COMMERCE DEPARTMENT

June 16, 2023 **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, Division of Energy Resources**
Docket No. E002/M-23-73

Dear Mr. Seuffert:

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

> 2022 *Annual Electric Service Quality Report* (Report) submitted by Northern States Power Company, d/b/a Xcel Energy (Xcel or the Company).

Xcel filed the Report on March 31, 2023.

As discussed in the attached Comments, the Department provides its responses to the Commission's April 13, 2022, Notice of Comments.

The Department:

- recommends the Minnesota Public Utilities Commission (Commission) accept the Company's 2022 Safety Report.
- will provide recommendations in supplemental comments regarding the Company's service quality after reviewing the Company's reply comments.
- will also provide comments in response to the Supplemental Filing including the 2022 Institute of Electrical and Electronic Engineers (IEEE) Benchmarking Results Xcel will file later in 2023.

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

- An explanation of how the percentages of meters not read for six to twelve months and the meters not read for more than twelve months for the other customer class increased 29% for the former and decreased 35% for the latter in 2022.
- Information regarding the decline in efficiency for service extension requests in 2022.

- A discussion as to why the number of formal complaints increased in 2022, while the number of complaints received in the Company's call center declined over that same period.
- Information regarding the decline in the number of electronic customer interactions for 2021 and 2022.
- Additional context regarding the significant improvement in small commercial customer satisfaction in the JD Power survey results over the past three years.
- Additional context regarding the significant decline in residential customer satisfaction in the JD Power survey results over the past three years.
- A discussion of the apparent lack of improvement in its reliability indices System Average Interruption Frequency Index (SAIFI), System Average Interruption Duration Index (SAIDI) and Customer Average Interruption Duration Index (CAIDI) over the past 10 years; and
- A discussion of how the creation of more accurate outage start and completion times will likely lead to a decline in the Company's reliability metrics for the three feeders it identified as having been equipped with Fault Location Isolation and Service Restoration (FLISR).
- Explain the dispersion of the estimated restoration times that don't fall within the -90 to 0 and +1 to +90-minute ranges for 2022.

The Department also included summary information for 2022 for Xcel's Quality of Service Plan (QSP) tariff. The QSP provides another perspective on the Company's service quality and reliability. In addition, in comments filed January 5, 2023, in Docket Nos. E002/CI-17-401 and E002/M-20-406, the City of Minneapolis (City or Minneapolis) included a comparative analysis for 2021 for service reliability for five utilities serving the Minneapolis/St. Paul metropolitan area which suggested Xcel's reliability results were not on par with those of the remaining four utilities. The Department provides a response to this analysis.

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

Sincerely,

/s/ JOHN KUNDERT
Financial Analyst

JK/ja
Attachment

Before the Minnesota Public Utilities Commission

PUBLIC Comments of the Minnesota Commerce Department
Division of Energy Resources

Docket No. E002/M-23-73

I. INTRODUCTION

The Minnesota Department of Commerce, Energy Division (Department) appreciates the opportunity to provide comments regarding Northern States Power, d/b/a Xcel Energy's (Xcel, the Company) Annual Compliance with Annual Safety, Reliability, and Service Quality Metrics for 2022 (Annual Report or Report).

A. COMMISSION NOTICE AND TOPICS

In its Notice of Comment Period in this proceeding dated April 26, 2023, the Minnesota Public Utilities Commission (Commission) identified five topics for comment.

1. Should the Commission accept Minnesota Power's, Otter Tail Power's, and Xcel Energy's 2022 Safety, Reliability, and Service Quality Metrics reports?
2. Are the utilities' reports consistent with recent Orders and Minnesota Rules 7826 on Electric Utility Standards?
3. At what level should the Commission set the utilities' 2023 Reliability Standards?
4. What additional solutions might utilities pursue to improve call center response times?
5. Are there other issues or concerns related to this matter?

B. 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, consistent with how Xcel organized its 2022 filing which was primarily by topic or reporting requirement.

On March 31, 2023, Xcel filed a petition (Annual Report, Report) 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 2022 and its proposed 2023 reliability standards.

C. EXECUTIVE SUMMARY AND RESPONSE TO COMMISSION QUESTIONS

As noted, this filing covers three areas: 1) safety; 2) service quality; and 3) service reliability. The scope of the safety reporting requirements is limited. The Department considers Xcel's performance in this area to be reasonable and recommends the Commission accept the Company's 2022 Safety Report.

The Department's review of the information Xcel provided regarding its 2022 service quality identified:

- Three metrics where service quality improved - Field Orders average response time, call center response times and small commercial customer satisfaction.
- Two metrics where service quality declined – new service extension requests and residential customer satisfaction.
- Four metrics where service quality declined, but the decline was attributable to a larger business need that will likely improve service quality in the future – annual number and percentage of Company and customer read meters, meters not read for 6 to 12 month and meters not read for more than 12 months.
- Six metrics where service quality declined, but the metric was heavily influenced by COVID-19 policies that have now lapsed – five metrics associated with involuntary disconnection and one related to customer complaints.
- Four metrics whose impact on overall service quality is difficult to assess– emergency medical account status, customer deposits, number of existing customers requesting service change at an existing location and electronic customer contacts.[1]

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 inconsistent with past years. Thus, the Department cannot provide a well-supported analysis of these metrics for 2022.

The Department appreciates Xcel's efforts regarding improving the field orders original metric. However, we do ask the Company to provide the following in its reply comments:

[1] These metrics either affect a small group of customers or are related to recent technological advancements.

- An explanation of how the percentages of meters not read for six to twelve months and the meters not read for more than twelve months for the other customer class increased 29% for the former and decreased 35% for the latter in 2022.
- Additional information regarding the decline in efficiency for service extension requests in 2022.
- A discussion as to why the number of formal complaints increased in 2022, while the number of complaints received in the Company's call center declined over that same period.
- Information regarding the decline in electronic customer contacts in 2021 and 2022 relative to 2020.
- Additional context regarding the significant improvement in small commercial customer satisfaction comments in the JD Power survey results over the past three years.
- Additional context regarding the significant decline in residential customer satisfaction comments in the JD Power survey results over the past three years.

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 2022 actuals for those reliability metrics compared to the Commission-approved benchmarks for 2022. 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. The Company provided adequate information for all the topics identified except for the three identified below. The Department asks the Company to provide this information in its reply comments.

- A discussion of the apparent lack of improvement in its reliability indices (SAIFI, SAiDI and CAIDI) over the past 10 years.
- A discussion of how the creation of more accurate outage start and completion times will likely lead to a decline in the Company's reliability metrics for the three feeders it identified as having been equipped with FLISR.
- Explain the dispersion of the estimated restoration times that don't fall within the -90 to 0 and +1 to +90-minute ranges for 2022.

The Department's review concluded that Xcel's reliability metrics for 2022 were good when compared to the appropriate 2021 IEEE benchmarks. We are still waiting for the 2022 benchmarking data from IEEE. The Department will submit supplemental comments regarding the 2022 IEEE Benchmarking results shortly after the Company provides the information.

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

The Department recommends the Commission accept the Company's Annual Safety report. The Department is awaiting additional information regarding the Service Quality and Reliability portions of

Xcel's 2023 filing before making a recommendation on those components of the Report. The Company will be supplementing its filing sometime in the fall of 2023. That supplement will include the 2022 reliability benchmarks developed using the IEEE Distribution Reliability Group methodology and will allow a comparison of Xcel's 2022 actuals to those benchmarks. The Department plans to file supplemental comments regarding its review soon after Xcel files that information.

2. *Is Xcel's 2022 Annual Report consistent with recent Orders and Minnesota Rules 7826 on Electric Utility Standards?*

Yes, the Department's review concludes the Company's report is consistent with the requirements listed in the Commission's question.

3. *At what level should the Commission set Xcel's 2023 Reliability Standards?*

The Commission adopted a new approach for calculating the Company's reliability goals for 2021. The basis for those goals is an annual benchmarking analysis performed by the IEEE Distribution Reliability Group. The Commission adopted the same IEEE specific reliability standards for Xcel in 2022.

Xcel has requested 2023 Reliability Standards consistent with those the Commission approved in 2022 and 2021. The Department sees no need to change those standards for 2023.

4. *What additional solutions might utilities pursue to improve call center response time?*

Xcel's call center response times improved in 2022 relative to 2021. Those same 2022 response times met the requirements included in Minn. Rules 7826.1200 and 7826.1700. Hence, the Department believes the Company made whatever changes were necessary to comply with the Commission's requirements for that metric and a near-term adjustment is not required.

If the Commission is interested in making the call response times requirement more stringent, then the Department suggests the Commission consider revising the call center response metric included in Xcel's QSP tariff. The QSP tariff provides financial penalties if the Company doesn't meet certain performance benchmarks.

The Department considers those financial penalties to be the most efficient approach for achieving compliance with a Commission performance standard.

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

The Department has no additional issues or concerns.

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.

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 2022 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.

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. Then in 2021 the number of employees with respiratory conditions jumped from 2 in 2020, 16 in 2021 and 19 in 2022. The average prior to 2020 was zero.

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

In Department Information Request No. 3, the Department asked about the drivers for this increase in respiratory illnesses in 2021 and 2022. [3]

Xcel explained in its response 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.

c. *2022 Safety Performance*

Table 1 below summarizes Xcel's most recent and past reports regarding property damage claims.[4]

Table 1: Property Damage Reimbursement 2013 -2022

Year	Claims	Total Amount Paid	Average Claim ($)
2012	88	$135,836.53	$1,543.60
2013	110	$184,083.70	$1,673.49
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
10 Yr. Avg	76.8	$269,385.04	$3,548.37
2022	77	$397,768.40	$5,165.82
2022 Variance %	0%	48%	46%

The number of claims in 2022 were equal to the 10-year average. The amount paid in claims in 2022 was 48% above the 10-year average. The driver for this increase in the 2022 average annual payment amount was one large claim paid related to the disconnection of one customer and the damage resulting from that disconnection.[5] That result is also reflected in the increase for the average amount per claim paid. Absent that one large claim, the average claim in 2022 declines from $5,165.82 to $2,714.06. That adjusted average claim amount for 2022 would be below the 10-year average.

[3] A copy of Xcel's response is included in Department Attachment A.
[4] Department's calculation based on data provided in Attachment A of the Report.
[5] In Department Information Request No. 4 we asked for the context for the one large claim Xcel paid in 2022. A copy of the Company's response is included as Department Attachment B.

Based on its review of Xcel's 2022 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:[6]

- 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 93.9% of customer meters were read by utility personnel in 2022. Table 2 summarizes this information. The 2022 results are well below the 10-year historical average.

Xcel explained the 2022 results are consistent with the ongoing difficulties the Company apparently experienced due to supply chain issues among other factors.

[6] 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).

Department Information Request No. 5 asked Xcel to provide some additional context regarding those supply chain issues.[7] The Company responded:

> The global supply chain issues led to our vendor's inability to secure meters and modules to replace those that were no longer communicating or required replacement for other reasons. For example, in 2022, we had on order and expected to receive 50,210 meters/modules, but only received 18,360. This consisted of multiple shipments throughout the year. Further, shipments were often delayed, which added to the increased number of manual read requests as equipment in need of replacement could not be automatically read until the replacement parts were received.

Table 2: Company Read Meters 2012 – 2021 Average and 2022 Results

Line No.	Year	Company Read	Total Avg Meters	Annual Percentage
1.	2012	1,722,304	1,744,022	98.8%
2.	2013	1,647,254	1,705,800	96.6%
3.	2014	1,695,377	1,740,895	97.4%
4.	2015	1,695,993	1,729,417	98.1%
5.	2016	1,682,472	1,741,814	96.6%
6.	2017	1,698,451	1,756,195	96.7%
7.	2018	1,546,505	1,772,358	87.3%
8.	2019	1,786,389	1,789,124	99.8%
9.	2020	1805655.5	1,808,598	99.8%
10.	2021	1,828,863	1,834,673	99.7%
11.	**10 Year Avg**	**1,710,926**	**1,762,290**	**97.1%**
12.	2022	1,741,969	1,855,248	93.9%

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 0.0009%.[8]

The Department is concerned in situations where a service quality metric is declining. However, this instance, wherein Xcel is attempting to replace its existing metering system by installing a new Advanced Metering Infrastructure (AMI) cannot be classified as "normal operations". Thus, the Department's observation is the Company's meter reading metrics were negatively affected by the commencement of the AMI project in 2022. Given the multi-year nature of the AMI project, those meter reading metrics may be affected for the next three years as well.

[7] Department Attachment C contains a copy of this information request.
[8] The Department's calculations are based on data provided in Tables A and B, Attachment C of the Company's 2021 Report.

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 2022 results from that 4-year average.

Table 3: Meters Not Read for 6-12 Months 2018 – 2021 Average and 2022 Results[9]

Year	Residential	Commercial	Industrial	Other	Total
2018	1,709	703	489	6	2,907
2019	1,678	874	257	11	2,820
2020	1,794	953	135	13	2,895
2021	2,325	809	99	4	3,237
4 Yr. Average	1,877	835	245	9	2,960
2022	11,765	1,196	125	11	13,097
% Var	527%	43%	-49%	29%	342%

The number of residential meters not read for 6 to 12 months spiked in 2022 for the residential, commercial, and other customer classes. Yet, the number of meters not read for 6 to 12 months declined for the industrial class. The Department believes this improved result for the industrial class may be due to that group of customers using a different meter manufacturer than the other customer classes use. Xcel also 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, according to Xcel's Errata filed in this docket on June 5, 2023.

Table 4: Meters Not Read for Longer than 12 Months 2018 – 2021 Average and 2022 Results[10]

Year	Residential	Commercial	Industrial	Other	Total
2018	589	479	283	44	1,395
2019	582	606	163	50	1,401
2020	773	684	116	40	1,613
2021	639	674	158	20	1,491
4 Yr. Average	646	611	429	39	1,475
2022	2,112	784	91	25	3,012
2022 Variance	227%	28%	-49%	-35%	104%

[9] Table 2, Errata to the 2022 Report, filed June 5, 2023 .
[10] *Id.*

The results are not surprising given that Xcel is amid retiring its existing metering system for residential and commercial customers. The number of commercial meters not read for over a year increased 28%. That same figure for the residential class was a 227% increase. The same percentage figure for the industrial class was a 49% decrease in Table 4, like the one noted in Table 3. The other customer class results registered a 29% increase in meters not read for 6 to 12 months in Table 3 and a 35% decrease for meters not read for more than 12 months in Table 4. These results for the other customer class appear to be inconsistent. The Department asks the Company to explain this apparent inconsistency in its reply comments.

The Company also included updated information on the number of "All Premises" that had not had their meters read for 6 to 12 and over 12 months in Table 3 of the Errata Xcel filed in early June 2023. This approach significantly lowered the number of customers that were not read for the different categories. The addition information is helpful, but still demonstrates Xcel's results for 2022 for these metrics spiked by over 300% and 150% over the respective four-year average.

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 its current staffing levels are like 2021.[6]

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

(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 increased from 8,757 in 2021 to 9,376 in 2022 or 7%. The average days for those orders to be completed decreased from 4.17 in 2021 to 3.54 in 2022.
The Company also noted that it began installing Itron AMI meters in April 2022. As of March 2023, Xcel had installed approximately 195,000 meters and 165 of those meters have an issue providing data to

the system. Again, these non-functioning meters are a result of the Company's move to AMI. The Department did not identify a reporting requirement associated with this development. Given the meter replacement project is a capital project, the issue of malfunctioning meters will likely be addressed in a future general rate proceeding. Thus, the Department doesn't consider an additional reporting requirement necessary.

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 2022, Xcel sent 668,855 disconnection notices to residential customers and 57,135 notices to commercial customers.[11] The Commission ordered 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 information for 2020 and 2021 in Table 5 reflect those Commission actions. The current reporting year (2022) is the first full calendar year in which Xcel was disconnecting customers for non-payment since 2019.

The Department developed a three-year average for Table 5 given the change to the data in 2019 noted in footnote 11 in the Report.[12] 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 significantly in 2022 compared to 2021. The percentage increase was 87% while the 2020 – 2022 three-year average percentage increase was 61%. While those percentage increases would be very concerning in a normal year, 2022 as noted

[11] These two amounts sum to 725,990 disconnection notices sent in 2022.
[12] 2019, 2020, 2021 and 2022 figures represent Minnesota-only customers. Prior Years included North and South Dakota

above was not a normal year. The Company appears to be working through customer arrearages resulting from the suspension of disconnections during the pandemic. The number of residential disconnection notices increased significantly in 2022, 82% above the 3-year average.

Table 5: Residential Customer Involuntary Disconnection Information 2013 - 2022[13]

Year	Customers Receiving Disconnect Notice	Customers Seeking CWR Protection	Customers Granted CWR Protection	% Granted	Customers Disconnected Involuntarily	Customers Restored within 24 Hours	Customers Restored by Entering Payment Plan
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[14]	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
3-year avg.	367,401	73,027	73,027	100%	8,602	3,798	3,036
2022	668,855	126,910	126,910	100%	8,538	3,197	5,533
3 yr. var %	82%	74%	74%	NA	-1%	-16%	82%

The number of customers seeking and granted Cold Weather Rule (CWR) protection also increased significantly in 2022, 74% 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 in 2022 relative to 2021 but was slightly below the three-year average (-1%). This result is a little surprising, given the re-initiation of Xcel's traditional disconnection policy. The number of involuntary disconnects in 2022, while higher than 2020 and 2021, was significantly lower than the same figure in 2019, the last pre-pandemic year.

The number of customers restored within 24 hours was 16% below the three-year average. The final column in Table 5, which identifies the number of customers restored to electric service by entering a payment plan, also significantly increased compared to the three-year average (82%). The number of

customers restored to service via entering a payment plan in 2022 was higher than in 2019, the last pre-pandemic year.

The Department acknowledges Xcel fulfilled the requirements of Minnesota Rules 7826.1500

c. *Service Extension Requests*

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.

Xcel reported 4,521 residential and 225 commercial customers requested service to a location the Company had not previously served in 2022.[15] The average interval between request/readiness date and installation date was 12.0 days for residential and 16.6 days for commercial customers.

Response times for residential customers in 2022 were 85% higher than the three-year average from 2019 – 2021, while the number of residential installations was 11% lower.[16] Response times for commercial customers in 2022 were 96% higher than the three-year average, while the number of commercial installations was 33% lower.

Xcel attributed at least part of the increases in response times to supply chain issues. The Company also referenced the elimination of an internal policy the result of which may have led to increased response times. The residential and commercial response times in 2022 were the highest the Company had provided since at least 2009 (12.0 days and 16.6 days respectively).

The Department requests Xcel explain the drivers for the decline in response times in 2022 residential and commercial class results in its reply comments.
Xcel stated 217,130 customers requested service to a location previously served in 2021. This represents a slight increase from 2021, and the Company responded to all requests by the next business day.

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

[15] 2022 Report, p. 9.
[16] Response time in this discussion equals the average number of days needed to complete the installation.

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 2022, an average of 82.8% of all calls and 84.6% of outage calls were answered within 20 seconds.[17] Table 6 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 Agents, an average of 58.9% were answered within 20 seconds in 2022. In 2020 and 2021 respectively, the same calculation resulted in 58.9% and 51.3%. The inclusion of IVR outage calls pushed the total outage call percentages for all three years (2020 through 2022) above the 80% threshold.

Xcel provided a lengthy explanation of its efforts to improve its call center performance during 2022. The Company's call center experienced significant absenteeism in 2021 due to COVID as well as a large amount of staff turnover. The Company continued its attempts to remedy that situation in 2022.

[17] Department's calculations are based on data provided in Xcel's Attachment F.

Table 6 – Call Center Response Summary for 2022

Category	Calls offered to Agents	Answered within 20	%
Residential	891,062	495,377	55.59%
BSC	56,525	35,291	62.43%
Credit	144,695	110,919	76.66%
PAR	24,715	16,596	67.15%
Total	1,116,997	658,183	58.92%
	Calls handled by IVR	**Answered within 20**	**%**
Nonbilling/No noutage	313,304	313,304	100.00%
Billing	1,264,854	1,264,854	100.00%
Outage	282,137	282,137	100.00%
Total	1,546,991	1,546,991	100.00%
	Outage calls	**Answered within 20**	**%**
Agents	168,888	99,516	58.92%
IVR	282,137	282,137	100.00%
Total	451,025	381,653	84.62%
XCEL	**All calls**	**Answered within 20**	**%**
Line 16/17	1,399,134	940,320	67.21%
Line 18/19	2,663,988	2,205,174	82.78%
DOC	**All calls**	**Answered within 20**	**percent**
	3,146,180	2,617,994	83.21%

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

(b) Reporting Requirements Included in Commission Orders

ii. 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

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.[18] 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%) than in 2021.

Table 7 shows the historical numbers regarding EMAs.

Table 7: Residential Customers Requesting Emergency Medical Account Status 2013 – 2022

Year	Requested Medical Acct. Status	Granted Medical Acct. Status	Percent Granted
2012	1,508	679	45.0%
2013	1,562	832	53.3%
2014	1,780	1,012	56.9%
2015	3,333	2,557	76.7%
2016	3,427	2,713	79.2%
2017	3,150	2,388	75.8%
2018	2,818	2,267	80.4%
2019	2,420	2,196	90.1%
2020	986	935	94.8%
2021	1,084	971	89.6%
10-year avg	2,207	1,655	75.0%
2022	1,222	1,079	88.3%
Variance %	-45%	-35%	

[18] 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 lower in 2022 than the 10-year average while the percentage of new applicants approved was higher.

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

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 8 below 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 2022 number of deposits required was 55% below the 10-year average.

Table 8: Customer Deposits Required 2012 – 2021

Year	Number of Deposits
2012	665
2013	652
2014	606
2015	561
2016	362
2017	314
2018	394
2019	486
2020	678
2021	583
10 -year Average	530
2022	237
Variance %	-55%

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

Minn. R. 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 tendays.
(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 Commission's Consumer Affairs Office (CAO) for further investigation and action.

In 2022, Xcel reported the Company's Customer Advocate Group handled 635 complaints, 295 of which were forwarded by the CAO.[19] The Company provided data showing 9.1% of complaints Xcel's Customer Advocate Group handled in 2022 were resolved upon inquiry.[20] The most frequent complaint category was "inadequate service" at 51.7%. Xcel reported 32.3% of these complaints in 2022 were resolved by taking the action the customer requested.[21]

Xcel's report on customer complaints includes the required information. Table 9 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 9, the Department did not develop summary statistics.

[19] Attachment G of the Report.
[20] Id.
[21] Id.

The Department also notes that while the number of formal complaints increased from 484 in 2021 to 635 in 2022, the number of complaints received in the Company's call center declined over that same period from 34,346 to 22,792. The Department asks that Xcel provide additional information and/or an explanation as to why those two seemingly contrary results occurred in 2022.

Xcel also received 22,792 complaints in 2022 which were handled upon initial inquiry in the Company's Call Centers. Xcel reported approximately 62.6% of these complaints were resolved by taking the action the customer requested. The complaint category with the largest volume for all customers was "inadequate service."

Table 9: Selected Summary of Customer Complaints[22]

Year	Number of Complaints	Inadequate Service	Wrongful Disconnect	Billing Error	Resolved Upon Initial Inquiry	Took Action Customer Requested
2010	693	44.9%	21.9%	18.2%	17.0%	29.1%
2011	627	49.1%	17.2%	16.7%	13.2%	28.2%
2012	613	53.5%	19.7%	17.3%	18.6%	27.4%
2013	745	55.8%	15.6%	13.8%	18.9%	38.3%
2014	770	53.2%	19.7%	14.8%	16.8%	51.3%
2015	789	52.5%	23.4%	13.3%	14.3%	29.5%
2016	547	52.1%	19.0%	14.6%	16.3%	32.7%
2017	572	53.5%	24.5%	10.5%	18.0%	27.1%
2018	664	58.1%	18.8%	11.6%	20.6%	26.7%
2019	756	59.7%	17.3%	11.1%	14.0%	26.7%
2020	430	57.2%	3.7%	16.3%	14.4%	35.8%
2021	484	56.6%	7.4%	16.5%	10.7%	31.6%
2022	635	51.7%	4.7%	23.0%	9.1%	32.3%

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

[22] Id.

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

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.[23] The Parties agreed to separating the category of Inadequate Service into four sub-categories. The Parties will begin reporting using those new sub-categories beginning with the 2023 SRSQ which will be filing in April 2024.

The Order in the 21-237 docket included an additional requirement that Xcel Energy 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 50 DER complaints in 2022.

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 provide a discussion of its efforts to comply wit this reporting requirement in the filing. The Company inferred that it would comply with this reporting requirement beginning in April 2024, consistent with the Commission Order.

The Department's review concludes Xcel either met the reporting requirements in the Commission's the three Commission Orders listed above or is in the process of complying with those Orders.

h. Electronic Customer Contacts

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

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

i. Order Accepting Reports, Requiring Additional Filings, and Establishing a Workshop (Docket No. E002/M-20-406), issued December 18, 2020

At Order Point 14, the Commission required the Company to "report over the next two reporting cycles, to the extent feasible, the following:

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 disconnections as part of reporting under Minn. R. 7826.1700.

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

e. Percentage uptime to the second decimal;
    i. General website
    ii. Payment services
    iii. Outage map and/or outage information page
f. Error rate percentage to the third decimal;
    i. Payment services
g. 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.
h. Required the Company to continue to provide the information listed in Order Point 14 in the December 18, 2020, Order in Docket no. E002/M-20-406.

Xcel included a discussion addressing Order Point 14 of the Commission's December 2020 Order on pages 16 through 19 of its Report.

The Company provided monthly page views of its website, Facebook, MyAccount, as well as the number of mobile app installations. The Department summarizes these annual figures in Table 10 for 2020-2022.

Table 10: Xcel Energy 2020 - 2022 Page Views and App Installations Totals

Description	2020 Results	2021 Results	2022 Results
Website	12,681,427	11,098,531	10,669,980
MyAccount, Mobile App Installations	19,432,738	14,626,276	14,458,009
Email	235,210	121,679	83,952

The Department notes the number of electronic customer interactions for all three categories listed in the table declined each year. The Department asks that Xcel discuss this potential trend in its reply comments and explain the drivers behind it.

Xcel also provided a monthly summary of all emails received through the customerservice@xcelenergy.com email address, as well as a chart of the subject category of each email.

The Department summarizes these annual figures for 2020 to 2022 in Table 11:

Table 11: Xcel Energy Annual Number of Emails Received and Number of Emails Received by Top Six Subject Categories 2020 - 2022

Email Topic	2020	2021	2022[24]
Billing	70,093	42,344	30.475
Start/Stop/Transfer	52,922	36,625	17,882
MyAccount	41,161	20,929	10,326
Other	12,701	6,206	6,632
Outages	10,349	5,719	4,198
Credit	9,173	3,407	1,847
Subtotal	196,399	115,230	71,360
Not Identified	38,811	6,449	12,592
Total	235,210	121,679	83,952

The results in Table 11 are like those in Table 10. The Department asks the Company to explain what factors might be driving these declines in its reply comments.

[24] The Department estimated the number of emails in the six categories given information Xcel provided in the Report.

i. 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 provided internal goals information related to interactive transaction surveys at the customer level.[25] The Company did not meet any of the five annual customer satisfaction goals identified in 2022. Xcel did meet two of those same goals in 2021. The Department notes these goals involve tasks which call center staff would handle primarily. Given Xcel's difficulties with its call center over the past two years, this result may not be that surprising.

Xcel also provided trade secret information from J.D. Power for its residential customers, which is summarized in **TRADE SECRET** Tables 12-A and 12-B.

Xcel explained in its reply comments dated June 24, 2022, in Docket No. E002/M-22-162 that some variation in index scores for the different categories from year to year is to be expected.[26] The Company also stated that "a statistically significant increase or decrease requires a year over year variation of more than 20 points." Using that rule of thumb from a conservative perspective and assuming that a 30-point variation is required, **[TRADE SECRET DATA HAS BEEN EXCISED]**.

[25] Report, p. 20 – 21.
[26] Reply Comments at p. 2.

TRADE SECRET Table 12- A: JD Power Residential Satisfaction Metrics for NSP 2020-2022 – Index Scores

Metric	2020 Index Score	2021 Index Score	2022 Index Score	2021 to 2022 Difference
Overall Customer Satisfaction Index	**[TRADE SECRET DATA HAS BEEN EXCISED]**			
Power Quality and Reliability				
Price				
Billing and Payment				
Corporate Citizenship				
Communications				
Customer Contact				

Some of this decline may be due to factors outside of Xcel's control. For example oil and natural gas prices spiked after the Russian invasion of Ukraine in February 2022 and prices remained elevated for some time. Those higher natural gas prices led to higher electric generation costs and home heating costs. That explanation would provide support for the change in the price metric from 2021 to 2022.

The Department asks Xcel to provide some additional context regarding the 2022 results for the residential customer class results in its reply comments. The Department is interested in understanding what caused the significant declines in these rankings.

The information in Table 12-B viewed in isolation, appears to represent a decline in residential customer satisfaction over the three-year period. JD Power's process and the information provided to it by the different utilities benchmarked is all proprietary, so these results are essentially black-box results.

TRADE SECRET Table 12- B: JD Power Residential Satisfaction Metrics for NSP 2020-2022 – Percentile Rank

Metric	2020	2021	2022
Overall Customer Satisfaction Index	**[TRADE SECRET DATA HAS BEEN EXCISED]**		
Power Quality and Reliability			
Price			
Billing and Payment			
Corporate Citizenship			
Communications			
Customer Contact			

Tables 13-A and 13-B provide the JD Power information for the Small Commercial Class.

TRADE SECRET Table 13- A: JD Power Small Commercial Satisfaction Metrics for NSP 2020-2022 – Index Scores

Metric	2020 Index Score	2021 Index Score	2022 Index Score	2021 to 2022 Difference
Overall Customer Satisfaction Index	**[TRADE SECRET DATA HAS BEEN EXCISED]**			
Power Quality and Reliability				
Price				
Billing and Payment				
Corporate Citizenship				
Communications				
Customer Contact				

The 2022 index scores for the Small Commercial class are consistent with past years.

TRADE SECRET Table 13- B: JD Power Small Commercial Satisfaction Metrics for NSP 2020-2022 – Percentile Rank

Metric	2020	2021	2022
Overall Customer Satisfaction Index	**[TRADE SECRET DATA HAS BEEN EXCISED]**		
Power Quality and Reliability			
Price			
Billing and Payment			
Corporate Citizenship			
Communications			
Customer Contact			

The information in Table 13-B appears to represent a significant improvement in small commercial customer satisfaction over the three-year period in its reply comments. The Department asks Xcel to provide some additional context regarding the 2022 results for this customer class. The Department is interested in what drove the significant improvements in these rankings.

C. ANNUAL SERVICE RELABILITY REPORT for 2022

a. Overview of 2022 Reliability Performance

Like the service quality section, the reliability performance topic 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 far exceeds the information the Company provides in response to the reliability reporting requirements included in the Minnesota Rules.

Considering these numerous Order-based reporting requirements, Xcel added a new section to its 2022 Report. This new section addresses several Commission Orders the Company has identified as being related to overall all system reliability performance as opposed to the specific performance metrics identified in Minnesota Rule 7826.0500 through 7826.0700 and the accompanying reporting requirements.[27]

- 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 require Xcel to provide an infographic summarizing key customer-service quality and reliability metrics in a format for general audiences and consult with Commission staff on its development.
    - The Company provided a copy of this infographic as Attachment H to the Report. The Department reviewed the attachment. The information included does pertain to service quality and reliability. The Department concludes the Company complied with the requirements in these different Commission Orders.

- Order Point 3 in the Commission's December 18, 2020, Order in Docket No. E002/M-20-406 required Xcel to continue filing quarterly status reports on efforts to improve reliability in the Southeast Work Center through 2021.
    - The Company noted it continue to provide these quarterly reports to the Commission through 2022 and provided a copy of its most recent quarterly report on the progress and improvements made in the Southeast Work Center filed on February 1, 2023, as Attachment I to the Report.
    - The Department reviewed the attachment. As best the Department can tell, it seems as though Xcel's efforts in this work center are helping to improve reliability over the long-term. While the 2022 results for the three major reliability performance metrics were not below the prior year's results, the 2022 results were within the "acceptable" range of the five-year averages. The Department concludes the Company complied with this reporting requirement.

- 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

[27] See Report pages 24-25.

pro-active management of the system as a whole, increased reliability, and active contingency planning.

- Order Point 3.1 in the Commission's March 19, 2019, Order in Docket No. E002/M-18-239 required the Company to include more discussion of leading causes of outages and mitigation strategies.
    - The Company provided a summary of this information as Attachment J to the Report. The Department reviewed the attachment. It appears that Xcel spent additional funds on vegetation management on 2022. Vegetation management or the lack thereof, is often a significant driver for outages. The Department concludes the Company complied with the requirements in these different Commission Orders. The Department concludes the Company complied with these reporting requirements.

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

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

Subpart 1 of Minnesota Rule 7826.0500 includes the annual reliability reporting requirements. We 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. [28]
- The utility's SAIFI for the calendar year, by work center and for its assigned service area. [29]
- The utility's CAIDI for the calendar year, by work center and for its assigned service area. [30]

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 17 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.[31] 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."[32]

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.[33]

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.

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

[28] SAIDI stands for System Average Interruption Duration Index.
[29] SAIFI stands for System Average Interruption Frequency Index.
[30] CAIDI stands for Customer Average Interruption Duration Index.
[31] 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).
[32] *Id.* at page 3.
[33] *Id.* at Order Point 6, p. 7.

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 at the same benchmarks 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.

By way of explanation, IEEE doesn't publish its benchmarking results for the prior year until August of the following year, so the three IOUs don't know where they stand relative to those benchmarks for 2022. Table 14 compares the 2021 IEEE information to Xcel's 2022 actuals. While this is not a standard comparison, it does provide some context.

Table 14: 2021 2021 IEEE Results Compared to Xcel's Actual 2022 Reliability Performance

Work Center	Metric	2021 IEEE Benchmarks	2022 Xcel Actuals	Met Benchmark?
Minnesota	SAIDI	139	90.00	Yes
	SAIFI	1.09	0.86	Yes
	CAIDI	117	104.05	Yes
Metro East	SAIDI	139	96.79	Yes
	SAIFI	1.09	0.90	Yes
	CAIDI	117	107.99	Yes
Metro West	SAIDI	139	81.85	Yes
	SAIFI	1.09	0.87	Yes
	CAIDI	117	94.19	Yes
Northwest	SAIDI	136	84.06	Yes
	SAIFI	1.08	0.69	Yes
	CAIDI	126	122.38	Yes
Southeast	SAIDI	136	111.84	Yes

	SAIFI	1.08	0.91	Yes
	CAIDI	126	122.69	Yes

Xcel's performance in 2022 was better than the 2021 IEEE benchmarks for all of the fifteen metrics listed. This is a good result, if not completely internally consistent.

Table 15 shows the Company's 2022 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 2022 actuals to 2020 goals. Thus, Xcel met 3 of the 12 reliability goals identified in the Minnesota Rules approach.

The Department notes this comparison is not required, but it does provide Commission staff, Commissioners, and other interested parties a point of reference for Xcel's actual 2022 reliability results compared to historical goals.[34]

While the IEEE 2021 results provide a useful proxy for the yet-to-be-calculated 2022 IEEE reliability results, the Department will provide additional comments after Xcel provides the 2022 IEEE benchmarking information later this year.

[34] This comparison also suggests the IEEE 2021 benchmarks used as the point of comparison are not as rigorous as the reliability goals calculated using the historical Minnesota-specific rules-based approach.

Table 15: Xcel's 2022 Reliability Performance Compared with 2020 Goals Using Historical Method

Work Center	Metric	2022 Performance	2020 Goals
Minnesota	SAIDI	90.00	NA
NA	SAIFI	0.86	NA
	CAIDI	104.05	NA
Metro East	SAIDI	96.79	89.95
	SAIFI	0.90	0.84
	CAIDI	107.99	106.91
Metro West	SAIDI	81.85	79.37
	SAIFI	0.87	0.79
	CAIDI	94.19	100.55
Northwest	SAIDI	84.06	87.11
	SAIFI	0.69	0.75
	CAIDI	122.38	115.72
Southeast	SAIDI	111.84	94.82
	SAIFI	0.91	0.76
	CAIDI	122.69	122.04

Based on its review of Xcel's 2022 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.

c. *Storm-Normalization Method*

Subpart 1 of Minnesota Rule 7826.0500 includes the 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.

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

Xcel identified five Commission Orders which fall into this category.

- 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 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.

Regarding the requirements included in the first two bullet points, the Company included Table 13 in the Report.[35] This table includes historical reliability information indices and Major Event Day exclusions for 2013 through 2022. 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.[36] This information appears responsive to the reporting requirements listed in the first and second bullet points.

Xcel provided 2022 reliability indices by customer class in Table 13A of the Report.[37] 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]

[35] Report, p. 30.
[36] The Company provided the underlying date for these analyses in Attachment K of the Report.
[37] Report, p. 33.
[38] Higher SAIDI and SAIFI scores equate to less reliable service.

This information appears responsive to the reporting requirements listed in the third and fourth bullet points.[39]

The Company identified its interactive map, which contains increased granularity on certain electric reliability and service quality data, as well as low-income program participation for Xcel's Minnesota service territory. This information appears responsive to the reporting requirements listed in the fifth bullet point.

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

- Xcel's reliability indices have neither significantly improved nor declined over the past 10 years. This result may not be a cause for concern, since, Xcel has improved its reliability tracking technology over this time. This improved technology may result in the identification of larger numbers of outages due to the fact the information is now reported whereas previously it was not. The Department would appreciate Xcel providing a discussion of changes in its reliability indices over the past 10 years in its reply comments.
- The Company's preliminary results regarding the question of reliability by customer class are consistent with common knowledge. Industrial customers use large amounts of electricity and often have high load factors. It is not surprising those customers would have better reliability than the other customer classes. 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. The Company also noted its industrial customers are often served by shorter feeders and there is less vegetation in those areas as factors that affect reliability. Commercial customers also tend to be aggregated. 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 this 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. While the Company may design its system to be reliable, there are more drivers that can degrade reliability in residential or rural areas.
- The Department appreciates the Company's efforts in developing the interactive map. This map provides an interesting perspective on the Company's service territory.

[39] Xcel also provided the supporting data for these calculations in **TRADE SECRET** Attachment L.

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

As part of the transition to using the IEEE Benchmarking approach, the Commission identified reporting requirements that would allow it and other interested parties to evaluate the different IOU's historical performance. For Xcel, Order Point 10 in Attachment B in the Commission's January 28, 2020, Order in Docket No. E002/M-19-261 requires the Company to provide "IEEE Benchmarking results for SAIDI, SAIFI, CAIDI and MAIFI from the IEEE benchmarking working group."

The Company provided this historical information in Graphs 2 through 4 on pages 36 through 38 of the Report. Xcel's reliability results (SAIFI, SAIDI, and CAIDI) are all in the first or second quartile for the period from 2016 through 2021. Compared to the other participating utilities in the IEEE Benchmarking work group, Xcel's results are good. The Company also noted IEEE's Benchmarking group doesn't currently provide information on the Momentary Average Interruption Frequency Index (MAIFI). Hence, that information is not available from IEEE.

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

Xcel is investing or planning to invest a significant 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."

The Company provided its response on page 39 of the Report. Xcel noted it had installed "automated field devices on three feeders that were used to test the functionality of the Fault Location Isolation and Service Restoration (FLISR). Xcel also noted that it is planning to expand this initial test over the next four years. The Company did not report any reliability data for those three feeders.

Additionally, Xcel discussed the benefits AMI investments will provide relative to reliability. Once again, the Company did not provide any data, but did comment: "However, it should be noted that because AMI technology provides enhanced capabilities, creating more accurate outage start and completion times, this will likely reflect as a decline of our reported reliability metrics as compared to our historical reporting."

The Department asks Xcel to include a discussion of how the creation of more accurate outage start and completion times will likely lead to a decline in the Company's reliability metrics in its reply comments.

d. 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 2022 will not be available until later this year, this is not a reporting requirement Xcel can complete at this time. The Company noted at page 41 of the Report "it will provide any explanations and/or action plans for any failures to meet the IEEE Benchmarking results" in a supplemental filing it will make after the IEEE publishes those 2022 results.

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 (2018 through 2022).
- 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 of the Report appear to meet this Commission reporting requirement.[40]

e. *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."

[40] Report, p. 45, 49, 53, 57.

Xcel reported no generation outages on the Company's system that caused an interruption of service to firm electric customers in 2022. 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.

f. *Outage Communications*

i. 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 2022, Xcel reported 258 outages on its system met the definition of "major service interruption."[42] The Company reported 231 of these types of outages in 2021. 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.

[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.

Table 16: Major Service Interruptions Not Reported to the Minnesota Public Utilities Commission's Consumer Affairs Office 2013 -2022

Year	Unreported Major Service Interruptions	Number of Major Service Interruptions	Percent Unreported
2012	5	252	2%
2013	2	605	<1%
2014	11	233	5%
2015	27	259	10%
2016	12	310	4%
2017	6	154	4%
2018	6	243	2%
2019	5	214	2%
2020	9	264	3%
2021	13	231	6%
10-yr Avg.	10	277	4%
2022	14	258	5%
Variance	46%	-7%	

TRADE SECRET Attachment O of the filing provides information provides the information summarized in Table 16.

The Company's 2022 results for unreported Major Service Interruptions are on the high side at 46% above the 10-year average. The number of Major Service interruptions are slightly below the 10-year average. The Department also notes ten of the fourteen unreported interruptions occurred in May 2022. The Company appears to have resolved this issue given its performance in the latter half of 2022.

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

ii. Outage Communications to Customers

The Commission's Order dated February 9, 2018, in Docket No. E002/M-16-281 and Epp2/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. The Company has agreed to provide summary Estimated Restoration Time (ERT) data on a going forward basis as part of these Annual reports and proposed the data would be summarized as to the accuracy of our ERT estimates for the calendar year."

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

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

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

Table 17: ERT Accuracy – Within -90 to +0 Minutes 2017 through 2022 (%)

Entity	2017	2018	2019	2020	2021	2022
NSPM	43.5%	43.6%	48.3%	54.4%	53.9%	50.4%
MN Only	43.1%	43.5%	49.9%	54.3%	54.8%	51.6%

The Company appears to have demonstrated some improvement in this metric over time.

Table 18 provides similar information for the +1 to +90 minute ERT window. Xcel voluntarily supplied this additional information in this Report.

Table 18: ERT Accuracy – Within +1 to +90 Minutes 2017 through 2022 (%)

Entity	2017	2018	2019	2020	2021	2022
NSPM	19.0%	15.2%	18.6%	16.6%	19.3%	23.8%
MN Only	18.6%	14.5%	18.7%	16.4%	18.5%	19.9%

When the Department sums the annual percentage accuracy for 2022 for NSPM and MN Only, the totals for -90 to +90 minutes equal 74.2% and 71.5%. The Department asks Xcel to explain the dispersion of the estimated restoration times that don't fall within the -90 to 0 and +1 to +90-minute ranges for 2022 in its reply comments.

Table 19 provides similar information for the +1 to +30 minute ERT window.

[43] Report at pages 62 through 65.

Table 19: ERT Accuracy – Within +1 to +30 Minutes 2017 through 2022 (%)

Entity	2017	2018	2019	2020	2021	2022
NSPM	10.1%	8.0%	10.0%	10.4%	11.3%	12.5%
MN Only	10.0%	7.5%	10.4%	10.3%	10.9%	11.5%

The Company appears to demonstrate some improvement in this metric as well over the six years included in the table.

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

g. 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 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 to the filing 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.

h. 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 224 voltage investigations in 2022. After investigation, the Company found approximately 54% of these instances were caused by a specific voltage problem. In cases where the Company finds that the voltage is not within the acceptable range, actions are taken such as swapping transformers, upgrading transformers, or checking capacitor banks.

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

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

Table 18 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 18: Xcel's Historical Work Center Staffing Levels for Trouble and O&M Staffing 2012 - 2022

Year	Metro East	Metro West	Northwest	Southeast	Other	Total
2012	134	190	34	58	44	461
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
10-yr Avg	126	179	32	51	46	434
2022	135	188	32	58	50	450
Var.	7%	5%	0%	15%	8%	4%

Table 19: Xcel's Staffing Levels Work Center for Contractors 2020 - 2022

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
Var.	50%	3%	-100%	-100%	88%	17%

Table 19 include recent staffing levels for contractors. The number of contractors has increased over the past three years.

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.

j. Order-based Other Reliability Metric Reporting Requested

i. Momentary Average Interruption Frequency Index (MAIFI)

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 68 and 74 of the Report. The Company provided MAIFI calculations by work center and for all of Minnesota for the 2010 through 2022 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.[44]

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 2022 interruptions, as well as a similar chart that covers the past five years.

Since Xcel has not installed MAIFI on all its system, there are some limitations to this data.
The Department concludes Xcel complied with these reporting requirements.

[44] Report at pages 54 through 60.

ii. Customers Experiencing Multiple Interruptions (CEMI)

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 20 and 21 on page 75 of the filing. The information in that graph suggests the Company's CEMI 4, 5, 6+ results for 2022 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 two customers had the highest number of outages for normalized outages with 13 outages. Twenty-two customers had the highest number for all days, 13 when the data was normalized. These results appear to be slightly higher than the 2021 results.

The Department concludes Xcel complied with these reporting requirements.

iii. Customer Experiencing Lengthy Interruptions (CELI)

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

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

Xcel provided this information in Graphs 22 and 23 on page 77 of the filing. The Department did not identify a trend towards improvement in Graphs 22 or 23.

The Company identified the longest outage in 2022 was 6,357minutes (106 hours or 4 days 10 hours). It affected one customer.

The Department concludes Xcel complied with these reporting requirements.

k. Proposed 2023 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.

In its filing, the Company noted the Commission's November 9, 2022, Order in Docket No. E002/M-22-162 required the Company to use the following 2022 IEEE benchmarking results as Xcel's 2022 proposed standards:

- Metro East work center - second quartile using the large utilities peer group;
- Metro West work center - second quartile using the large utilities peer group;
- Northwest work center - second quartile using the medium utilities peer group; and
- Southeast work center - second quartile using the medium utilities peer group.

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.

The Department concludes Xcel complied with the requirements for setting the annual reliability standards listed in Minnesota Rules 7826.0600, subp. 1.

l. *Miscellaneous – 2022 Quality of Service Tariff Results/Discussion of the City of Minneapolis' Concerns Regarding Xcel's Service Reliability Compared to Select Suburban Utilities*

i. 2022 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 20 recreates Table 1 from Xcel's 2022 QSP compliance filing, filed April 27, 2023. Xcel's QSP performance was good. The Company met all seven of the performance standards in 2022.

Table 20 – QSP Tariff Results for 2022

Measure	2022 Performance	Standard
Customer Complaints to PUC	329 complaints	≤ 375 Complaints*
Telephone Response Time (percent of calls answered in ≤ 20 sec)	84.6%	≥ 80%
Electric Reliability – SAIDI	87.92 min.	≤ 133.23 min
Electric Reliability – SAIFI	0.84 outage events	≤1.21 outage events
Gas Emergency Response Time	28.09 min	≤ 60 min
Accurate Invoices	99.81%	≥ 99.3%
Invoice Adjustment Timeliness	1.77 billing periods	≤ 2.35 billing periods

*Customer complaint standard is ≤ .2059 complaints per 1,000 customers. This number reflects the calculation in 2022.

The QSP tariff also includes financial penalties for certain levels of customer outages calculated in customer-specific basis. Table 21 recreates Table 2 from Xcel's 2022 QSP compliance filing.

Table 21 – 2022 Outage Credits

Description	2022 Credits	Dollars
Six or More Service Outages	5,261	$263,050
Outages Lasting 24-Hours or Longer	435	$21,750
Consecutive Years of Outages	964	$85,825
Tracked Small Municipal Pumping Outages (A40)	1,059	$105,900
Untracked Small Municipal Pumping Outages (A40)	248	$40,672
Tracked Large Municipal Pumping Outages (A41)	554	$110,800
Untracked Large Municipal Pumping Outages (A41)	196	$52,332
Total	**8,717**	**$680,329**

The Department reviewed the Company's 2021 QSP compliance filing to use that information as a point of comparison. In 2021 Xcel also met all seven performance standards and recorded 10,424 credits and $711,968 in penalties.

Using the 2021 results as the point of comparison, Xcel's performance under the QSP improved in 2022.

ii. City of Minneapolis' Service Reliability Concerns

In comments filed January 5, 2023, in Docket Nos. E002/CI-17-401 and E002/M-20-406, the City of Minneapolis (City or Minneapolis) included a service reliability analysis for five utilities serving the

Minneapolis/St. Paul metropolitan area. The table in Department Attachment D recreates the information provided in Table 2 in the City's comments.

Reviewing the information in the City's Table 2, Xcel's service reliability results for 2021 are higher (worse) than the four other utilities (Connexus Energy, Dakota Electric Association, Shakopee Public Utilities, and Wright-Hennepin Coop Electric Association) for SAIDI, SAIFI, and CAIDI considering all days and days without MED.

Procedurally, the Department elected to include its review and comments of this information in the instant docket given the strong reliability focus, rather than include it in the other two dockets.

In Department Information Request No. 2, the Department asked Xcel to:

> Provide a narrative that explains the various factors that would result in Connexus Energy, Dakota Electric Association, Shakopee Public Utilities, and Wright-Hennepin Cooperative Electric Association having different results than Xcel Energy's Minnesota electric service territory regarding SAIDI, SAIFI and CAIDI in 2021.

The Company listed four factors that could affect those reliability metrics:

- Installation of automatic outage recording equipment.
- Line and equipment exposure - weather, age, animal contacts and public damage influence this category.
- System configuration – is the distribution system primarily overhead or underground?
- System age – distribution systems constructed in the 1960s and 1970s were primarily overhead while those built later (1980s and after) were primarily underground.

Xcel also provided a table comparing each of the five utilities primary service area, the median year the housing structure was built, and the primary residential electric service type during median year of original construction.[45]

The information in this table suggests that the housing stock in the Company's primary service area is older than those of the other four companies. In addition, the distribution system in those Company's primary service area is overhead as opposed to underground for the four other utilities.

[45] Department Attachment E includes a copy of Xcel's response to this Department information request.

The Department has no additional comments on this topic.

III. CONCLUSION AND RECOMMENDATIONS

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

A. 2022 ANNUAL SAFETY REPORT

The Department considers Xcel's performance in this area to be reasonable and recommends the Commission accept the Company's 2022 Safety Report.

B. 2022 SERVICE QUALITY REPORT

In a change from past practice, the Department is providing a table summarizing the Company's 2022 results given the various reporting requirements included under this topic.

The table located in the Department's Attachment F, summarizes the service quality performance standards required by rule or Commission Order.

The Department's review identified:

- Three metrics where service quality improved. These included Field Orders average response times, call center response times and small commercial customer satisfaction.
- Two metrics where service quality declined – new service extension requests and residential customer satisfaction.
- Four metrics where service quality declined, but the decline was attributable to a larger business need that will likely improve service quality in the future – annual number and percentage of Company and customer read meters, meters not read for 6 to 12 month and meters not read for more than 12 months.
- Six metrics where service quality declined, but the metric was heavily influenced by COVID-19 policies that have now lapsed – five metrics associated with involuntary disconnection and one related to customer complaints.
- Four metrics whose impact on overall service quality is difficult to assess– emergency medical account status, customer deposits, number of existing customers requesting service change at existing locations and electronic customer contacts.

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 2022.

The Department appreciates Xcel's efforts regarding improving the Field Order original metric. The Department requests the Company provide the following in its reply comments:

- An explanation of how the percentages of meters not read for six to twelve months and the meters not read for more than twelve months for the other customer class increased 29% for the former and decreased 35% for the latter in 2022.
- Additional information regarding the decline in efficiency for service extension requests in 2022.
- A discussion as to why the number of formal complaints increased in 2022, while the number of complaints received in the Company's call center declined over that same period.
- Information regarding the decline in electronic customer contacts in 2021 and 2022 relative to 2020.
- Additional context regarding the significant improvement in small commercial customer satisfaction in the JD Power survey results over the past three years, and:
- Additional context regarding the significant decline in residential customer satisfaction in the JD Power survey results over the past three years in its reply comments.

The Department has no additional comments regarding the Company's Service Quality section of its Report. We will defer making a recommendation to accept this section of the Report until we have had an opportunity to review the Company's reply comments.

C. 2022 SERVICE RELIABILITY REPORT

The Department created a table located in Department Attachment G, which summarizes the service reliability information for 2022 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 2022 actuals for those reliability metrics compared to the Commission-approved benchmarks for 2022. 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. The Company provided adequate information for all the topics identified except for the three identified below. The Department asks the Company to provide this information in its reply comments.

- A discussion of the apparent lack of improvement in its reliability indices (SAIFI, SAiDI and CAIDI) over the past 10 years.
- A discussion of how the creation of more accurate outage start and completion times will likely

lead to a decline in the Company's reliability metrics for the three feeders it identified as having been equipped with FLISR.

- Explain the dispersion of the estimated restoration times that don't fall within the -90 to 0 and +1 to +90-minute ranges for 2022.

The Department's review concluded that Xcel's reliability metrics for 2022 were good when compared to the 2021 IEEE benchmarks. We are still waiting for the 2022 benchmarking data from IEEE. The Department will submit supplemental comments regarding the 2022 IEEE Benchmarking results shortly after the Company provides the information.

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

Xcel Energy		Information Request No.	3
Docket No.:	E002/M-23-73		
Response To:	Minnesota Department of Commerce		
Requestor:	John Kundert		
Date Received:	May 15, 2023		

Question:
Topic: Injuries/Illness Classification Counts
Reference(s): Attachment A

Has the Company determined the driver for the increase in respiratory injuries or illnesses the past two years relative to the proceeding 10 years?

Response:

The increase in respiratory injuries or illnesses over the past two years at Xcel Energy is directly related to COVID-19 and OSHA's mandated recording of all cases deemed to have a work-related exposure. OSHA's Occupational Exposure to COVID-19, Emergency Temporary Standard's (ETS) reporting became effective on June 21, 2021. Specifically, in 2022, we recorded 157 Respiratory Conditions, with 156 related to COVID-19. In 2021, we recorded 149 Respiratory Conditions that were all related to COVID-19. Prior to OSHA's ETS effective date, we began recording COVID-19 related Respiratory Conditions in 2020 with 58 reported cases, 57 of those were related to COVID-19. Prior to the COVID-19 pandemic, we typically recorded zero to one case of Respiratory Conditions per year.

Preparer:	Carrie Kleman
Title:	Corporate Safety Analyst
Department:	Safety Strategy & Employee Relations
Telephone:	612-320-656-2426
Date:	May 25, 2023

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

Xcel Energy		Information Request No.	4
Docket No.:	E002/M-23-73		
Response To:	Minnesota Department of Commerce		
Requestor:	John Kundert		
Date Received:	May 15, 2023		

Question:
Topic: Compensation for downed wires or other electrical system failures
Reference(s): Attachment B

Provide the basis for the non-outage electrical claim for $191,150 in Attachment B.

Response:

On December 7, 2017, an Xcel Energy field credit representative went to the customer's property to advise the customer that payment needs to be made or the customer's service will be disconnected for non-payment. The customer then called the Xcel Energy Call Center to stop disconnection and paid 50 percent of the past due balance and set up a payment plan for the balance. The Xcel Energy Call Center inadvertently failed to cancel the disconnection order after payment was made and service to the customer's business was disconnected on December 12, 2017 in error. The customer was out of town and did not discover the power was disconnected until December 27, 2017. At this time, the pipes and various equipment froze and the building had incurred water damage. The customer made a claim for approximately $300,000 in December of 2020 for the water damage to the building while service was disconnected. Payment was made in the sum of $191,150 for the water damage sustained to the property.

Preparer:	Lisa Lucas
Title:	Damage Claims Process Manager
Department:	Claims Department – Legal
Telephone:	715-737-2662
Date:	May 25, 2023

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

Xcel Energy		Information Request No.	5
Docket No.:	E002/M-23-73		
Response To:	Minnesota Department of Commerce		
Requestor:	John Kundert		
Date Received:	May 15, 2023		

Question:
Topic: Company Read Meters
Reference(s): Page 5 of the Petition

Provide support for the statement: "in 2022, supply chain issues related to obtaining parts from our current vendor continued to be a challenge, resulting in a significant decrease in automated read performance and driving our inability to receive and exchange meters/modules that were not transmitting.

Response:
The global supply chain issues led to our vendor's inability to secure meters and modules to replace those that were no longer communicating or required replacement for other reasons. For example, in 2022, we had on order and expected to receive 50,210 meters/modules, but only received 18,360. This consisted of multiple shipments throughout the year. Further, shipments were often times delayed, which added to the increased number of manual read requests as equipment in need of replacement could not be automatically read until replacement parts were received.

Preparer:	Dawn Pittman
Title:	Manager, Revenue Cycle Field Ops
Department:	Collections North
Telephone:	715-737-7662
Date:	May 25, 2023

Attachment D – Summary of Selected Service Reliability and Other Information for Five Minneapolis/St. Paul Metropolitan Area Electric Utilities – 2021

Category	Description	Connexus Energy	Dakota Electric Association	Shakopee Public Utilities	Wright-Hennepin Coop Elect. Assn.	Xcel
All Events (with MEDs)	SAIDI	38.792	57.700	7.323	34.629	129.935
	SAIFI	0.501	0.680	0.114	0.484	1.042
	CAIDI	77.429	84.853	64.237	71.548	124.698
Without MEDs	SAIDI	27.35	21.000	7.323	30.723	92.270
	SAIFI	0.367	0.330	0.114	0.484	0.934
	CAIDI	75.027	63.636	64.237	63.477	98.790
# Of Customers		139,583	111,103	18,772	53,390	1,311,845
Outages Recorded Automatically		Yes	Yes	No	Yes	Yes

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

Xcel Energy		Information Request No.	5
Docket No.:	E002/M-23-73		
Response To:	Minnesota Department of Commerce		
Requestor:	John Kundert		
Date Received:	May 15, 2023		

Question:
Topic: Company Read Meters
Reference(s): Page 5 of the Petition

Provide support for the statement: "in 2022, supply chain issues related to obtaining parts from our current vendor continued to be a challenge, resulting in a significant decrease in automated read performance and driving our inability to receive and exchange meters/modules that were not transmitting.

Response:
The global supply chain issues led to our vendor's inability to secure meters and modules to replace those that were no longer communicating or required replacement for other reasons. For example, in 2022, we had on order and expected to receive 50,210 meters/modules, but only received 18,360. This consisted of multiple shipments throughout the year. Further, shipments were often times delayed, which added to the increased number of manual read requests as equipment in need of replacement could not be automatically read until replacement parts were received.

Preparer:	Dawn Pittman
Title:	Manager, Revenue Cycle Field Ops
Department:	Collections North
Telephone:	715-737-7662
Date:	May 25, 2023

Attachment F – Xcel Service Quality Summary for 2022

Category/Topic	Metric	Result	Notes
Meter reading	Annual Number and percentage of Company read meters	Percentage of read meters was well below 10-year average = decline in service quality	Retirement of existing/ replacement with new metering system. Supply chain issues
	Annual Number and percentage of Customer read meters	Percentage of customer read meters increased = decline in service quality	Same reasons as listed above.
	Meters not read for 6-12 months	342% above the 2018 to 2021 Average = decline in service quality	Same reasons as listed above.
	Meters not read for longer than 12 months	104% above the 2018 to 2021 Average = decline in service quality	Same reasons as listed above.
	Field Orders	Annual number increased; response time decreased = improved service quality	Some field orders related to new meter change-outs
Involuntary disconnections	Annual Number of residential customers receiving disconnection notice	82% above 2019 – 2021 three-year average – service quality not assessed	Percentage increase affected by COVID-19 policies that have been terminated.
	Annual Number of customers seeking Cold Weather Rule protection	74% above 2019-2021 three-year average – service quality not assessed	Percentage increase affected by COVID-19 policies that have been terminated.

Category/Topic	Metric	Result	Notes
	Percentage of customers disconnected involuntarily	1% below the 2019-2021 three-year average – service quality not assessed	Percentage change affected by COVID-19 policies that have been terminated
	Percentage of customers service restored within 24 hours	16% below 2019-2021 three-year average – service quality not assessed	Percentage change affected by COVID-19 policies that have been terminated
	Percentage of customers restored by entering a payment plan	82% above 2019-2021 three-year average – service quality not assessed	Percentage increase affected by COVID-19 policies that have been terminated
Service Extension Requests	Number of annual new installation/ average # of days to complete	Number of annual installations declined, average number of days to complete increased over 50% for both residential and commercial customers = decline in service quality	
	Number of annual existing customers/ average # of days to complete	Number of requests increased, response time remained = constant service quality	
Call center response times	80% of calls, business or outage answered within 20 seconds	82.8% of all calls and 84.6% of outage calls answered within 20 seconds = improvement in service quality	Company did not meet 80% thresholds in 2021
Emergency Medical Account Status	Number of requests, number granted and percentage granted	Number of requests 45% below 10-year average, # granted, 35% below 10-year average Percentage granted well above 10-year average =	Affects a small number of customers

		improved/constant service quality	
Category/Topic	**Metric**	**Result**	**Notes**
Customer Deposits	Number of customers required to make a deposit	2022 number of customers making a deposit is equal to 237, 55% below the 10 year average	
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	Residential customer satisfaction declined = perceived decline in service quality	
	J.D. Power Commercial Customer Satisfaction Metrics	Commercial customer satisfaction improved = perceived improvement in service quality	

Attachment G – Xcel Service Reliability Summary for 2022

Category/Topic	Metric	Result	Notes
Service Reliability	SAIFI	Waiting for additional information from IEEE	Company met benchmark in 2021 by work center and company
	SAIDI	Waiting for additional information from IEEE	Company met benchmark in 2021 by work center and company
	CAIDI	Waiting for additional information from IEEE	Company met benchmark in 2021 for 3 out of 4 work centers and company
Storm Normalization	Not applicable	Input to reliability metrics – no changes in 2022, 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 2021	Company met Order based requirement.
Grid Modernization	Analysis of impact of grid modernization on feeders	Company did not provide any analysis	Department requesting additional information in reply comments
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 = service reliability improvement	Company met Order based requirement.
Worst Performing Circuit	Summary information on 25 worst performing feeders by work center	SAIFI, SAIDI, and CAIDI by feeder along with additional information	Company fulfilled reporting requirement.
ANSI Voltage Standards	Number of investigations and results of those investigations	Company provided information - % of incidents cause by voltage problem declined from 2021	Company fulfilled reporting requirement.
Work Center Staffing	Number of staff at each work center responsible for trouble calls and the maintenance of distribution lines.	# Of work center staff increased from 2021 and its 4% above 10-year average.	Company fulfilled reporting requirement.

Category/Topic	Metric	Result	Notes
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-23-73

Dated this **16th** day of **June 2023**

/s/Sharon Ferguson

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Alison C	Archer	aarcher@misoenergy.org	MISO	2985 Ames Crossing Rd Eagan, MN 55121	Electronic Service	No	OFF_SL_23-73_M-23-73
James J.	Bertrand	james.bertrand@stinson.com	STINSON LLP	50 S 6th St Ste 2600 Minneapolis, MN 55402	Electronic Service	No	OFF_SL_23-73_M-23-73
John	Coffman	john@johncoffman.net	AARP	871 Tuxedo Blvd. St, Louis, MO 63119-2044	Electronic Service	No	OFF_SL_23-73_M-23-73
Generic Notice	Commerce Attorneys	commerce.attorneys@ag.state.mn.us	Office of the Attorney General-DOC	445 Minnesota Street Suite 1400 St. Paul, MN 55101	Electronic Service	Yes	OFF_SL_23-73_M-23-73
George	Crocker	gwillc@nawo.org	North American Water Office	5093 Keats Avenue Lake Elmo, MN 55042	Electronic Service	No	OFF_SL_23-73_M-23-73
Christopher	Droske	christopher.droske@minneapolismn.gov	City of Minneapolis	661 5th Ave N Minneapolis, MN 55405	Electronic Service	No	OFF_SL_23-73_M-23-73
John	Farrell	jfarrell@ilsr.org	Institute for Local Self-Reliance	2720 E. 22nd St Institute for Local Self-Reliance Minneapolis, MN 55406	Electronic Service	No	OFF_SL_23-73_M-23-73
Sharon	Ferguson	sharon.ferguson@state.mn.us	Department of Commerce	85 7th Place E Ste 280 Saint Paul, MN 551012198	Electronic Service	No	OFF_SL_23-73_M-23-73
Edward	Garvey	edward.garvey@AESLconsulting.com	AESL Consulting	32 Lawton St Saint Paul, MN 55102-2617	Electronic Service	No	OFF_SL_23-73_M-23-73
Shubha	Harris	Shubha.M.Harris@xcelenergy.com	Xcel Energy	414 Nicollet Mall, 401 - FL 8 Minneapolis, MN 55401	Electronic Service	Yes	OFF_SL_23-73_M-23-73

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Adam	Heinen	aheinen@dakotaelectric.com	Dakota Electric Association	4300 220th St W Farmington, MN 55024	Electronic Service	No	OFF_SL_23-73_M-23-73
Michael	Hoppe	lu23@ibew23.org	Local Union 23, I.B.E.W.	445 Etna Street Ste. 61 St. Paul, MN 55106	Electronic Service	No	OFF_SL_23-73_M-23-73
Alan	Jenkins	aj@jenkinsatlaw.com	Jenkins at Law	2950 Yellowtail Ave. Marathon, FL 33050	Electronic Service	No	OFF_SL_23-73_M-23-73
Richard	Johnson	Rick.Johnson@lawmoss.com	Moss & Barnett	150 S. 5th Street Suite 1200 Minneapolis, MN 55402	Electronic Service	No	OFF_SL_23-73_M-23-73
Sarah	Johnson Phillips	sarah.phillips@stoel.com	Stoel Rives LLP	33 South Sixth Street Suite 4200 Minneapolis, MN 55402	Electronic Service	No	OFF_SL_23-73_M-23-73
Peder	Larson	plarson@larkinhoffman.com	Larkin Hoffman Daly & Lindgren, Ltd.	8300 Norman Center Drive Suite 1000 Bloomington, MN 55437	Electronic Service	No	OFF_SL_23-73_M-23-73
Kavita	Maini	kmaini@wi.rr.com	KM Energy Consulting, LLC	961 N Lost Woods Rd Oconomowoc, WI 53066	Electronic Service	No	OFF_SL_23-73_M-23-73
Pam	Marshall	pam@energycents.org	Energy CENTS Coalition	823 E 7th St St Paul, MN 55106	Electronic Service	No	OFF_SL_23-73_M-23-73
Stacy	Miller	stacy.miller@minneapolismn.gov	City of Minneapolis	350 S. 5th Street Room M 301 Minneapolis, MN 55415	Electronic Service	No	OFF_SL_23-73_M-23-73
David	Moeller	dmoeller@allete.com	Minnesota Power	30 W Superior St Duluth, MN 558022093	Electronic Service	No	OFF_SL_23-73_M-23-73

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Andrew	Moratzka	andrew.moratzka@stoel.com	Stoel Rives LLP	33 South Sixth St Ste 4200 Minneapolis, MN 55402	Electronic Service	No	OFF_SL_23-73_M-23-73
David	Niles	david.niles@avantenergy.com	Minnesota Municipal Power Agency	220 South Sixth Street Suite 1300 Minneapolis, Minnesota 55402	Electronic Service	No	OFF_SL_23-73_M-23-73
Carol A.	Overland	overland@legalectric.org	Legalectric - Overland Law Office	1110 West Avenue Red Wing, MN 55066	Electronic Service	No	OFF_SL_23-73_M-23-73
Generic Notice	Residential Utilities Division	residential.utilities@ag.state.mn.us	Office of the Attorney General-RUD	1400 BRM Tower 445 Minnesota St St. Paul, MN 551012131	Electronic Service	Yes	OFF_SL_23-73_M-23-73
Kevin	Reuther	kreuther@mncenter.org	MN Center for Environmental Advocacy	26 E Exchange St, Ste 206 St. Paul, MN 551011667	Electronic Service	No	OFF_SL_23-73_M-23-73
Christine	Schwartz	Regulatory.records@xcelenergy.com	Xcel Energy	414 Nicollet Mall FL 7 Minneapolis, MN 554011993	Electronic Service	Yes	OFF_SL_23-73_M-23-73
Will	Seuffert	Will.Seuffert@state.mn.us	Public Utilities Commission	121 7th Pl E Ste 350 Saint Paul, MN 55101	Electronic Service	Yes	OFF_SL_23-73_M-23-73
Ken	Smith	ken.smith@districtenergy.com	District Energy St. Paul Inc.	76 W Kellogg Blvd St. Paul, MN 55102	Electronic Service	No	OFF_SL_23-73_M-23-73
Byron E.	Starns	byron.starns@stinson.com	STINSON LLP	50 S 6th St Ste 2600 Minneapolis, MN 55402	Electronic Service	No	OFF_SL_23-73_M-23-73
James M	Strommen	jstrommen@kennedy-graven.com	Kennedy & Graven, Chartered	150 S 5th St Ste 700 Minneapolis, MN 55402	Electronic Service	No	OFF_SL_23-73_M-23-73

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Eric	Swanson	eswanson@winthrop.com	Winthrop & Weinstine	225 S 6th St Ste 3500 Capella Tower Minneapolis, MN 554024629	Electronic Service	No	OFF_SL_23-73_M-23-73
Carla	Vita	carla.vita@state.mn.us	MN DEED	Great Northern Building 12th Floor 180 East Fifth Street St. Paul, MN 55101	Electronic Service	No	OFF_SL_23-73_M-23-73
Joseph	Windler	jwindler@winthrop.com	Winthrop & Weinstine	225 South Sixth Street, Suite 3500 Minneapolis, MN 55402	Electronic Service	No	OFF_SL_23-73_M-23-73
Kurt	Zimmerman	kwz@ibew160.org	Local Union #160, IBEW	2909 Anthony Ln St Anthony Village, MN 55418-3238	Electronic Service	No	OFF_SL_23-73_M-23-73
Patrick	Zomer	Pat.Zomer@lawmoss.com	Moss & Barnett PA	150 S 5th St #1200 Minneapolis, MN 55402	Electronic Service	No	OFF_SL_23-73_M-23-73