person visits and those performed remotely.*
F. *Detailed cost information and subsequent analysis of costs as opposed to the Company's proposed language stating adjustments to costs can be following the first year of reporting.*
G. *Progress exploring texting capabilities for customer contact and progress on an automated process for reconnection.*
H. *Progress adding a direct link on its website to submit the Medically Necessary Equipment and Emergency Certification Form.*
I. *Feedback from the Department of Commerce, Energy Assistance Unit regarding remote disconnection.*
J. *Compliance with all consumer protection measures ordered in this proceeding.*
K. *Detailed information on the number of customers opting out of AMI meter installation and demand-billed customers compared to customers with AMI meters installed.*

i. *Meter-related complaints for advanced metering infrastructure*

The Company identified nine meter-related complaints related to the AMI Opt-Out in 2023.
Order Point six required Xcel to engage stakeholders to discuss the evaluation metric requirements established in this docket with 30 days of filing its 2023, 2024 and 2025 service quality reports.

ii. *The percentage of customers flagged for disconnection who pay their disconnection amount in full in the current process versus after the variance has been implemented.*

Xcel stated that it sent out 495,897 disconnection notices in 2023 and that 3,750 customers (0.75%) paid their past due balances in full in 2023 as well. The Company also included information that after it implemented this new process on May 1, 2023. According to Xcel, it sent out 330,027 disconnection notices between May 1, 2023, and December 31, 2023, and 2,660 customers (0.81%) paid their past due balances.

iii. *The number of field visits required when the Company is unable to reach customers (speaking to the customer or leaving a voicemail)*

The Company stated 39,250 AMI disconnection orders were placed in 2023. The Company was able to reach 32,229 customers via phone or voice mail but was unable to reach 7,021 of those customers. Xcel placed those customers in a group that would be manually disconnected. The Company's planned process was to perform a field visit prior to disconnection, which is consistent with past practice. However, after 4 months, Xcel realized that it failed to establish a protocol initiating a field visit when the Company was unable to establish a phone contact had not been put in place, which resulted in 1,161 AMI customers being disconnected without receiving a field visit.

Xcel then suspended customer disconnects until it put the proper protocols in place. . Any customers that remained disconnected in the week prior to the Cold Weather rule received a field visit to determine if they could be reconnected.

iv. *The length of time for reconnecting each customer, and the method for reconnecting the customer*

Xcel provided a table that included customer reconnection times for both remote and manual reconnection protocols on page 29 of the Report. The Department rearranged the information in those two tables in Tables 13.a and 13.b.

Table 13.a: Comparison of Average Time by Class for Reconnection for Remote and Manual Protocols - 2023 Results (in average hours)[21]

Protocol	Residential	Commercial	Blank
Remote	0.51	0.74	13.04
Manual	29.53	64.99	13.04
Difference	29.02	64.25	0
Percentage Diff.	98%	99%	0%

Remote reconnections for residential customers took 31 minutes on average while manual remote reconnections required 29.5 hours on average. The results for the commercial class were similar, while the results for the Blank class have so few observations (2) to make the information unreliable. 21

Table 13.b: Comparison of Longest Time by Class for Reconnection for Remote and Manual Protocols - 2023 Results (in average hours)

Protocol	Residential	Commercial	Blank
Remote	420.37	26.6	138.67
Manual	2091.06	1320.82	152.17
Difference	1670.69	1294.22	13.5
Percentage Diff.	80%	98%	9%

[21] Company's report page 28.

v. *Re-analysis of actual costs for disconnection/reconnection requiring in-person visits and those performed remotely.*

Xcel provided a table that compared remote and physical disconnect/reconnect costs for 2022 and 2023 in the filing. Costs for the remote disconnection protocol increased 54 percent between 2022 and 2023, while those for the physical or manual remote/disconnection protocol increased by 100%.

vi. *Detailed cost information and subsequent analysis of costs as opposed to the Company's proposed language stating adjustment to costs can be made following the first year of reporting.*

The Company provided this information in Attachment H. It supports the information provided in the previous reporting requirement.

vi. *Progress exploring texting capabilities for customer contact and progress on an automated process for reconnection.*

Xcel stated that it its working on this option and that it is under development. The Company did not provide a timeline for implementation.

vii. Progress adding a direct link on its website to submit the Medically Necessary Equipment and Emergency Certification Form

Xcel stated that the current website platform doesn't allow a "direct submit" option for this form. A customer can download the form, complete the form, and then email or fax it to the Personal Accounts department. The Department has requested the Company provide additional information relative to the costs and benefits of adding a direct link on its website in its reply comments or in Xcel's 2024 calendar year SRSQ filing. This information will hopefully provide some idea of the resources necessary to meet this requirement.

viii. Feedback from the Department of Commerce, Energy Assistance Unit regarding remote disconnection

The Company contacted this unit prior to filing and the Energy Assistance Unit did not have any feedback regarding remote disconnection at this time.

ix. *Compliance with all consumer protection measures order in this proceeding.*

Xcel noted that it filed the required consumer protection filing on April 20, 2023. The Company also provided a lengthy description of the contents of that filing.

x. *Detailed information on the number of customers opting out of AMI meter installation and demand-billed customers compared to customers with AMI meters installed.*

Xcel provided a table which included the number of AMI opt outs and the number of AMI meters installed. Approximately 0.17 percent of its customers chose to opt out of receiving and AMI meter.

xi. *A proposal for using the capacity of its advanced metering infrastructure to restore electric service to customers during periods of extreme heat.*

Minnesota Statutes § 216B.0975 states:

> *A utility may not affect an involuntary disconnection of residential services in affected counties when an excessive heat watch, heat advisory, or excessive heat warning issued by the National Weather Service is in effect. For purposes of this section, "utility" means a public utility providing electric service, municipal utility, or cooperative electric association.*

Xcel explained its process to identify, contact, and then reconnect currently disconnected customers. The Company also noted that it has agreed to file a report 30 days after its first full year of deployment of its new disconnection/reconnection policy.

The Department's review of this section of the filing concluded the Company has complied with the Commission's reporting requirements.

xii. Company's request to continue the temporary variance to Minn. R. 7820.2500 for residential and small general customers.

In its ORDER APPROVING PETITION AS MODIFIED AND REQUIRING FILINGS, dated March 22, 2023, in Docket E002/M-22-233, the Commission approved a one-year variance to Minn. R. 7820.2500 for certain customer classes. In the filing, the Company requested a change to the renewal parameters of its temporary variance to Minn. R. 7820.2500 set forth in Order Point 1.

Specifically, Xcel requested:

1) the Commission approve the requested temporary renewal extension request,
2) any approval extends until the Commission decides on the variance request presented in the next Annual Service Quality Report, and
3) the gap between the expiration of the current variance on April 22, 2024, and the Commission's decision on the present variance request, if approved, be retro-actively effective.

Minn. R. 7829.3200 provides the Commission can grant a variance to its rules, when the following requirements are met:[22]

A. Enforcement of the rule would impose an excessive burden upon the applicant or others affected by the rule;
B. Granting the variance would not adversely affect the public interest; and
C. Granting the variance would not conflict with standards imposed by law.

The Commission may require a utility to meet certain conditions before granting a variance. Commission-granted variances expire in one year unless the Commission authorizes a different expiration. The Commission can revoke variances prior to expiration if the utility does not comply with required conditions.[23]

Minn. R. 7820.2500 states:[24]

> Service may be disconnected only in conjunction with a personal visit by a representative of the utility to the address where the service is rendered and an attempt to make personal contact with the customer at the address. If the address is a building containing two or more dwelling units, the representative shall make a personal visit to the door of the customer's dwelling unit within the building. If security provisions in the building preclude free access on the part of the representative, the representative shall attempt to gain access to the building from the caretaker, for the purpose of attempting to make personal contact with the customer. The representative of the utility shall at all times be capable of receiving payment, if nonpayment is the cause of the disconnection of service, the representative shall be able to certify that the cause of disconnection has been remedied by the customer.

The Department's analysis of the Company's request for a variance from Minn. R. 7820.2500 considers each requirement under Minn. R. 7829.3200 governing whether the Commission should grant a variance.

Enforcement of the rule would pose an excessive burden on the applicant as it relates to employee safety. It is safer for the Company's employees to remotely disconnect service rather than perform a field visit for disconnection.[25] In addition, requiring Xcel to file a separate petition to request a variance that terminates on the existing termination date also poses an excessive burden on the applicant rather than having the Commission extend the variance to the date on which the Commission decides if variance is still warranted in the Company's subsequent Annual Report. Requiring another filing that would allow

[22] Minn. R. 7829.3200.
[23] Minn. R. 7829.3200, subpart 3.
[24] Minn. R. 7820.2500.
[25] Docket No. E002/M-22-233, Petition, p. 17.

the new proposed variance to be retro-active to April 22, 2024, is another excessive burden on the applicant.
Granting the variance does not adversely affect the public interest. As stated earlier, remotely disconnecting customers is safer for the Company's employees and is a lower cost than field visit disconnections.

Granting the variance does not conflict with standards imposed by law. The Department did not find the proposal conflicts with any standards proposed by law. The Company also stated it is not aware of any conflict with any standards imposed by law.[26]

The Department concludes the Company's proposal meets the three requirements listed in Minn. R. 7829.3200 for granting a variance to Commission Rules. The Department recommends the Commission approve Xcel's request for a variance to Minn. R. 7820.2500.

a. Customer Satisfaction

Two recent Commission Orders include the reporting requirements regarding this topic.

i. Order Accepting Reports (Docket Nos. E002/M-216-281 and E002/M-17-249), issued February 9, 2018
ii. Order Accepting Reports, Setting Filing Requirements, and Granting Withdrawal of Reconnect Pilot Proposal (Docket No. E002/M-18-239), issued May 14, 2019

In the first Order, the Commission required Xcel to provide "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 goals." In the second, the Commission required Xcel to "provide refreshed information responsive to the Commissions February 9, 2018, Order in future annual service-quality filings."

Xcel didn't provide the internal goals information in the 2023 SRSQ filing. The Commission did require the Company to provide similar, if not identical information in its Annual Performance Based Ratemaking Annual Compliance Filing in Docket No. E002/CI-17-401.[27] Given that combination of a new Commission Order on the topic and Xcel's decision to only report that information once in its Performance Based Ratemaking annual compliance filing, the Department inferred that the two reporting requirements listed for the SRSQ have been superseded formally or informally. If the Department's reasoning is incorrect, we would ask the Commission to request Xcel provide that information in its 2025 SRSQ.

This concludes the Department's review of the Company 2023 Annual Service Quality Report.

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[26] Docket No. E002/M-22-233, Petition, p. 17.
[27] ORDER ACCEPTING 2021 AND 2022 REPORTS, SUSPENDING DECISIONS ON BASELINES AND TARGETS, AND MODIFYING REPORT REQUIREMENTS at Order Points 5 and 6., issued January 26, 2024, and ORDER ESTABLISHING PERFORMANCE METRICS at Order Point 1.c, issued September 18, 2019.

III. ANNUAL SERVICE RELABILITY REPORT for 2023

1. Overview of 2023 Reliability Performance

Like the service quality section, reliability performance initially began with the development of Minnesota Rules 7826.0500 through 7826.0700. The Commission identified numerous additional reporting requirements beyond those included in the rules and implemented them via Commission Order. Currently, the amount of information Xcel provides regarding reporting requirements required by Order exceeds the information the Company provides in response to the reliability reporting requirements included in the Minnesota Rules.

i. 2023 – Summary of reliability performance

Considering the numerous Order-based reporting requirements associated with this topic, Xcel added a section to its Annual Report in which it identified and responds to Commission Orders the Company has identified as being related to this issue.[28]

- Order Point 8 in the Commission's November 9, 2022, Order in Docket No. E002/M-22-162 required all three Minnesota-based regulated electric utilities to provide a public facing summary of key customer-service quality and reliability metrics either directly or via a link on its home page that is one click away.[29]
    - The Company provided a copy of this infographic as Attachment I to the Report. The Department reviewed the attachment. The information included does pertain to service quality and reliability. Department staff also visited Xcel Energy's website to where this information is located. The attachment is located under Outages → Additional Resources Estimated Restoration Time → How We Restore Power - Service Quality Info Sheet.
    - The Department's review suggests the Company did not comply with this requirement in the Commission Order as the attachment appears to be two clicks away from Xcel's home page. The Department requests that Xcel discuss this issue in its reply comments.
- 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, increased reliability, and active contingency planning.
    - The Company provided a summary of this information as Attachment J to the Report. The Department reviewed the attachment. It appears that Xcel spent less on vegetation management in 2022 than it did in 2023.

[28] See Report pages 34-35.
[29] Order Point 2 in the Commission's May 14, 2019, Order in Docket No. E002/M-18-239, Order Point 12 in the January 28, 2020, Order in Docket No. E002/M-19-261, and Order Point 7 in the December 2, 2021, Order in Docket No. E002/M-21-237 also address this issue.

- The Department concludes the Company complied with this requirement in the Commission Order.

- Order Point 27(a) in the Commission's July 17, 2023, Order in Docket No. E002/GR-21-630 required:[30]
  - *Prior to seeking future cost recovery for any incremental FLISR investment, Xcel must propose a mechanism by which to base cost recovery for FLISR investment on reliability improvements:*
    - *Xcel must track and report, beginning in its next Service Quality, Safety and Reliability report due April 2024, on reliability performance for circuits equipped with FLISR investments approved in the present rate case is recommended by the Department, indicating in the Company's safety, reliability, and service quality filings which circuits have been equipped with FLISR. Allow Xcel to modify the requirements on circuit level performance reporting on its annual Service Quality, Safety, and Reliability reports to align with the Department's recommendation.*
  - The Company also provided this information in Attachment J of the annual report.
  - The Department reviewed the FLISR-related information Xcel provided and concludes the Company complied with this requirement in this Commission Order.

2. Reliability Reporting Requirements Included in Minnesota Rule 7826.0500 through 7826.0700

Minnesota Rules 7826.0500 through 7826.0700 delineate the

- reliability reporting requirements,
- reliability standards, and;
- reporting requirement for major service interruptions.

Minnesota Rules 7826.0500 requires each utility to file an annual report with the following information:

1. reliability performance,
2. storm-normalization method,
3. action plan for remedying any failure to comply with the reliability standards,
4. bulk power supply interruptions,
5. major service interruptions,
6. circuit interruption data (identify worst performing circuit),
7. known instances in which nominal electric service voltages did not meet American National Standards Institute (ANSI) standards,
8. work center staffing levels, and

[30] FLISR stands for Fault Location, Isolation, and Service Restoration. It is a form of distribution automation.

9. any other relevant information the utility considers relevant in evaluating its reliability performance over the calendar year.

1. *Annual Rule-based Reliability Performance Reporting Requirements*

Subpart 1 of Minnesota Rule 7826.0500 includes the annual reliability reporting requirements. The Department will focus on the first three of those reporting requirements in this section.

- The utility's SAIDI for the calendar year, by work center and for its assigned service area. [31]
- The utility's SAIFI for the calendar year, by work center and for its assigned service area. [32]
- The utility's CAIDI for the calendar year, by work center and for its assigned service area. [33]

The Commission developed a method for calculating SAIDI, SAIFI and CAIDI for Minnesota investor-owned utilities using historical information specific to that utility. This methodology was used for around 18 years (2003 through 2020 approximately).

The Commission adopted a new methodology for benchmarking electric utility reliability using SAIDI, SAIFI and CAIDI for the three investor-owned utilities operating in Minnesota in its Order dated December 18, 2020 in Docket No. E002/M-20-406.[34] Specifically, the Commission required "utilities to report reliability based on the traditional five-year rolling average at the work-center level but required utilities to use the IEEE benchmarking results to measure system-wide performance."[35]

In that same Order, the Commission required the utilities to discuss and propose a transition to a full benchmarking approach to setting reliability standards. In advance of the transition, the Commission delegated authority to the Executive Secretary to continue conversations with utilities and other interested parties on the definition of work-centers, the process for benchmarking individual work centers and other considerations for the transition to benchmarking.[36]

The Commission then set the service territory-wide reliability standards for the IOUs for 2021 using the IEEE benchmarking information instead of the traditional rules-based approach:

- Minnesota Power's service-territory wide reliability standard at the IEEE benchmarking second quartile for medium utilities.
- Otter Tail Power's service-territory wide reliability standard at the IEEE benchmarking second quartile for medium utilities.
- Xcel Energy's service-territory wide reliability standard at the IEEE benchmarking second quartile for large utilities.

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[31] SAIDI stands for System Average Interruption Duration Index.
[32] SAIFI stands for System Average Interruption Frequency Index.
[33] CAIDI stands for Customer Average Interruption Duration Index.
[34] Order Accepting Reports Requiring Additional Filings and Establishing Workshop in Docket Nos. E002/M-20-406 (Xcel), E017/M-20-401 (Otter Tail Power) and E015/M-20-404 (Minnesota Power).
[35] *Id.* at page 3.
[36] *Id.* at Order Point 6, p. 7.

The Commission extended the IEEE benchmarking methodology to the work-center level for the three IOUs in its Order dated March 2, 2022, in Docket Nos. E002/M-21-237 (Xcel), E017/M-21-235 (Otter Tail Power) and E015/M-20-230 (Minnesota Power). Specifically, the Commission adopted the following benchmarks:

- Minnesota Power –
  - Service territory-wide – second quartile for medium utilities.
  - Work-center – second quartile for small utilities.
- Otter Tail Power Company –
  - Service territory-wide – second quartile for medium utilities.
  - Work-center – second quartile for medium utilities.
- Xcel Energy –
  - Service territory-wide – second quartile for large utilities.
  - Work-center –
    - Southeast and Northwest - second quartile for medium utilities.
    - Metro East and Metro West – second quartile for large utilities.

Order Point 4 in the Commission's November 9, 2022, Order in Docket No. E002/M-22-162 set Xcel's 2022 statewide and work center reliability standards maintained the same standards delineated in 2021. The Commission also included language requiring Xcel to make a supplemental filing to its 2022 Report 30 days after IEEE publishes the 2022 benchmarking results.

Order Point 4 in the Commission's December 5, 2023, Order in Docket No. E002/M-23-73 set Xcel's 2023 statewide and work center reliability standards at the same level as those delineated in 2021. The Commission also included language requiring Xcel to make a supplemental filing to its 2023 Report 30 days after IEEE publishes the 2023 benchmarking results.

By way of explanation, IEEE doesn't publish its benchmarking results for the prior year until late July or early August of the following year, so the three IOUs don't know where they stand relative to those benchmarks for 2023. Table 14 compares the relevant 2022 IEEE benchmarked standards to information to Xcel's 2023 actual reliability performance. While this is not a standard comparison, it does provide some context.

Table 14: 2022 IEEE Results Compared to Xcel's Actual 2023 Reliability Performance

Work Center	Metric	2022 IEEE Benchmarks	2023 Xcel Actuals	Met Benchmark?
Minnesota	SAIDI	115	86.40	Yes
	SAIFI	1.02	0.85	Yes
	CAIDI	120	101.56	Yes
Metro East	SAIDI	115	105.04	Yes
	SAIFI	1.02	0.99	Yes
	CAIDI	120	105.66	Yes
Metro West	SAIDI	115	71.41	Yes
	SAIFI	1.02	0.77	Yes
	CAIDI	120	92.79	Yes
Northwest	SAIDI	143	95.39	Yes
	SAIFI	1.11	0.90	Yes
	CAIDI	134	105.85	Yes
Southeast	SAIDI	143	87.28	Yes
	SAIFI	1.11	0.71	Yes
	CAIDI	134	122.43	Yes

Xcel's performance was better than the IEEE benchmarks for all the fifteen metrics listed.

Table 15 shows the Company's 2023 reliability performance compared with the goals the Commission set in Docket No. E002/M-20-406 using the historical Minnesota Rules-based calculation. Shaded cells indicate reliability goals the Company did not meet, when comparing 2023 actuals to 2020 goals. Thus, Xcel met 6 of the 12 reliability goals identified in the Minnesota Rules approach.

While the Department notes this comparison is not required, it does provide Commission staff, Commissioners, and other interested parties a point of reference for Xcel's actual 2023 reliability results compared to historical goals.

This comparison also suggests the IEEE 2022 benchmarks used as the point of comparison are not as rigorous as the reliability goals calculated using the historical Minnesota-specific rules-based approach.

While the IEEE 2022 results provide a useful proxy for the yet-to-be-calculated 2023 IEEE reliability results, the Department will provide additional comments after Xcel provides the 2023 IEEE benchmarking information later this year.

Based on its review of Xcel's 2023 system-wide reliability requirements reporting, the Department concludes the Company appears to have fulfilled the requirements of Minnesota Rules 7826.0500, subps. 1.A, 1.B, and 1.C.

Table 15: Xcel's 2023 Reliability Performance Compared with 2020 Goals Using Historical Method

Work Center	Metric	2023 Performance	2020 Goals
Minnesota	SAIDI	86.40	NA
NA	SAIFI	0.85	NA
	CAIDI	101.56	NA
Metro East	SAIDI	105.04	89.95
	SAIFI	0.99	0.84
	CAIDI	105.66	106.91
Metro West	SAIDI	71.41	79.37
	SAIFI	0.77	0.79
	CAIDI	92.79	100.55
Northwest	SAIDI	95.39	87.11
	SAIFI	0.90	0.75
	CAIDI	105.85	115.72
Southeast	SAIDI	87.28	94.82
	SAIFI	0.71	0.76
	CAIDI	122.43	122.04

3. Storm-Normalization Method

Minnesota Rule 7826.0500, subp. 1 sets forth annual reliability reporting requirements. The Department will focus on the fourth of those reporting requirements in this section which requires "an explanation of how the utility normalizes its reliability data to account for major storms."

Xcel used the IEEE 1366 storm day threshold calculation procedures for its 2022 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 its reliability data is normalized to account for major storms by removing outages that start on a MED.

The Department acknowledges Xcel fulfilled the requirements of Minnesota Rules 7826.0500, subp. 1.D.

4. *Additional Order-based SAIDI, SAIFI and CAIDI Reporting Requirements*

Xcel identified five Commission Orders which fall into this category.

- Order Point 19 in the Commission's December 18, 2020, Order in Docket No. E002/M-20-406 require that *"Xcel must work with the workgroup to develop an interactive map, with input from stakeholders on the scope and details of the map. Xcel must file an update on the development of the map by October 1, 2021.*

- Order Point 4 in the Commission's December 12, 2014, Order in Docket No. E002/M-14-131 which required the Company to incorporate into its next filing a summary table that allows the reader to assess the overall reliability of the system and identify the main factors that affect reliability more easily.
- Order Points 1 and 2 from Attachment B of the Commission's January 28, 2020, Order required Xcel to provide non-normalized and normalized values for reliability metrics calculated using the IEEE 1366 method.
- Order Point 3.b in the Commission's March 19, 2019, Order in Docket No. E002/M-18-230 required the Company to include performance by customer class.
- Order Point 11 of Attachment B in 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.
- Order Point 2 in the Commission's October 20, 2023, Order within Docket No. E002/M-22-162 requires the Company to:

> "File the information listed below with its future SRSQ reports until such time as the Commission modifies the reporting requirement. Xcel shall provide the following information, as a downloadable .csv or .xlsx file, by feeder, for the calendar year. Xcel may exclude feeders that meet the 15/15 aggregation standard.
>
> a. Reliability reporting region where the feeder is located.
> b. The substation the feeder is on, with its full name.
> c. The zip code in which the feeder is primarily located.
> d. The number of customers on the feeder, including the proportion of residential to commercial and industrial
> e. Whether the feeder is overhead or underground
> f. SAIDI, SAIFI, and CAIDI, normalized (IEEE 1366 Standard) and with Major Event Days
> g. Number of outages, total customer outages, and total customer-minutes-out for the following situations"
> i. All levels, All Causes included,
> ii. Bulk Power Supply – All causes, distribution, substation, transmission substation, and transmission line levels;
> iii. All levels, no "planned" cause, includes bulk power supply.
> iv. All levels, "planned" cause only, includes bulk power supply."
> h. Number of outages, total customer outages, and total customer-minutes-out in the following primary outage cause categories, normalized and non-normalized.
> i. Equipment – OH
> ii. Equipment – UG
> iii. Lightning
> iv. Other
> v. Power Supply
> vi. Planned

vii. Public
viii. Unknown
ix. Vegetation
x. Weather – non-lightning
xi. Wildlife"

- Order Point 3.b in the Commission's February 9, 2019, Order in Docket No. E002/M-17-249, required Xcel to provide a discussion of the ways the Commission looks at increased granularity.

As for the first bullet point, the Company included a link to the interactive map on page 38 of the annual report. Regarding the requirements included in the second and third bullet points, the Company included Table 13 in the Report. This table includes historical reliability information indices and Major Event Day exclusions for 2014 through 2023. It provides this information calculated three ways: 1) All days – (non-normalized); 2) Minnesota Quality of Service Tariff method (normalized); and 3) Approved rules method (normalized). Xcel also provided a series of graphs that demonstrate the different outage categories for its entire Minnesota service territory as well as by work-center. The Company provided this information for a non-normalized All Days method and normalized Annual Rules method.[37] This information appears responsive to the reporting requirements listed in the first and second bullet points.

Turning to the fourth and fifth bullet points, Xcel provided 2023 reliability indices by customer class in Table 13A of the Report. The Company also provided a discussion of its efforts to analyze this issue. The initial results suggest SAIFI and SAIDI are higher for the Residential class, followed by the Commercial class and lowest for the Industrial class.[38, 39] Regarding the information required by the sixth bullet point, Xcel provided the information listed in Attachment L as a live .xlsx file. The Department believes the Company has met the requirements included in the seventh bullet point by providing the information required by the first six bullet points.

The Department's review of the information provided via those additional reporting requirements is as follows:

- Xcel's results regarding reliability by customer class are consistent with common knowledge. Industrial customers use large amounts of electricity and often have high load factors. The Company also noted its industrial customers are often served by shorter feeders and there is less vegetation in those areas, as factors which affects reliability. Commercial customers also tend to be aggregated, like industrial customers.[40] The same drivers that affect industrial customers apply to them to a lesser extent. Once again, vegetation is not as likely a driver for an outage for the Commercial customer class. Residential customers are more widely dispersed relative to commercial and industrial customers, which brings the vegetation driver into play. In addition, their average usage is also lower. There are more drivers that can degrade reliability in residential or rural areas.

[37] The Company provided the underlying date for these analyses in Attachment K of the Report.
[38] Higher SAIDI and SAIFI scores equate to less reliable service.
[39] Xcel also provided the supporting data for these calculations in Trade Secret Attachment L.
[40] Shopping malls are an example.

- The Department appreciates the Company's efforts in developing the interactive map. This map provides an interesting perspective on the Company's service territory. The Department also notes that Xcel has a financial incentive to provide reliable service to large customers in any customer class. A small number of large customers generate a significant portion of Xcel's rate revenues. It is logical that those customers would have highly reliable service. If they don't, Xcel would lose a disproportionate amount of revenue.

5. *Additional Order-based Reliability Reporting Requirement Regarding Grid Modernization Investments*

Xcel is investing or planning to invest a significant amount of money to modernize its distribution system or grid. In an attempt to gather information on the effectiveness of some of those existing or proposed investments, the Commission identified the following reporting requirement: "Order Point 5 of the Commission's Order in Docket No. E002/M-20-406 required the Company to file the reliability (SAIDI, SAIFI, CAIDI, MAIFI, normalized/non-normalized) for feeders with grid modernization investments such as Advanced Metering Infrastructure or Fault Location Isolation and Service Restoration to the historic five-year average reliability for the same feeders before grid modernization investments."

Attachment J of Xcel's Report discussed FLISR in detail and provided more information regarding distribution system performance.

6. *Action Plan to Improve Reliability*

Minnesota Rules 7826.0500, subpart 1E requires the Company to provide "an action plan for remedying any failure to comply with the reliability standards set forth in Minn. R. 7826.0600 or an explanation as to why the non-compliance was unavoidable."

Given that the IEEE Benchmarking group's results for 2023 will not be available until later this year, this is not a reporting requirement Xcel can complete at this time.
That said, Xcel provided a detailed reliability analysis for each of its four work centers, including the following:

- Actual annual reliability factors by work center for the past five years (2019 through 2023).
- The current year Delta for SAIFI and SAIDI for every outage code compared to the five-year average.
- A table listing the MEDs, as well as days which had moderate storm activity, and specific outages for transmission, distribution substations, and distribution lines.

The Department acknowledges Xcel fulfilled the requirements of Minnesota Rules 7826.0500, subp. 1.E.

The Company also identified a Commission Order relevant to this topic, Order Point 12 from Attachment B of the Commission's Order in Docket No. E002/M-19-261 requires the Company to provide the causes of sustained customer outages by work center.

Tables 14 through 17 and Graphs 2 through 13 of Xcel's Report appear to meet this Commission reporting requirement.

7. *Bulk Power Supply Interruptions*

Minnesota Rules 7826.0500, subpart 1.F requires Xcel to provide "to the extent feasible, a report on each interruption of a bulk power supply facility during the calendar year, including the reasons for the interruption, duration of the interruption, and any remedial steps that have been taken or will be taken to prevent future interruption."

Xcel reported no generation outages on the Company's system that caused an interruption of service to firm electric customers in 2023. Xcel provided a table listing interruptions caused by transmission outages.[41] The table identifies the transmission line, date, time, duration, reasons for the interruption, comments, and remedial steps taken or planned.

The Department acknowledges Xcel fulfilled the requirements of Minnesota Rules 7826.0500, subp. 1.F.

8. *Outage Communications*

1. Outage Communications with the Commission's CAO

Minnesota Rules 7826.0500, subp. 1.G. requires an electric utility to provide a "copy of each report filed under part 7826.0700." Minnesota Rules 7826.0700 requires an electric utility to "promptly inform the Commission's CAO of any major service interruption occurring on the utility's system with certain information."

The Commission's Order dated December 18, 2020, in Docket No. E002/M-20-406 at Order Point 4 granted a variance to Minn. R. 7826.0700, sub. 1, item G, in the reports like Attachment F of Xcel's filing. In 2023, Xcel reported 304 outages on its system met the definition of "major service interruption."[42] The Company reported 258 of these types of outages in 2022. Table 16 below shows the number of outages the Company did not report to the CAO and the total number of major service interruptions Xcel reported.

Trade Secret Attachment O of Xcel's Report provided this information which is summarized in Table 16.

The Company's 2023 results for unreported Major Service Interruptions are 43% above the 10-year average. The number of Major Service interruptions is also 10% above the 10-year average. The Department requests the Company provide some additional information on the increases reported and unreported Major Service Interruptions in 2023 in its reply comments. The Department would also like to know what efforts Xcel will undertake to improve these results in 2024.

[41] See Attachment N of the filing.
[42] Major Service Interruption is defined under Minn. R. 7826.0200, subp. 7 as an interruption of service at the feeder level or above and affecting 500 or more customers for one or more hours.

The Department acknowledges Xcel fulfilled the requirements of Minnesota Rules 7826.0700, subpart 1G.

The Company also noted in the Report that it didn't have any major service interruptions on its system in 2023 in which 10% or more of its Minnesota customers were out of service for 24 hours or more.

Table 16: Major Service Interruptions Not Reported to the Minnesota Public Utilities Commission's Consumer Affairs Office 2014 -2023

Year	Unreported Major Service Interruptions	Number of Major Service Interruptions	Percent Unreported
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%
2020	9	264	3%
2021	13	231	6%
2022	14	258	5%
10-yr Avg.	11	277	4%
2023	15	304	5%
Variance	43%	10%	

2. Outage Communications to Customers

The Commission has issued three Orders on this topic.

- The Commission's Order dated February 9, 2018, in Docket Nos. E002/M-16-281 and E002/M-17-249 at Order Point 3.D, requires the Company to provided: "[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."
- In the Commission Order dated January 28, 2020, in Docket No. E002/M-19-261 at Order Point 2, the Commission requires the Company to provide the estimated restoration time accuracy for the 0-to-+30-minute window.
- In the Commission Order dated October 20, 2023, Order in Docket No. E002/M-22-162 at Order Point 4(d) the Commission requires the Company "to provide estimated restoration time accuracy, using a) within -90 minutes to 0 of estimated restoration time and b) within the 0 to +30 minutes of estimated restoration time".

The Company discussed estimated restoration times (ERTs) and the Company's measurement efforts, along with communication it has provided to its customers in its SRSQ.[43]

Table 17 below shows the Company's performance related to its ERTs over the past five years.

The Company noted in the Report that estimated restoration time (ERT) accuracy has remained relatively flat in the -90-to-0-minute window from 2019 through 2023. The Department's inclusion of the 2018 data suggests there might have been a slight improvement over the 6-year period.

Table 17: ERT Accuracy – Within -90 to +0 Minutes 2018 through 2023 (%)

Entity	2018	2019	2020	2021	2022	2023
NSPM	43.6%	48.3%	53.4%	53.9%	50.4%	48.3%
MN Only	43.5%	49.9%	54.3%	54.8%	51.6%	49.5%

Table 18 provides similar information for the +1-to-+30-minute ERT window.

Table 18: ERT Accuracy – Within +1 to +30 Minutes 2017 through 2023 (%)

Entity	2018	2019	2020	2021	2022	2023
NSPM	8.0%	10.0%	10.4%	11.3%	12.5%	9.5%
MN Only	7.5%	10.4%	10.3%	10.9%	11.5%	8.2%

Table 19 provides similar information for the +1-to-+90-minute ERT window.

Table 19: ERT Accuracy – Within +1 to +90 Minutes 2018 through 2023 (%)

Entity	2018	2019	2020	2021	2022	2023
NSPM	15.2%	18.6%	16.6%	19.3%	23.8%	20.6%
MN Only	14.5%	18.7%	16.4%	18.5%	19.9%	17.6%

Xcel also noted that it continues to identify systems and tools to help improve the outage customer experience.

The Department concludes Xcel complied with this aspect of the Commission Orders.

[43] Report at pages 74 through 77.

9. *Worst Performing Circuit*

Minnesota Rules 7826.0500, subpart 1.H requires Xcel to provide "to the extent technically feasible, circuit interruption data, including identifying the worst performing circuit in each work center, stating the criteria that utility used to identify the worst performing circuit, stating the circuits SAIDI, SAIFI, and CAIDI, explaining the reasons that the circuits performance is in last place, and describing any operational changes the utility has made, is considering, or intends to make to improve its performance."

The Commission Order dated April 7, 2006, in Docket No. E002/M-05-551, included a requirement the Company increase the number of feeders that it includes in this portion of the report to 25 feeders per work center, for a total of 100. That same Order also directed the Company to work with Commission staff on the format of the Worst Performing Feeder portion of the Annual Report.

Trade Secret Attachment M of Xcel's Report provides information regarding this requirement by work center. The Company also included information in Attachment M related to operational steps Xcel is taking regarding the individual feeder's future reliability.

The Department acknowledges Xcel fulfilled the requirements of Minnesota Rules 7826.0500, subp. 1.H.

10. *Compliance with ANSI Voltage Standards*

Minnesota Rules 7826.0500, Subpart 1.I requires Xcel to provide "data on all known instances in which nominal electric service 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."

Xcel reported it conducted 319 voltage investigations in 2023. After investigation, the Company found approximately 35% (113) of these instances were caused by a specific voltage problem. Table 20 provides historical information for this metric.

The number of investigations and the number of voltage problems diagnosed were 8% and 29% above the 10-year average in 2023.

The Department acknowledges Xcel fulfilled the requirements of Minnesota Rules 7826.0500, subp. 1.I.

Table 20: Voltage Investigations and Problems – 2013 through 2023

Year	# of Investigations	# with voltage problem diagnosis	%
2013	496	232	46.77%
2014	318	121	38.05%
2015	333	67	20.12%
2016	360	79	21.94%
2017	284	64	22.54%
2018	300	59	19.67%
2019	185	26	14.05%
2020	212	36	17.00%
2021	247	69	17.00%
2022	224	122	54.46%
10 yr Avg	296	88	29.57%
2023	319	113	35.42%
Variance	23	25	
% Variance	8%	29%	

11. *Work Center Staffing Levels*

Minnesota Rules 7826.0500, subpart 1.J requires Xcel to provide "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 Order Point 4(j) n the Commission's October 20, 2023, Order in Docket No. E002/M-22-162-261, the Commission required the Company to provide "separate information on the number of contractors for each work center."

Table 21 contains this information for the past ten years by work center. Trouble and O&M Staffing levels increased by eleven employees from 2021 and are 4% above the ten-year average.

Table 21: Xcel's Historical Work Center Staffing Levels for Trouble and O&M Staffing 2013 - 2023

Year	Metro East	Metro West	Northwest	Southeast	Other	Total
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
2020	125	181	31	49	49	435
2021	132	171	33	51	52	439
2022	135	188	32	58	50	463
10-yr Avg	126	179	32	51	46	434
2023	135	193	29	50	56	
Var.	7%	5%	0%	15%	8%	4%

Table 22 includes recent staffing levels for contractors. The number of contractors increased from 2020 through 2022 and then decreased significantly in 2023.

Table 22: Xcel's Staffing Levels Work Center for Contractors 2020 - 2023

Year	Metro East	Metro West	Northwest	Southeast	Other	Total
2020	2	9	1	2	1	15
2021	2	14	0	0	2	18
2022	4	12	0	0	5	21
3-yr Avg	3	12	0	1	3	18
2023	4	8	0	0	1	13
Var.	33%	-33%	Not Applicable	-100%	-67%	-32%

The Department acknowledges Xcel fulfilled the requirements of Minnesota Rules 7826.0500, subp. 1.J and the Commission's January 28,2020 Order in Docket No. E002/M-19-261.

12. *Order-based Other Reliability Metric Reporting Requested*

3. Momentary Average Interruption Frequency Index (MAIFI)

There are three Commission Orders that are relevant to this topic:

- In Order point 4.c in Docket No. E002/M-22-12, the Commission required the Company to provide "normalized and non-normalized reporting of MAIFI data":[44]
- In Order Point 32, in the Commission's September 3, 2013, Order in Docket No. E002/M-12-961, the Commission required the Company to provide "additional reporting of its currently available Momentary Average Interruption Frequency Index (MAIFI) data, such trend lines, to the extent available."
- In Order Point 3.c, in the Commission's February 9, 2018, Order in Docket Nos. E002/M-16-281 and E002/M-17-249 the Commission required the Company to provide "an assessment of MAIFI data."

Xcel provided this information on pages 80 and 87 of the Report. The Company provided MAIFI calculations by work center and for all of Minnesota for the 2014 through 2023 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.

The Company also provided five years of historical MAIFI data that included trend lines. Those trend lines appear to show improvements during that period. In addition, Xcel included a pareto chart showing the top causes for the 2023 interruptions, as well as a similar chart that covers the past five years.

Since Xcel has not installed AMI which provides the MAIFI, on its entire system, there are some limitations to this data. For example, comparing MAIFI's from year-to-year is complicated by the fact that Xcel continues to expand it system capabilities and procedures have changed over time.

[44] That Commission Order was issued on October 20, 2023.

The Department concludes Xcel has complied with these reporting requirements.

4. Customers Experiencing Multiple Interruptions (CEMI)

This is another topic whose reporting requirements are contained in three Orders:

- At Order Point 4.e in Docket No. E002/M-22-162 the Commission required Xcel "to provided CEMI at normalized and non-normalized outage levels of 4, 5, and 6":[45]
- At Order Point 3.c, in the Commission's March 19, 2019, Order in Docket No. E002/M-18-239, the Commission required the Company to provide " CEMI at normalized and non-normalized outage levels of 4, 5, and 6":
- In the Commission's January 28, 2020 ,Order, in Docket No. E002/M-19-261 in Attachment B, Order Point 5, the Commission required the Company to provide "the highest number of interruptions experienced by any one customer (or feeder, if customer level is not available.)"

Xcel provided this information in Graphs 17 and 18 on pages 88 and 89 of the filing. The information in that graph suggests the Company's CEMI 4, 5, 6+ results for 2023 were at a similar level when compared to the results from the last several years.

Like our comments regarding SAIFI, SAIDI and CAIDI results, the Department notes consistent CEMI +4, +5 and +6 results do not necessarily mean that Xcel's reliability is not improving. The Department will continue to monitor this situation.

The Company identified one customer who had the highest number of outages for normalized outages with 11 outages. Five customers had the highest number for all days, (13). These results appear to be a slight improvement compared to the 2022 results.

The Department concludes Xcel complied with these reporting requirements.

5. Customer Experiencing Lengthy Interruptions (CELI)

Three Commission Orders identify the reporting requirements for this topic.

- In the Commission's October 20, 2023, Order in Docket No. E002/M-22-162 at Order Point 4.g, the Commission required the Company "to provide CELI at normalized and non-normalized intervals of greater than 6 hours, 12 hours and 24 hours."[46]
- 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."

[45] *Ibid.*
[46] *Ibid.*

- 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 "the longest experienced interruption by any one customer (or feeder if customer level is not available.)"

Xcel provided this information in Graphs 19 and 20 on page 91 of the filing. The Company provided normalized with IEEE 1366 New Annual Rules in Graph 19 for 2014 – 2023 and all days CELI information for 2014 -2023 in Graph 20. The Department did not identify a trend towards improvement in Graphs 19 or 20.

The Company identified the longest outage in 2023 was 7,213 minutes (120 hours or 5 days). It was a planned outage and affected two customers.

The Department concludes Xcel complied with these reporting requirements.

13. *Order Based Reliability Analysis Requirements*

Xcel provided two analyses in the Report. The first provided an analysis of the incremental costs of achieving IEEE first quartile performance. The second included a discussion of the potential for minimizing the differences in reliability metrics between feeders relative to the customer class primarily served on that feeder.

i. *Incremental Cost Analysis of Achieving IEEE First Quartile Performance*

The Commission tasked Xcel with providing an "analysis of the incremental costs associated with achieving IEEE first quartile performance that includes a discussion of timeframes, cost and benefits in their SRSQ 2024 filing" in Order Point 5 of its Order dated December 5, 2023, in Docket No. E002/M-23-73. The Company provided this analysis on pages 95 through 99 of the Report.

The driver for this analysis was a recommendation by the City of Minneapolis that the Commission start setting Xcel's reliability goals at the first quartile level, phased in over time to allow a reasonable amount of time to plan for how to best meet the standards. The Department suggested modifying the City's recommendation in a subsequent set of comments such that the concept of incremental cost was incorporated into the recommendation.

Xcel began its analysis by providing a historical comparison between the Company's statewide reliability performance indices and the IEEE large utility group first quartile performance. The results of that analysis found:

- SAIDI – Xcel would need to produce a 10-to-15-minute improvement in this performance indice to provide performance levels consistent with a first quartile result.
- SAIFI – The Company would need to improve this performance indice by 0.10 to 0.17.
- CAIDI – Xcel's CAIDI performance would need to by 8 to 10 minutes.

The changes necessary in SAIDI, SAIFI and CAIDI represent substantial improvements in those performance indices. Xcel's average State-wide SAIDI for 2013 – 2022 was 88.9 minutes. The proposed 10-to-15-minute improvement identified, would lower that average SAIDI to a range of 73.9 to 78.9 minutes. That range represents a decline in SAIDI of 11 to 17 percent on average. Regarding the SAIFI performance indice a decrease of 0.10 to 0.17 would lower the 10-year average SAIFI to 0.69 to 0.75. That improvement would equal a 12 to 20 percent decrease in SAIDI relative to the 10-year average. Considering CAIDI, the proposed 8-to-10-minute improvement would lower the Company 10-year average CAIDI by 8 to 10 percent.

Xcel then identified two technologies it could use to improve system reliability performance. These included: 1) An automated switching technology (FLISR) which improves SAIDI and SAIFI but may degrade CAIDI; and 2) Targeted undergrounding of distribution lines to improve all three reliability performance indices.

The Company then provide a cost estimate of $1 to $2 billion for this exercise.

Xcel also developed a preliminary list of the benefits associated with these proposed improvements:

- $105 million annually – benefit of avoiding 300,000 customer interruptions per year at $350/customer interruption.
- Vegetation management savings costs of several million dollars per year.
- Life cycle cost savings associated with the replacement of overhead facilities of approximately $8 million annually.
- Avoided costs associated with 5,300 distribution transformers the Company has identified as being at significant risk of being overloaded.

The Company also discussed the timeframe associated with this task. It estimates that the completion of investments required to meet first quartile performance could take nearly a decade, which would include the development and trial of several pilot projects. Xcel also noted that there are significant risks associated with this type of large-scale project. The risks identified included: 1) at-scale program costs; 2) labor and material availability; 3) supply chain availability; 4) future cost inflation rates; 5) future changes in the overall industry performance within the first quartile.

The Company concluded its analysis by referencing plans that are in development to identify targeted undergrounding projects in some locations with high reliability values but lower construction and permitting costs.

The Department appreciates Xcel's efforts to develop this analysis. We did not have enough time to review the analysis closely but consider the cost-related discussion to be consistent with the Department's understanding of the Company's options in this regard. The Department does have concerns regarding Xcel's use of the estimated cost of a customer interruption to the customer being equal to $350/interruption/customer. The Company uses the Interruption Cost Estimate (ICE) tool to

estimate benefits to customers.[47] At the same time, using the information on customer outage credits included in Xcel's Quality of Service tariff, the Department estimates the value of a customer interruption to be between $7.50 to $8.33/interruption/customer.[48]

In the filing, the Company identifies the annual benefits of avoiding 300,000 customer interruptions to be $105 million dollars using the ICE estimate of $350/interruption/customer. Using the implied cost of a customer interruption included in the QSP, the benefits of avoiding 300,000 interruptions are between $2.25 million and $2.5 million annually. While the use of the ICE-derived estimate for the cost/interruption/customer might be high enough to justify the costs of improving the distribution system, the implied actual cost/interruption/customer included in the QSP is so low that the benefits identified from improving the distribution system are negligible when compared to the costs.

The Department is uncomfortable with this inconsistency between the estimated cost per interruption per customer provided by ICE and actual cost per interruption per customer included in the Company's QSP tariff. For the Department, the first step in this process would be for Xcel to update the customer outage credits in the QSP to reflect an updated and reasonable cost/customer/interruption.

Regarding this specific Order Point, The Department concludes Xcel complied with this reporting requirement.

ii. *Review of the Potential for Minimizing differences in Reliability Metrics between feeders by customer class*

The Commission also required Xcel "to discuss how to lower the difference in SAIDI, SAIFI, and CAIDI between feeders associated with the different customer classes in its 2024 filing, including costs and benefits to implementation" in Order Point 6 of its Order dated December 5, 2023, in Docket No. E002/M-23-73. The Company provided this analysis on page 99 of the Report.

Xcel provided a brief response to this Commission reporting requirement noting:

- Residential customers represent almost 90 percent of the Company's statewide reliability performance indices.
- Residential customers tend to be in less densely populated areas compared to Commercial and Industrial class customers.
- Providing electric service to Residential customers requires longer distribution feeders as does providing electric service to rural customers.
- Commercial and industrial customers experience fewer service interruptions.

[47] This tool was developed by staff at the Lawrence Berkeley National Laboratory.
[48] Xcel Electric Rate Book, Section 6, 4th Revised Sheet No. 7.10 identifies a $50 annual credit to customers experiencing at least 6 interruptions in one year. Thus, $50 divided by 6 customer interruptions equals $8.33/interruption/customer. The same tariff sheet identifies a $75 annual credit for customers experiencing 5 or more interruptions per year over a 2-year period. Hence, $75 divided by 10 customer interruptions equals $7.50/interruption/customer.

- Commercial and industrial customers are often located in areas with more underground distribution infrastructure and higher load density than residential areas.
- Higher load density necessitated shorter feeder lengths which reduces exposure to service interruptions.

The Department notes that the information Xcel provided in the Report is consistent with the information provided in its 2023 Report (Docket No. E002/M-23-73). We also note that the Department considered the Company's preliminary results to be consistent with common knowledge regarding the electric system.[49]

We have no further comment on this topic and conclude that the Company has complied with the Commission's reporting requirement.

14. *Proposed 2024 Reliability Standards for SAIFI, SAIDI and CAIDI*

Minnesota Rules 7826.0600, subpart 1. requires Xcel to provide "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. . ."

Subpart 2 of this same rule states: "The commission shall set reliability performance standards annual for each utility in the form of numerical values for the SAIDI, SAIFI, and CAIDI for each of its work centers. These standards remain in effect until the commission takes final action on a filing proposing new standards or changes them in another proceeding."

Xcel provided the standard formulas for calculating SAIDI, SAIFI and CAIDI and referenced the need to normalize that information in the Report.

15. *Additional Order-based Reliability Reporting Requirements Regarding Historical Information*

In its filing, the Company noted the Commission's December 5, 2023, Order in Docket No. E002/M-23-73 required the Company to use the following 2023 IEEE benchmarking results as Xcel's statewide 2023 proposed reliability standards:

- Statewide – second quartile for large utilities.
- Metro East work center - second quartile for large utilities;
- Metro West work center - second quartile for large utilities;
- Northwest work center - second quartile for medium utilities; and
- Southeast work center - second quartile for medium utilities.

The IEEE Distribution Reliability Working Group benchmarking performance will not be available until later this year. Xcel will provide that supplemental information later this year.

[49] Department Comments at page 34 in Docket No. E002/M-23-73, submitted June 16, 2023.

Regarding Xcel's proposed 2024 reliability standards, the Company requests the Commission approve the following:

- Statewide – second quartile for large utilities.
- Metro East work center - second quartile for large utilities;
- Metro West work center - second quartile for large utilities;
- Northwest work center - second quartile for medium utilities; and
- Southeast work center - second quartile for medium utilities.

The Department notes the proposed 2024 reliability standards are identical to the Company's approved 2023 reliability standards and concludes Xcel complied with the requirements for setting the annual reliability standards listed in Minnesota Rules 7826.0600, subp. 1.

16. *Miscellaneous – 2023 Quality of Service Tariff Results*

6. 2023 Quality of Service Tariff Results

Xcel developed a QSP tariff because of a Commission investigation in 2002, (Docket No. E,G002/CI-02-2034). The Commission and interested parties also revisited this issue in a second docket in 2012 (Docket No. E,G002/M-12-383).

Table 23 recreates Table 1 from Xcel's 2023 QSP compliance filing, filed May 1, 2024. Xcel's QSP performance was good. The Company met six of the seven of the performance standards in 2023. Although, Xcel exceeded the number of allowed customer complaints.

Table 23 – QSP Tariff Results for 2023

Measure	2023 Performance	Standard
Customer Complaints to PUC	759 complaints	≤ 380 Complaints*
Telephone Response Time (percent of calls answered in ≤ 20 sec)	85.3%	≥ 80%
Electric Reliability – SAIDI	82.47 min.	≤ 133.23 min
Electric Reliability – SAIFI	0.81 outage events	≤1.21 outage events
Gas Emergency Response Time	29.01 min	≤ 60 min
Accurate Invoices	99.76%	≥ 99.3%
Invoice Adjustment Timeliness	1.90 billing periods	≤ 2.35 billing periods

*Customer complaint standard is ≤ .2059 complaints per 1,000 customers. This number reflects the calculation in 2024.

Xcel must make an under-performance payment for failing to meet the customer complaints standard in 2023. The Company discussed its preferred options for the allocation of that payment in its annual compliance filing.

The QSP tariff also includes financial penalties for certain levels of customer outages calculated in customer-specific basis. Table 24 recreates Table 2 from Xcel's 2023 QSP compliance filing.

Table 24 – 2023 Outage Credits

Description	2023 Credits	Dollars
Six or More Service Outages	4,064	$203,200
Outages Lasting 24-Hours or Longer	839	$41,950
Consecutive Years of Outages	981	$90,975
Tracked Small Municipal Pumping Outages (A40)	977	$97,700
Untracked Small Municipal Pumping Outages (A40)	247	$63,232
Tracked Large Municipal Pumping Outages (A41)	511	$102,200
Untracked Large Municipal Pumping Outages (A41)	196	$52,332
Total	**7,814**	**$657,757**

The Department reviewed the Company's 2022 QSP compliance filing to use that information as a point of comparison. In 2022 Xcel met all seven performance standards. The Company also recorded 8,717 credits and $680,329 in penalties.

Using the 2022 results as the point of comparison for the Outage Credits information, Xcel's performance under the QSP improved very slightly in 2023.

III. EQUITY STUDY

A. INTRODUCTION

In its Order in Docket Nos. E002/M-20-406 and E002/CI-17-401 dated May 18, 2023, at Order Point 3 the Commission required Xcel to: "conduct an analysis that examines whether there is a relationship between poor performance on the five identified metrics displayed on the interactive map and equity indicators. Required Xcel to file this analysis with its next service quality report due April 1, 2024".

In that same Order in Order Point 4, the Commission also required: "If Xcel's analysis determines there are disparities in any of the five metrics displayed on the map, required Xcel to identify preliminary steps it could take to rectify the disparities and if Commission approval is required, where and when it would expect to file solutions. This should include an analysis of whether modifications to Xcel's Quality of Service Plan are necessary to address any identified disparities. Required Xcel to file this preliminary plan with its next service quality report due April 1, 2024."

Xcel retained a consultant to perform this analysis. TRC Companies (TRC or the Consultant) was the vendor selected. Xcel tasked TRC with providing an analysis of the five metrics listed on the Company's interactive map:

1. Customers Experiencing Lengthy Interruptions of 12 hours or more (CELI-12);
2. Customers Experiencing Multiple Interruptions of six or more per year (CEMI-6);
3. Disconnections;
4. Conservation Improvement Program Low Income (CIP LI) participation, and;
5. Low Income Energy Affordability Program Participation (LI EAP or Affordability Program).

The Company provided a copy of TRC's analysis/report as Attachment Q to the Report.

B. ANALYSIS

TRC's analysis refined a similar analysis performed by Dr. Gabriel Chan for the Just Solar Coalition which was filed in Xcel's 2021 electric general rate case (Docket No. E002/GR-21-630) surrebuttal testimony. Dr. Chan provided an analysis that:

- Found a high correlation between utility disconnections in communities with a higher population of POC and a higher rate of disconnections after having accounted for poverty and median income.
- Showed a statistically significant lower level of service quality relative to the frequency of longer duration customer outages (CELIs) for in the Minneapolis Green Zones[50] and
- Identified a statistically significant lower level of service quality relative to the frequency of more frequent short duration outages (CEMI) for in the Minneapolis Green Zones.

The Consultant extended Dr. Chan's analysis by:

- Including additional information on disconnections and a customer's ability to pay their bill.
- Enlarged the scope of the analysis to cover the Commission-required five metrics.
    - CELI - 12 hours or more;
    - CEMI – six outages or more per year;
    - CIP Low Income participation;
    - Low Income Energy Affordability Program participation, and
    - Disconnections.
- Added additional explanatory variables to the model.
    - Home ownership rates and housing vintage information;[51]
    - Home computer access;
    - Home internet access;
    - Limited English proficiency; and
    - Distance to nearest payment center that accepts payments for Xcel Energy.

TRC also used a nonparametric kernel smoothing modeling approach which it claimed provided additional insights when compared to Dr. Chan's linear regression.

[50] The City of Minneapolis has defined green zones as a group of neighborhoods with 1) high levels of pollution; 2) racial marginalization; 3) political marginalization, and 4) economic marginalization.
[51] TRC used those two variables as proxies for wealth.

C. FINDINGS

a) Customers Experiencing Lengthy Interruptions (CELI)

The Consultant's analysis concluded:

> The racial composition of a neighborhood does not have a strong relationship with outage duration, except among neighborhoods with old housing stock and high percent POC where the highest CELI rates are observed and CELI rates rise with percent POC.

TRC suggested that this result may be due to a combination of neighborhoods with older housing stock having larger and more established vegetation and a distribution system that primarily consists of overhead lines. The Consultant also mentioned that the age of Xcel distribution system in those older neighborhoods could be elevated relative to the normal age of the distribution system as well.

b) Customers Experiencing Multiple Interruptions (CEMI)

TRC's analysis concluded:

> There is not a strong relationship between outage frequency and any of the explanatory variables we considered.

The Consultant provided information that demonstrates that there is no clear pattern as to how the different variables studied influence CEMI.

c) Disconnections

TRC's analysis found:

> After controlling for additional variables and allowing more flexibility, the racial composition of a neighborhood still has a strong correlation with the disconnection rate, but the impact is smaller than the previous analysis.

The Consultant then concluded that due to the lack of the non-payment rate in the dataset, it could not distinguish between three potential reasons for this result:

- There is a higher rate of non-payment in higher percent POC neighborhoods and Xcel is applying the disconnect policy uniformly or non-uniformly.
- The non-payment rate is the same and Xcel is applying a disconnect policy in a non-uniform way.
- The non-payment rate is the same and Xcel is applying a disconnect policy in a uniform way, but that people in different communities is accessing some of the elements of the disconnect policy (such as payment plans) in different ways.

The Department believes that this is an issue that merits further investigation as it potentially could involve non-uniform application of the Company's disconnection policy.

d) Low Income Energy Assistance Programs (LI EAP)

TRC's analysis concluded:

> After controlling for other factors, LI EAP participant is higher in neighborhoods with high percent POC. This is consistent with Xcel being successful at targeting program impacts to disadvantaged communities.

The Consultant also mentioned this outcome is consistent with Xcel and other interested parties managing the program successfully.

e) CIP Low Income (CIP LI)

TRC's analysis found:

> CIP Low Income participation is sparse, but the program does not appear to be underserving communities with high percent POC. It may be underserving very low-income communities, which is not expected given the challenges of programs designed to make improvements to building stock in areas with low capital and split incentives, even though the program is designed to address those barriers.

It appears that there may be some room for improvement in terms of getting CIP programs into low-income neighborhoods, but the Consultant didn't find evidence that an admittedly low level of participation is under-performing relative to the percentage of POC in the neighborhood.

D. CONCLUSIONS

The Consultant identified 4 potential areas for improvement.

- Revisit vegetation management practices in high percentage POC communities with older houses. TRC's analysis did find a correlation between long-duration outages and those factors.
- Initiate a closer review of distribution equipment in those some high percentage POC communities with other houses. This could help to lower the number of long-duration outages in those communities.
- Use the existing Low-Income Energy Assistance Program as well as the Conservation Improvement Plan Low Income programs to try to understand the higher number of disconnections in POC neighborhoods.
- Expand outreach for CIP Low Income programming in low-income neighborhoods.

TRC also noted that it could not determine whether the higher disconnection rates in high percent POC neighborhoods was higher due to a difference in the application of disconnection policy in those communities, or higher due to levels of non-payment.

E. XCEL DISCUSSION OF POTENTIAL IMPROVEMENTS IDENTIFIED IN TRC'S ANALYSIS

The Company included a review of TRC's identified improvements on pages 109 through 112. Xcel's review discussed the following points:

- Regarding TRC's finding that there were longer duration outages in high POC percentage neighborhoods, especially North Minneapolis, South Minneapolis and surrounding downtown St. Paul. The Company noted that the data TRC reviewed only covered three years and that long duration outages usually occur where there is major storm damage. Xcel also noted that there had been two major storms, one in 2020 and one in 2021 that likely influenced the data the Consultant reviewed. The upshot of this discussion was CELI data for those three years may over-state the number of longer duration outages.
- In terms of enhanced vegetation management practices, the Company identified some potential improvement but did not propose any new programs or initiatives.
- Relative to the issue of attempting a closer review of the existing distribution system in the areas of interest, Xcel suggested improving reliability by undergrounding some of the existing distribution plant. The Company designated this as a targeted undergrounding plan and stated it would develop such a filing if the Commission expressed interest.
- Turning to TRC's suggestion that Xcel could probably do more in extremely low-income neighborhoods with high percent POC with the CIP Low Income program, the Company stated it would continue to work with stakeholders to expand access to those programs through formal and information channels. Xcel noted that no Commission action is required as the Department of Commerce approves the CIP LI offerings.
- Regarding the TRC's review of the disconnection issue, Xcel noted that it can use targeted outreach about its energy assistance and payment options to the identified areas. The Company also noted the results of those efforts could be tracked and then filed in the 2025 Annual Electric Service Quality Report or another filing. The Company also mentioned the Automatic Bill Credit Pilot Program (Docket No. E002/M-22-266) which is currently before the Commission. Xcel believes this pilot may help to reduce disconnections and increase participation in low-income affordability programs.

The Department:

- Asks that Xcel include a discussion of how it could determine whether the higher level of disconnections in high percent POC neighborhoods is due to the differential application of disconnection policies or to a difference in non-payment rates. This issue was the initial driver for this discussion and doesn't appear to have been explained adequately.

- Recommends the Commission approve Xcel's proposal to use targeted outreach to lower disconnection rates in the high percent POC neighborhoods and report on its efforts in its 2025 SRSQ Report or another docket if the Commission prefers.
- Concludes that Xcel has complied with the reporting requirements regarding the topic of equity identified earlier.

IV. SUMMARY AND RECOMMENDATIONS

This filing covers four areas: 1) safety; 2) service quality; 3) service reliability and 4) equity. The Department will provide its conclusions and recommendations for each of those topics separately.

A. 2023 ANNUAL SAFETY REPORT

The Department considers Xcel's performance in this area to be reasonable and recommends the Commission accept the Company's 2023 Safety Report.

B. 2023 SERVICE QUALITY REPORT

The Department developed a table summarizing the Company's 2023 results given the various reporting requirements included under this topic. The table is in Attachment A and summarizes the service quality performance standards required by rule or Commission Order. The Department didn't include any information in this summary regarding AMI Disconnect/Reconnect reporting requirements in Attachment A since there is no historical information on those metrics.

The Department ranks meter reading, involuntary disconnections, and customer complaints as the three most important service quality concerns. Due to Xcel's meter replacement efforts which began in 2022, and the effects of COVID-19 policies on involuntary disconnections and customer complaints, the Department considers data the Company provided to be inconsistent with past years. Thus, the Department cannot provide a well-supported analysis of these metrics for 2023.

The Department also notes that it concludes the Company has complied with all the reporting requirements associated with the AMI Disconnect/Reconnect project. The Department does ask the Company to provide some additional information in reply comments "direct submit" reporting requirement for the Medically Necessary Equipment and Emergency Certification Form. The Department supports the Company's request to continue the temporary variance to Minn. R. 7820.2500 for residential and small general customers.

The Department recommends the Commission accept the Company 2023 Service Quality report pending the resolution of the "direct submit" issue.

C. 2023 SERVICE RELIABILITY REPORT

The Department created a table located in Department Attachment B, which summarizes the service reliability information for 2023 included in this document.

SAIDI, SAIFI and CAIDI are the centerpieces of the Company's reliability efforts. The most important comparison in the service reliability section is that of Xcel's 2023 actuals for those reliability metrics compared to the Commission-approved benchmarks for 2023. This is a comparison all parties are still waiting to see.

Many of the other topics included in this section of the Report provide a perspective on system reliability but are more related to providing additional context or detail on that concept and are identified in Attachment B. The Company provided adequate information for all the topics identified, although the Department is requesting that Xcel provide: 1) additional information on the increases in reported and unreported Major Service Interruptions in 2023 and any efforts the Company could take to improve those results and 2) a discussion of the location of the Company's Service Quality and Reliability Summary and that document's location one-click from Home Page in its reply comments.

The Department's review concludes that Xcel's reliability metrics for 2023 were good when compared to the 2022 IEEE benchmarks. IEEE will likely release the 2023 benchmarking data around the end of July of 2024. Shortly after that information is published, Xcel will make a supplemental filing in this docket that provides that information. The Department will the submit supplemental comments regarding the 2023 IEEE Benchmarking results shortly after the Company provides the information and will provide a recommendation regarding the Company's Service Reliability report at that time.

D. EQUITY ANALYSIS

It is not clear whether the reporting requirements relative to this analysis will become recurring or not. If they are recurring, then the Department will include this section in its comments consistent with the Commission's requirements.

That said, the Department:

- Asks that Xcel include a discussion of how it could determine whether the higher level of disconnections in high percent POC neighborhoods is due to the differential application of disconnection policies or to a difference in non-payment rates in its reply comments. This issue was the initial driver for this discussion, and still doesn't appear to have been explained adequately.
- Recommends the Commission approve Xcel's proposal to use targeted outreach to lower disconnection rates in the high percent POC neighborhoods and report on its efforts in its 2025 SRSQ Report or another docket if the Commission prefers.
- Concludes that Xcel has complied with the reporting requirements regarding the topic of equity identified earlier.

Attachment A – Xcel Service Quality Summary for 2023

Category/Topic	Metric	Result	Notes
Meter reading	Annual Number and percentage of Company read meters	Percentage of read meters was well above 10-year average = improvement in service quality	
	Annual Number and percentage of Customer read meters	Percentage of customer read meters decreased = improvement in service quality	
	Meters not read for 6-12 months	247% above the 2018 to 2022 Average = decline in service quality	Retirement of existing/ replacement with new metering system. Supply chain issues
	Meters not read for longer than 12 months	106% above the 2018 to 2022 Average = decline in service quality	Same reasons as listed above.
	Field Orders	Annual number filed in 2023 decreased 17%; response time increased = decline in service quality	Some field orders related to new meter change-outs
Involuntary disconnections	Annual Number of customers receiving disconnection notice	86% above three-year average – 16% above 2022 - service quality declined	Percentage increase affected by COVID-19 policies that have been terminated.
	Annual # of customers seeking Cold Weather Rule protection	50% above 2020-2022 three-year average – 5% increase from 2022 – increase in customers receiving CWR = service quality improvement, albeit short-term	Percentage increase affected by COVID-19 policies that have been terminated.

Category/Topic	Metric	Result	Notes
	Percentage of customers disconnected involuntarily	320% above the 2020-2022 three-year average – 190% increase from 2022 - service quality decline	Percentage increase affected by COVID-19 policies that have been terminated
	Percentage of customers service restored within 24 hours	303% above 2020-2022 three-year average – 248% increase since 2022 - service quality improvement	AMI installation simplified and accelerated disconnection process
	Percentage of customers restored by entering a payment plan	121% above 2020-2022 three-year average – 121% increase from 2022 - service quality improvement	Percentage increase affected by COVID-19 policies that have been terminated. AMI installation simplified and accelerated disconnection process.
Service Extension Requests	Number of new installation/ "average number of days to complete"	Number of annual installations residential installations increased by 83% from 2022, average number of days to complete increased 93%, similar results for commercial customers = decline in service quality	
	Number of annual existing customers/ average number of days to complete	Number of requests decreased, response time remained constant = no improvement or decline in service quality	

Category/Topic	Metric	Result	Notes
Call center response times	80% of calls, business or outage answered within 20 seconds	83.4% of calls answered within 20 seconds = improvement in service quality	Company met 80% threshold in 2023 and improved from 2022
Emergency Medical Account Status	Number of requests, Number of requests granted, and Percentage granted	Number of requests 20% above 10-year average, number granted was 29% above 10-year average, percentage granted 6.1% above 10-year average = improved service quality	Year to year – 100% increase in number requested, 100% increase in number granted, 4.4% decrease in percentage granted. More customer receiving help = improved service quality
Customer Complaints	Number of complaints	31% increase from 2021 – service quality impact not assessed	% Increased overstated due to COVID-19 policies now terminated
Electronic Customer Contacts	Various metrics of on-line company/customer interactions	Number of page views and app installations declined as did number of emails received – service quality impact not assessed	
Customer Satisfaction	J.D. Power Residential Customer Satisfaction Metrics	Xcel didn't include this information – referenced identical information required in Annual Performance Based Ratemaking filing (Docket No. E002/CI-17-401).	Department accepted the Company's approach in 2024 report. Asked Commission to order Xcel to file information in 2025 SRSQ if so desired.
	J.D. Power Commercial Customer Satisfaction Metrics	See above	See above

Attachment B – Xcel Service Reliability Summary for 2023

Category/Topic	Metric	Result	Notes
Service Reliability	SAIFI	Waiting for additional information from IEEE	Company met 2022 IEEE benchmark in 2023 by work center and company
	SAIDI	Waiting for additional information from IEEE	Company met 2022 IEEE benchmark in 2023 by work center and company
	CAIDI	Waiting for additional information from IEEE	Company met 2022 IEEE benchmark in 2023 by work center and company
Storm Normalization	Not applicable	Input to reliability metrics – no changes in 2023, no effect on reliability in isolation	Company met Commission Order based storm normalization reporting requirements
IEEE Benchmarking	Historical information	Company provided information on SAIDI, SAIFI and CAIDI for 2016 through 2023	Company met Order based requirement.
Grid Modernization	Analysis of impact of grid modernization on feeders	Company did provide analysis in Attachment J.	Company met Order based requirement.
Bulk Power Supply Interruptions	Annual information related to this topic on NPSM's system	Company provided information	Company met Order based requirement.
Outage Communications	Annual information related to Major Service Interruptions provided to CAO	Company provided information, number of outages not reported consistent with past years – constant service reliability	Company fulfilled reporting requirement.
	Estimated Restoration Times (ERTs) for customers affected by outages	ERTs for NSPM appears to be improving slightly =	Company met Order based requirement.

		service reliability improvement	
Worst Performing Circuit	Summary information on 100 worst performing feeders by work center	SAIFI, SAIDI, and CAIDI by feeder along with additional information included in **TRADE SECRET** Attachment M.	Company fulfilled reporting requirement.
ANSI Voltage Standards	Number of investigations and results of those investigations	Company provided information - percentage of incidents cause by voltage problem increased from 2022 and was higher than 10-year average	Company fulfilled reporting requirement.
Category/Topic	**Metric**	**Result**	**Notes**
Work Center Staffing	Number of staff at each work center responsible for trouble calls and the maintenance of distribution lines.	Number of staff increased from 2022 and is 4% above 10-year average. Number of contractors declined from 2022 and is below 3-year average.	Company fulfilled reporting requirement.
MAIFI	Normalized and non-normalized MAIFI data, additional reporting on MAIFI data including trend lines, and an assessment of MAIFI	Company provided required information. MAIFI roll-out not yet complete so comparing year to year results is misleading	Company fulfilled reporting requirement.
CEMI	Provide annual CEMI data at 4, 5 and 6.	CEMI appears to be constant.	Company met Order based requirements.
CELI	Provide annual CELI data at 6, 12 and 24 hours.	CELI results appear to be constant	Company met Order based requirements.

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
Public Comments

Docket No. E002/M-24-27

Dated this **14th** day of **June 2024**

/s/Sharon Ferguson

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