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STATE OF MINNESOTA
BEFORE THE
MINNESOTA PUBLIC UTILITIES COMMISSION

Katie J. Sieben	Chair
Hwikwon Ham	Commissioner
Audrey C. Partridge	Commissioner
Joseph K. Sullivan	Commissioner
John A. Tuma	Commissioner

IN THE MATTER OF NORTHERN STATES POWER COMPANY'S ANNUAL REPORT ON SAFETY, RELIABILITY, AND SERVICE QUALITY FOR 2024; AND PETITION FOR APPROVAL OF ELECTRIC RELIABILITY STANDARDS FOR 2025	DOCKET NO. E002/M-25-27 **ANNUAL REPORT AND PETITION**

INTRODUCTION

Northern States Power Company, doing business as Xcel Energy, submits to the Minnesota Public Utilities Commission the attached Annual Report on our safety, reliability, and service quality performance for 2024. We make this filing pursuant to Minn. R. 7826.0400, 7826.0500, and 7826.1300. This filing also includes our Petition for approval of the Company's proposed reliability standards for the year 2025, as required under Minn. R. 7826.0600. In addition, the Annual Report contains several compliance items from various dockets.

We respectfully request that the Commission accept our annual report for 2024, approve our proposed reliability standards for 2025, and approve our request for a variance to Minn. Rule 7820.2500.

I. DESCRIPTION AND PURPOSE OF FILING

A. Background

Legislation passed in 2001 required that the Commission establish safety, reliability, and service quality standards for electric distribution utilities. After a rulemaking process, the Commission adopted rules that became effective on January 28, 2003. These rules contain both performance standards and reporting requirements. Additionally, the rules require individual utilities to propose electric reliability

standards each year for approval by the Commission. Over time, the Commission added additional compliance obligations through various Order Points.

We have separated the Annual Report, as laid out in Minnesota Rules, Chapter 7826, Electric Utility Standards, into three parts: Part I contains Safety and Service Quality standards; Part II contains the Reliability metrics and proposed standards; Part III separately addresses, for ease of review by parties and the Commission, Order Points in the Commission's January 13, 2025 Order in Docket No. E002/M-24-27 that represent new requirements not part of prior annual reports.

In this Petition, we request the Commission take three actions:

- Accept the Company's Annual Report for 2024,
- Approve our proposed reliability standards for 2025, and
- Approve our request for a variance to Minn. Rule 7820.2500.

Each of these are discussed in more detail below.

A. Accept the Company's Annual Report for 2024

Attached to this Petition is the Company's Annual Report, detailing the Company's safety, reliability and service quality performance for 2024. The Company's Annual Report, and its attachments, are consistent with the Minnesota service quality reporting rules found in Minn. R. Ch. 7826, as well as the various Commission Order Points adopted over the years. In addition to responding to the new compliance obligations ordered from the 2017 through 2024 Annual Reports, the Company has included a compliance matrix to assist our stakeholders to find the information they are looking for within the Annual Report. We respectfully request the Commission accept the Company's Annual Report for 2024.

B. Approve Proposed Reliability Standards for 2025

Minn. R. 7826.0600, subp. 1, requires the Company to propose 2025 standards for System Average Interruption Frequency Index (SAIFI), System Average Interruption Duration Index (SAIDI), and Customer Average Interruption Duration Index (CAIDI). The Company proposes setting the 2025 standards based on the 2025 Institute of Electrical and Electronics Engineers (IEEE) benchmarking results as follows:

- Statewide reliability: IEEE second quartile for large utilities;

- Metro East and Metro West work centers: IEEE second quartile for large utilities; and
- Southeast and Northwest work centers: IEEE second quartile for medium utilities.

Our proposal is consistent with the 2025 standards established in the Commission's November 9, 2022 Order in Docket No. E002/M-22-162, Order Point 4. Because the IEEE benchmarking data for the previous year is not available until third quarter of the following year, the 2024 benchmarking data will not be available until the summer of 2025. After this data is received, the Company intends to file a supplement to its 2024 Annual Report providing the 2024 benchmarking information compared to our 2024 results, along with an explanation and action plan for any standards not met for 2024.

C. Approve our request for a variance to Minn. Rule 7820.2500.

Minn. Rule 7820.2500 states that "Service may be disconnected only in conjunction with a personal visit by a representative of the utility to the address where the service is rendered and an attempt to make personal contact with the customer at the address. If the address is a building containing two or more dwelling units, the representative shall make a personal visit to the door of the customer's dwelling unit within the building. If security provisions in the building preclude free access on the part of the representative, the representative shall attempt to gain access to the building from the caretaker, for the purpose of attempting to make personal contact with the customer. The representative of the utility shall at all times be capable of receiving payment, if nonpayment is the cause of the disconnection of service, or the representative shall be able to certify that the cause of disconnection has been remedied by the customer."

The deployment of AMI provides the Company with the ability to remotely manage customer disconnections and reconnections. We believe this technology, together with the use of calls, voicemails, and one additional method of electronic communication where the customer has provided consent to do so,[1] represents the most effective means of communication with customers prior to service disconnection. The Company expects to continue indefinitely requesting a variance to Minn. Rule 7820.2500.

[1] Per the Commission's January 13, 2025 Order in Docket No. E-002/M-24-27, Order Point 19. See Part III of our annual report.

V. EFFECT OF CHANGE UPON XCEL ENERGY REVENUE

Approval of our Annual Report and the reliability performance standards proposed in this Petition will not result in any changes to Xcel Energy's revenue.

CONCLUSION

Xcel Energy is committed to providing our customers with safe, reliable and high quality customer service. We appreciate this opportunity to report our performance to the Commission, and respectfully request that the Commission accept our Annual Report on safety, reliability, and service quality. We also request that the Commission approve our proposed reliability standards for 2025 as detailed in this Petition, and approve our request for a variance to Minn. Rule 7820.2500.

Dated: April 1, 2025

Northern States Power Company

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IN THE MATTER OF NORTHERN STATES POWER COMPANY'S ANNUAL REPORT ON SAFETY, RELIABILITY, AND SERVICE QUALITY FOR 2024; AND PETITION FOR APPROVAL OF ELECTRIC RELIABILITY STANDARDS FOR 2025	DOCKET NO. E002/M-25-27 **ANNUAL REPORT AND PETITION**

SUMMARY OF FILING

Please take notice that on April 1, 2025 Northern States Power Company, doing business as Xcel Energy, filed with the Minnesota Public Utilities Commission a Petition requesting approval of its 2024 Electric Annual Service Quality Performance Report, requesting the Commission approve our proposed reliability standards for 2025, and requesting a variance to Minn. Rule 7820.2500.

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Xcel Energy's Service Quality Annual Report Part II

Reliability Standards and
Request for Approval of Electric Reliability Standards for 2025

April 1, 2025
Docket No. E002/M-25-27

IV. RELIABILITY PERFORMANCE REPORT FOR 2024

Minn. R. 7826.0500 requires the Company to provide an Annual Reliability Performance Report on or before April 1 of each year reflective of our previous calendar year. The Annual Reliability Performance Report has eleven elements required by Minnesota Rules and, over time, the Commission has required the Company to report additional elements related to the Company's reliability performance. The Company's 2024 Reliability Performance Report is provided below, including the SAIDI, SAIFI and CAIDI reliability metrics as well as information about other reliability metrics the Commission has asked us to report on: MAIFI, CEMI, and CELI.

We here provide definitions of each reliability metric discussed in this Part.

System Average Interruption Duration Index (SAIDI) measures the average total number of minutes a customer was without power during a calendar year. This index is calculated as follows:

$$\textbf{SAIDI} = \frac{\textbf{Total Customer Minutes of Sustained Outages}}{\textbf{Number of Customers}}$$

System Average Interruption Frequency Index (SAIFI) measures the average frequency of sustained service interruptions per customer during a calendar year and is calculated as follows:

$$\textbf{SAIFI} = \frac{\textbf{Total Number of Sustained Customer Interruptions}}{\textbf{Number of Customers}}$$

Customer Average Interruption Duration Index (CAIDI) measures the average outage time a customer could expect to be without power if they experienced a sustained outage and is calculated as follows:

$$\textbf{CAIDI} = \frac{\textbf{Total Customer Minutes of Sustained Outages}}{\textbf{Total Number of Sustained Customer Interruptions}}$$

Momentary Average Interruption Frequency Index (MAIFI) indicates the average frequency of momentary interruptions with a duration under 5 minutes in length:

$$\textbf{MAIFI} = \frac{\textbf{Total Customer Momentary Interruptions}}{\textbf{Number of Customers}}$$

Customers Experiencing Lengthy Interruptions (CELI) is a metric representing the number or percentage of customers experiencing an outage equal to or longer than the specified length. For example, CELI-12 represents customers experiencing at least one outage 12 hours or longer in a given interval of time, e.g. in a year.

Customers Experiencing Multiple Interruptions (CEMI) is a metric representing the number or percentage of customers experiencing equal to or more than a specified number of outages in a given interval of time. For example, CEMI-6 represents customers experiencing six or more outages in a year.

A. 2024 RELIABILITY PERFORMANCE SUMMARY AND PLANS

The Commission's November 9, 2022 Order, Order Point 8 in Docket No. E002/M-22-162 requires the Company:

> *To display, either directly or via a link to a PDF file, the utility's public facing summary… on the utility's website placed such that the summary is available to a website user after a single click away from the home page.*

Consistent with Order Point 8, depicted in the Infographic provided as Attachment I and available on our website,[1] Xcel Energy served approximately 1.36 million electric customers in 2024, and our Minnesota customers had power 99.98 percent of time utilizing the Average Service Availability Index (ASAI). Excluding Major Event Days (MEDs), our Minnesota customers were without power for an average of 110 minutes in 2024 and experienced one outage. Including MEDs, less than three percent of our Minnesota customers experienced six or more power outages, with less than ten percent experiencing an outage lasting twelve hours or more in 2024.

In addition, 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,*

[1] Infographic can be found on Xcel Energy's website in the bottom banner under Outage & Safety by clicking on "MN Service Quality (PDF)."

> *including information on how it is demonstrating proactive management of the system as a whole, increased reliability, and active contingency planning.*

Each year, Xcel Energy develops and manages programs to maintain and improve the performance of its transmission and distribution assets. We identify and implement these programs based on the leading causes of outages, to assure reliability, to enable proactive management of the system as a whole, and to effectively respond when outages occur. In Attachment J, the Company describes its reliability management program development consistent with Order Point 3 above.

Finally, in the Commission's July 17, 2023 Order in Docket No E002/GR-21-630 (our 2022 Electric Rate Case), Order point 27(a) further required:

> *Prior to seeking future cost recovery for any incremental FLISR investments, Xcel must propose a mechanism by which to base cost recovery for FLISR investments on reliability improvements:*
>
> > *a. Xcel must track and report, beginning in its next Service Quality, Safety, and Reliability report due April 2024, on reliability performance for circuits equipped with FLISR investments approved in the present rate case as recommended by the Department, indicating in the Company's safety, reliability, and service quality filings which circuits have been equipped with FLISR. Allow Xcel to modify the requirements on circuit level performance reporting in its annual Service Quality, Safety, and Reliability reports to align with the Department's recommendation.*

Fault Location, Isolation, and Service Restoration (FLISR) is a form of distribution automation that involves deployment of automated switching devices that work to detect feeder mainline faults, isolate them, and restore power to un-faulted sections. Specifically, if there is a fault on a feeder that is automated with FLISR, we will be able reduce the number of customers who experience a sustained outage by approximately two-thirds, and will shorten the duration of certain sustained outages that affect a substantial portion of our customers. The Company provides tracking and reporting information related to its reliability performance for circuits equipped with FLISR investments in Attachment J.

B. RELIABILITY METRICS CONTEMPLATED BY THE COMMISSION'S RULES

1. SAIDI, SAIFI and CAIDI Metrics

a. Overview of Company's SAIDI, SAIFI and CAIDI Performance

A number of state rules and Commission Orders govern our reporting on these metrics. Pursuant to Minn. R 7826.0500, Subpart 1. A-D, each utility's reliability report should include:

A. The utility's SAIDI for the calendar year, by work center and for its assigned service area as a whole.
B. The utility's SAIFI for the calendar year, by work center and for its assigned service area as a whole.
C. The utility's CAIDI for the calendar year, by work center and for its assigned service area as a whole.
D. An explanation of how the utility normalizes its reliability data to account for major storms.

In addition, as required by Minn. R. 7826.0600, on April 1, 2024, we proposed reliability standards for 2024 for each of our four Minnesota work centers based on the Institute of Electrical and Electronics Engineers (IEEE) benchmarking data.[2]

As a result, Order Points 6 and 7 in the Commission's January 13, 2025 Order in Docket No. E002/M-24-27 concluded:

> *6. Xcel's 2024 statewide Reliability Standard is set at the IEEE benchmarking second Quartile for large utilities. Xcel's Southeast and Northwest work center reliability standards are set at the IEEE benchmarking second quartile for medium utilities. Xcel's Metro East and Metro West work center reliability center standards are set at the IEEE benchmarking second quartile for large utilities.*
>
> *7. Xcel must file a supplement to its 2024 safety, reliability, and service quality report 30 days after IEEE publishes the 2024 benchmarking results, with an explanation for any standards the utility did not meet.*

Table 13 below presents our 2024 reliability performance as required by Minn. R

[2] The four Minnesota work centers include Metro East, Metro West, Northwest, and Southeast.

7826.0500. Moreover, as required in Order Point 7 above, the Company will submit a supplemental filing after IEEE publishes its 2024 benchmarking results later this year, likely in late August or early September, along with an explanation for any statewide standards we did not meet. The remaining "Standards" column in Table 13 will be completed at that time.

Table 13
2024 IEEE Normalized Reliability Performance Results

		Performance Results	Standards
Minnesota	SAIDI	110.04	--
	SAIFI	1.08	--
	CAIDI	101.95	--
Metro East	SAIDI	115.50	TBD
	SAIFI	1.08	TBD
	CAIDI	107.15	TBD
Metro West	SAIDI	101.37	TBD
	SAIFI	1.14	TBD
	CAIDI	88.58	TBD
Northwest	SAIDI	122.44	TBD
	SAIFI	0.92	TBD
	CAIDI	132.86	TBD
Southeast	SAIDI	121.49	TBD
	SAIFI	0.92	TBD
	CAIDI	131.52	TBD

The reliability statistics reported in Table 13 are calculated using the normalization method of IEEE 1366 Regional MED and include:

- Outages occurring at all levels (distribution, substation, and transmission).
- All outage cause codes.
- Where applicable, credit for partial restoration.
- Base calculations on the number of customers' billing accounts and meters.
- Base calculations on normalized data.

We determine regional MED thresholds using the IEEE 1366 method. Any day that meets or exceeds the daily SAIDI MED threshold is considered a MED for the qualifying region. This means that all outages that start on a MED (which lasts from midnight to midnight) for a particular work center are excluded from the calculation

of the various reliability indices for that work center.

Order Point 2 in the Commission's October 20, 2023 Order in Docket No. E002/M-22-162 also requires the Company to

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

Order Point 2 is addressed in the Non-Public Document, Attachment L as a live .xlsx file.

Additional reliability information was ordered in Order Point 4 in the Commission's December 12, 2014 Order in Docket No. E-002/M-14-131, which requires the Company to

> *incorporate into its next filing a summary table that allows the reader to more easily assess the overall reliability of the system and identify the main factors that affect reliability.*

In addition, Order Point 4(b) of the Commission's October 20, 2023 Order requires the Company to report *"Normalized SAIDI, CAIDI, CEMI, and CELI calculated using the IEEE 2.5 base method."*

Table 14A below provides a historical view of the requirements and also designates the years the Company was on (green) and off (red) target for those years/indices based on the annual rules or tariff at that time. Again, because we do not yet have 2024 targets based on the IEEE benchmarking, the Annual Rules targets are not yet included.

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Table 14A

Historical Reliability Indices & Major Event Day Exclusions

All Days[1]		2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Minnesota	SAIDI	184.50	214.39	141.70	125.00	124.51	134.23	130.09	184.42	168.41	308.73
	SAIFI	0.96	1.05	0.90	0.95	0.86	1.07	1.04	1.08	1.06	1.47
	CAIDI	192.32	204.84	158.10	131.22	145.30	124.88	124.66	170.24	158.81	209.57
Metro East	SAIDI	177.19	223.67	136.51	112.11	104.58	124.02	145.68	142.85	250.29	291.55
	SAIFI	1.04	1.08	0.95	0.96	0.85	1.07	1.01	1.05	1.32	1.47
	CAIDI	169.86	206.85	144.37	116.71	122.51	115.72	144.42	136.23	189.48	198.84
Metro West	SAIDI	229.78	198.25	148.58	88.23	79.93	143.90	121.33	214.14	132.33	387.56
	SAIFI	1.00	1.00	0.86	0.92	0.74	1.13	1.14	1.11	0.96	1.65
	CAIDI	229.92	198.86	173.27	95.70	107.39	127.70	106.04	193.13	138.30	234.20
Northwest[4]	SAIDI	75.61	225.74	173.71	109.50	150.83	133.58	104.05	244.83	134.22	158.55
	SAIFI	0.66	1.07	0.98	0.87	0.94	0.98	0.79	1.19	0.97	1.10
	CAIDI	115.40	211.50	177.46	126.02	160.71	135.77	131.23	205.14	138.48	144.73
Southeast[5]	SAIDI	98.23	249.05	96.37	353.32	374.20	122.56	145.09	123.52	100.94	132.82
	SAIFI	0.79	1.15	0.84	1.15	1.32	0.93	0.92	0.97	0.78	0.99
	CAIDI	125.07	217.15	114.75	307.95	283.42	132.39	157.71	126.95	130.04	134.37

MN Tariff[2]		2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	'24 Target
Minnesota	SAIDI	86.83	89.49	73.80	93.26	76.67	95.56	88.13	87.92	82.47	108.23	133.23
	SAIFI	0.79	0.81	0.72	0.85	0.70	0.96	0.90	0.84	0.81	1.06	1.21
	CAIDI	109.90	110.54	102.10	109.90	109.74	99.72	97.67	104.63	101.27	102.10	NA
Metro East	SAIDI	93.71	95.49	75.70	103.28	79.27	104.56	82.14	96.62	103.97	114.86	
	SAIFI	0.90	0.87	0.75	0.92	0.72	0.99	0.83	0.89	0.98	1.07	
	CAIDI	104.58	110.07	100.79	112.40	110.30	105.19	98.23	108.37	106.55	107.53	
	MED's	2 7/12, 7/18	3 7/5, 7/6, 7/21	3 6/11, 6/14, 7/12	1 5/24	2 7/15, 9/2	1 8/14	2 8/24, 9/17	4 5/11, 8/3, 8/27, 12/15	4 4/1, 7/19, 7/24, 7/26	5 5/21, 7/14, 8/26, 8/27, 8/29	
Metro West	SAIDI	88.98	82.90	69.28	81.25	68.25	87.51	94.64	81.22	69.76	100.97	
	SAIFI	0.82	0.82	0.70	0.84	0.69	1.02	1.05	0.86	0.75	1.14	
	CAIDI	108.90	101.51	98.40	96.63	99.17	86.17	89.82	94.52	92.80	88.66	
	MED's	1 7/18	3 7/5, 7/6, 7/21	2 6/11, 6/14	1 7/1	2 7/14, 7/15	4 5/29, 7/18, 8/10, 8/14	2 8/26, 9/17	4 5/11, 5/12, 8/3, 8/27	4 3/31, 4/1, 6/24, 6/25	6 7/14, 8/5, 8/26, 8/27, 8/29, 10/31	
Northwest[4]	SAIDI	69.39	80.19	69.41	99.87	61.17	100.34	89.94	79.19	80.18	113.57	
	SAIFI	0.57	0.56	0.64	0.73	0.53	0.75	0.63	0.63	0.77	0.83	
	CAIDI	121.05	143.58	107.70	137.06	115.94	133.14	141.67	125.90	103.91	137.08	
	MED's	0 None	4 5/19, 6/19, 7/5, 11/18	1 6/11	0 None	5 4/7, 4/11, 9/2, 9/17, 12/7	3 3/22, 7/18, 8/23	0 None	5 1/16,5/12,5/30, 6/20, 6/24	2 4/1, 7/25	3 6/12, 6/18, 7/14	
Southeast[5]	SAIDI	70.78	109.59	92.84	110.67	122.22	99.65	75.28	99.26	73.60	115.93	
	SAIFI	0.52	0.82	0.79	0.77	0.84	0.76	0.66	0.78	0.62	0.88	
	CAIDI	135.23	133.06	117.19	144.04	145.19	130.48	114.54	126.96	119.40	132.08	
	MED's	1 7/18	3 6/10, 7/5, 7/6	0 None	2 4/14, 9/20	4 4/10, 4/11, 7/20, 9/24	1 8/8	3 7/29, 12/15, 12/16	1 5/11	2 4/1, 7/28	1 5/21	

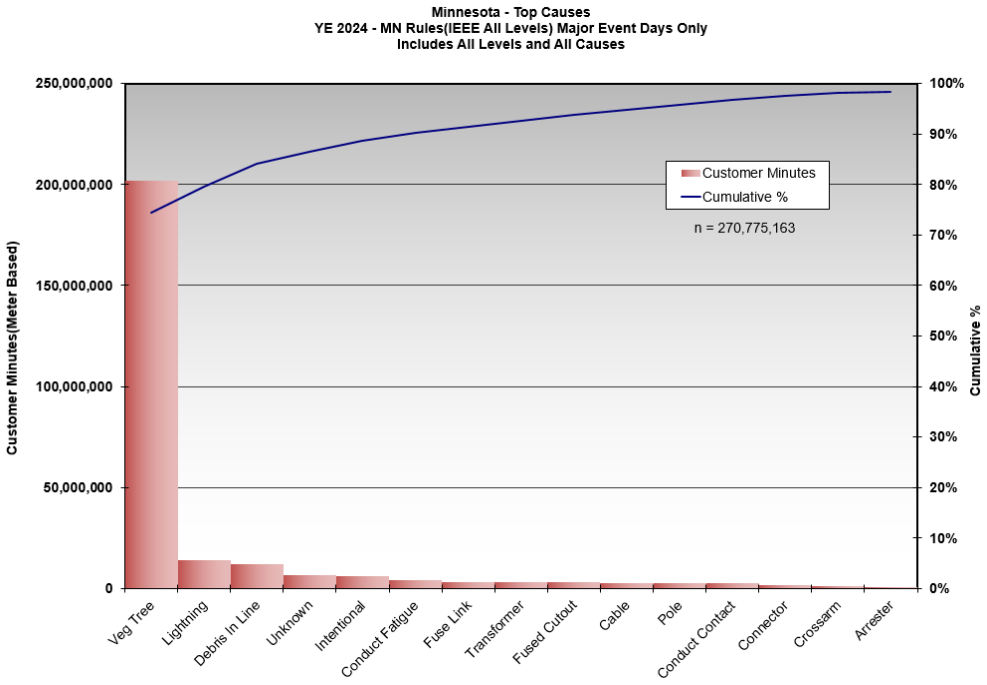
Annual Rules[3]		2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	'24 Target[6]
Minnesota	SAIDI	89.95	90.45	75.04	96.07	81.02	98.95	88.99	90.00	86.40	110.04	NA
	SAIFI	0.83	0.83	0.74	0.89	0.75	0.99	0.92	0.86	0.85	1.08	NA
	CAIDI	108.09	108.93	100.90	107.39	108.29	100.27	96.29	104.05	101.56	101.95	NA
Metro East	SAIDI	93.73	95.52	76.22	103.69	80.57	104.98	82.19	96.79	105.04	115.50	TBD
	SAIFI	0.90	0.87	0.76	0.93	0.75	1.01	0.83	0.90	0.99	1.08	Late
	CAIDI	104.25	109.70	100.48	111.74	107.35	103.69	98.27	107.99	105.66	107.15	Summer
	MED's	2 7/12, 7/18	3 7/5, 7/6, 7/21	3 6/11, 6/14, 7/12	1 5/24	2 7/15, 9/2	1 8/14	2 8/24, 9/17	4 5/11, 8/3, 8/27, 12/15	4 4/1, 7/19, 7/24, 7/26	5 5/21, 7/14, 8/26, 8/27, 8/29	
Metro West	SAIDI	90.95	83.64	69.51	83.26	69.50	88.86	94.73	81.85	71.41	101.37	TBD
	SAIFI	0.84	0.82	0.71	0.87	0.70	1.00	1.06	0.87	0.77	1.14	Late
	CAIDI	108.44	101.43	97.84	95.47	99.16	88.51	89.67	94.19	92.79	88.58	Summer
	MED's	1 7/18	3 7/5, 7/6, 7/21	2 6/11, 6/14	1 7/1	2 7/14, 7/15	4 7/18, 8/10, 8/14, 10/20	2 8/26, 9/17	4 5/11, 5/12, 8/3, 8/27	4 3/31, 4/1, 6/24, 6/25	6 7/14, 8/5, 8/26, 8/27, 8/29, 10/31	
Northwest[4]	SAIDI	75.58	85.81	75.77	109.34	89.07	121.97	93.46	84.06	95.39	122.44	TBD
	SAIFI	0.66	0.70	0.76	0.87	0.78	0.93	0.74	0.69	0.90	0.92	Late
	CAIDI	115.39	122.38	100.28	126.05	113.48	130.98	126.13	122.38	105.85	132.86	Summer
	MED's	0 None	5 5/19,6/19,7/5,7/16, 11/18	1 6/11	0 None	3 1/26, 4/11, 9/2	1 7/18	1 8/29	5 1/16,5/12,5/30, 6/20, 6/24	1 7/25	3 6/12, 6/18, 7/14	
Southeast[5]	SAIDI	86.51	110.23	96.33	118.80	129.11	105.19	79.94	111.84	87.28	121.49	TBD
	SAIFI	0.75	0.85	0.84	0.92	0.93	0.87	0.76	0.91	0.71	0.92	Late
	CAIDI	115.16	130.02	114.73	129.64	139.00	120.29	105.09	122.69	122.43	131.52	Summer
	MED's	1 7/18	3 6/10, 7/5, 7/6	0 None	2 4/14, 9/20	4 4/10, 4/11, 7/20, 9/24	1 8/8	3 7/29, 12/15, 12/16	1 5/11	1 7/28	1 5/21	

1) All Days - Includes All Days, Levels and Causes, Meter-based customer counts
2) MN Tariff - Normalized using IEEE 1366 at the regional level after removing Transmission Line level. All Causes, Meter-based customer counts
3) Annual Rules - Normalized using IEEE 1366 at the regional level, All Levels, All Causes, Meter-based customer counts

4) Northwest - Includes customers counts and interruptions in the North Dakota work region that impact Minnesota customers
5) Southeast - Includes customers counts and interruptions in the South Dakota work region that impact Minnesota customers
6) 2012-2020 Annual Rules Targets were based on 5 year rolling actual averages or locked targets.
2021-Presnet Annual Rules Targets are based on IEEE Working Group Benchmarking Study Large Utility Group 2nd Quartile for Metro East & West
Medium Utility Group 2nd Quartile for Northwest & Southeast, Current year targets will become available late summer when study results are released

Given the difficulty of conveying both reliability and factors that affect reliability in a single table, we have separated these out. Graph 1 below illustrates the major causes of outages for storm days that affect reliability. These types of outages are the main factors that affect reliability. Graphs 1A-1D provide the percentage of customer interruptions by various outage categories for each work center. Results in all graphs are presented using Annual Rules storm normalization and all-days (no normalization). Please see Attachment K for the underlying data for Graphs 1A – 1D.

Graph 1
Major Cause of Outages



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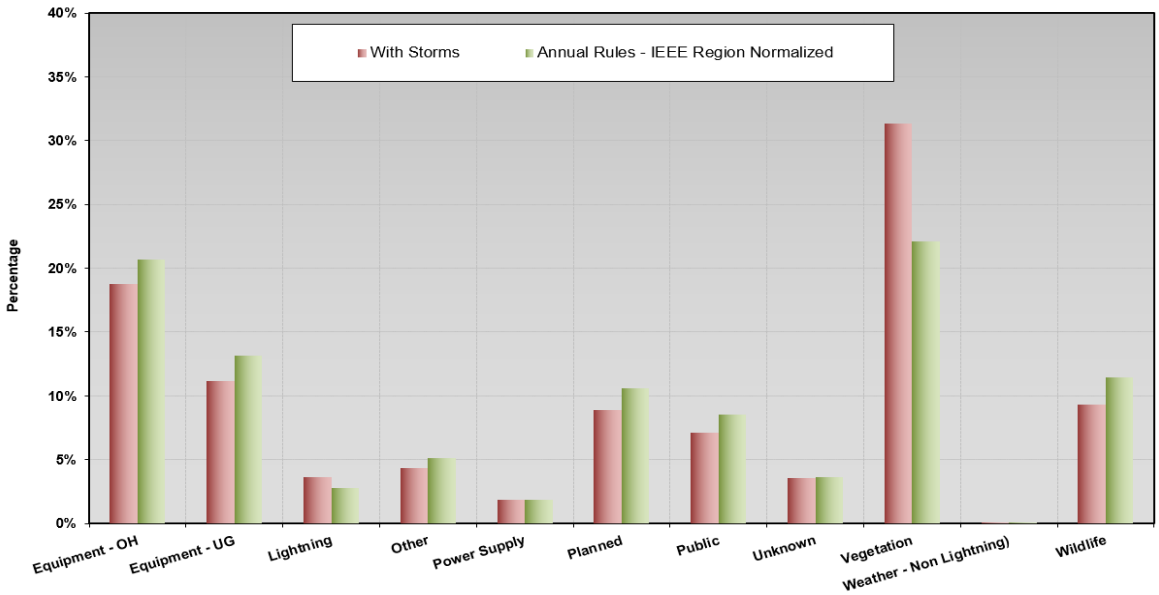
Graph 1A

Metro East Work Region Outage Causes

2019-2024 Average Annual Customer Interruption Percentages - All Levels

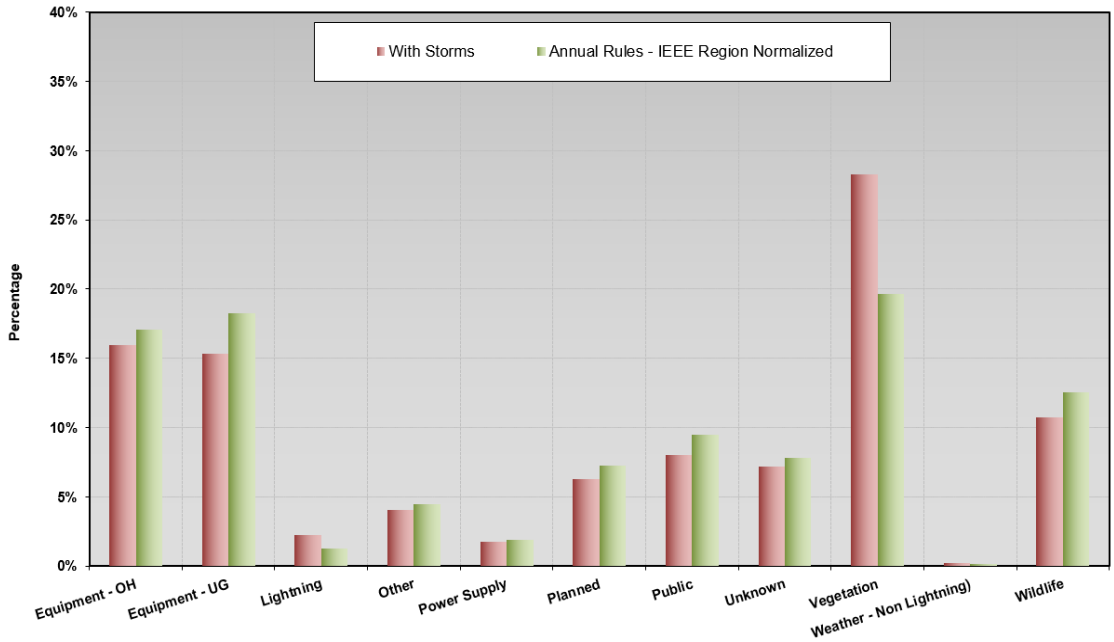


Annual Rules based on sustained outages (>5 minutes), including All Levels and All Cause codes, IEEE 1366 Region normalized using 5 year rolling data including outliers

Graph 1B

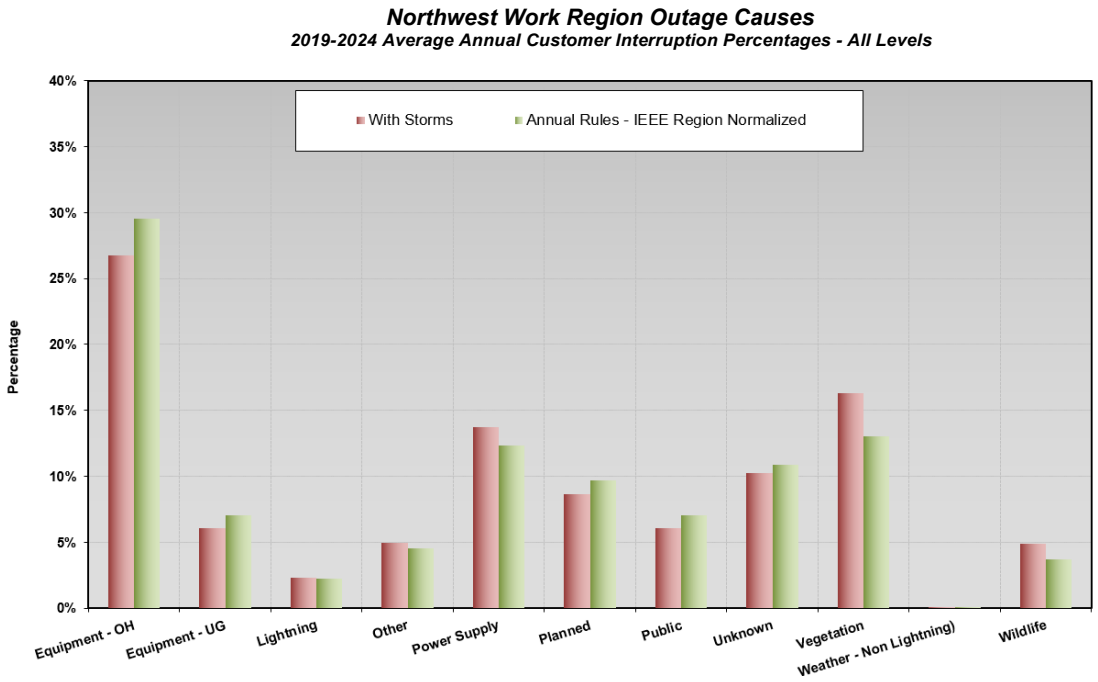
Metro West Work Region Outage Causes

2019-2024 Average Annual Customer Interruption Percentages - All Levels



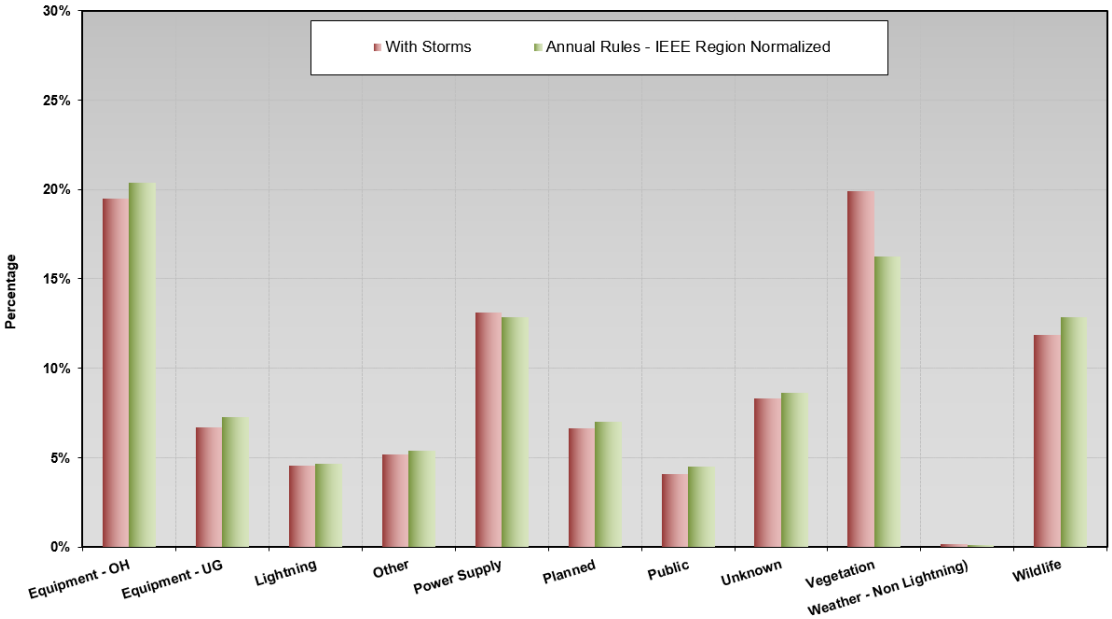
Annual Rules based on sustained outages (>5 minutes), including All Levels and All Cause codes, IEEE 1366 Region normalized using 5 year rolling data including outliers

Graph 1C



Annual Rules based on sustained outages (>5 minutes), including All Levels and All Cause codes, IEEE 1366 Region normalized using 5 year rolling data including outliers. Northwest Region includes customers/outages in the North Dakota work region that are in the state of Minnesota.

Graph 1D



Annual Rules based on sustained outages (>5 minutes), including All Levels and All Cause codes, IEEE 1366 Region normalized using 5 year rolling data including outliers. Southeast Region includes customers/outages in the South Dakota work region that are in the state o MN.

Reliability Management Programs are developed to address major causes of outages that are discussed in Attachment J. In 2024, as seen in Graph 1 above, vegetation related causes accounted for the most customer outage minutes. Our Vegetation Management Program remains a highly valued program because it can impact outages during storms, in particular. It addresses service line debris clearance, an inspection program, and landscape maintenance around overhead lines. Tree pruning, part of landscape maintenance, is the selective removal of branches that pose an unacceptable safety or reliability risk to the conductors or equipment currently based on prior tree contact or inspection. The overall goal of our Vegetation Management Program is to maintain an approximate five-year cycle of continual vegetation maintenance. Additional Reliability Management Program summaries can be found in Attachment J.

The Commission's December 5, 2023 Order, Order Point 4(i), in Docket No. E002/M-22-162 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.*

Table 14B provides the information requested in Order Point 4 of the December 5 Order referenced above.

Table 14B

2024 Reliability Indices By Customer Class					
Annual Rules		Residential	Commercial	Industrial	All
Minnesota	SAIDI	110.8	95.4	93.4	110.0
	SAIFI	1.09	0.92	0.89	1.08
	CAIDI	101	103	105	102

Table 14B provides the SAIDI, SAIFI, and CAIDI metrics for residential, commercial, and industrial customers. The Company continues to work to fully understand the causes and differences between customer class and reliability results. Although not formally studied, the difference between feeders primarily serving commercial versus residential customers is likely due to less vegetation in industrial and commercial areas, shorter feeders due to higher load density resulting in less exposure to the environment, and a higher percentage of customers with underground service. We note that Attachment L provides customer class information along with the reliability data by feeder. The Company will continue to research and determine differences in reliability results between customer classes and report on any insights gained in future service quality reports.

Much of the data in Attachment L has been marked as protected data. This information is "security information" as defined by Minn. Stat. § 13.37, subd. 1(a). As we have explained in past filings related to our treatment of customer data, we take our responsibility for all the data we maintain in order to provide our customers with reliable and safe service very seriously. We hear about data breaches impacting individuals and organizations almost daily. Responsible access to sensitive data must be balanced with accountability for third parties to demonstrate their actions with the data will be in the public interest before gaining access. Additionally, as we have pointed out in the past with respect to utility release of customer data, once released by the utility, the Commission will have no jurisdiction over third parties, and the utilities lose any ability to control its use, sale, or other dissemination.

Our Company principles with respect to privacy and security are:

- Maintain customer privacy, confidentiality, and security in terms of their usage and how they are connected to the grid, and
- Avoid revealing details that would give a bad actor information to target an attack for maximum impact (e.g. peak load, equipment capacities, number of customers, how critical infrastructure is connected to the grid, etc.).

Attachment L to this filing contains information that the Company believes could be manipulated to reveal the location and size of facilities serving our customers. The public disclosure or use of this information creates a risk because those who want to disrupt the electrical grid for political or other reasons may learn which facilities to target to create the greatest disruption. For this reason, pursuant to Minn. Stat. § 13.37, subd. 2, we have excised this data from the public version of our filing.

b. Additional contemplated SAIDI, SAIFI, and CAIDI metrics based on grid modernization investments

Order Point 5 of the Commission's December 18, 2020 Order in Docket No. E002/M-20-406 requires the Company to:

> *file the reliability (SAIDI, SAIFI, CAIDI, MAIFI, normalized/nonnormalized) 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.*

Like the Commission, the Company is interested in realizing the reliability

improvements gained through grid modernization efforts. As part of the deployment of Advanced Distribution Management System (ADMS) to the Minnesota Distribution Control Centers, the Company installed automated field devices on three feeders that were used to test the functionality of FLISR. These automated field devices are integrated with ADMS and are currently running what is referred to as Open Loop FLISR, or a mode that is supervised and controlled by control center operators. The Company will be expanding the initial test area and feeders with enabled fault location prediction. Included in this expansion, the Company has developed a 2021-2027 deployment plan and proceeded to implement expansion of the FLISR footprint. It is expected to result in reliability improvements in the future with footprint expansion and utilizing fault location functionality within ADMS. Included in Attachment J we summarize FLISR reliability results.

Advanced Metering Infrastructure (AMI) is expected to provide improvements that will give the Company insight into customers' outages sooner. In 2022, the Company began integration between AMI and the outage management system. Integration efforts are continuing into 2025. This integration merges real-time AMI data and capabilities into the outage management system to enhance outage detection, accelerate outage response, and reduce truck rolls. AMI data such as last gasp, power restoration, and ping responses are power status communications transmitted in real-time that will be leveraged to enhance our response to outages and improve reliability performance. However, it should be noted that because AMI technology provides enhanced capabilities, creating more accurate outage start and completion times, this will likely manifest as a decline of our reported reliability metrics as compared to our historical reporting – reflecting better data, not a decline in actual performance. In addition, reliability performance for individual feeders and non-normalized reliability metrics can fluctuate greatly year-to-year based on a number of factors, including severity of weather and improving or declining reliability performance. In considering any metric that measures the impact of grid modernization investments, it is important to note that reliability improvements are expected to be gradual rather than a step change.

2. ACTION PLAN FOR FAILURES TO COMPLY BY WORK CENTER

a. Reliability Performance as Compared to Standards

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

In this report, as required by Minn. R. 7826.0600, we propose 2025 reliability standards for our MN service territory and each of our four Minnesota work centers. We note that these reliability statistics are calculated using the normalization method of IEEE 1366 (2.5 base method) Regional MED.

- Include outages occurring at all levels (distribution, substation, and transmission).
- Include all outage cause codes.
- Where applicable, include credit for partial restoration.
- Base calculations on the number of customers' billing accounts and meters.
- Base calculations on normalized data

Again, because this Order Point relies on the IEEE Benchmarking results, which we will not receive until later this year, we will fully respond as part of a supplemental filing in late August or early September, when the Company will provide any explanations and/or action plans for any failures to meet the IEEE Benchmarking results.

In addition, Order Point 4 of the Commission's October 20, 2023 Order requires the Company to:

> *provide in future annual SRSQ reports…until such time as the Commission modifies the reporting requirement:*
>
> *a. Non-normalized SAIDI, SAIFI and CAIDI values*
> *b. Normalized SAIDI, CAIDI, CEMI, and CELI calculated using the IEEE 2.5 base method;*
> *c. Non-normalized and normalized MAIFI information;*
> *d. ERT information within -90 minutes to 0 and within +1 to +30 minutes;*
> *e. Non-normalized and normalized CEMI at outage levels of 4, 5, and 6 interruptions;*
> *f. Highest number of interruptions experienced by one customer.*
> *g. Non-normalized and normalized CELI at outage duration of greater than 6, 12, and 24 hours;*
> *h. Longest interruption experienced by one customer;*
> *i. Performance and reliability factors by customer class;*
> *j. Field office personnel information which includes the number of contractors by work center, and*
> *k. Causes of sustained customer outages, by work center.*

Order Points 4(a) – 4(j) are documented and discussed throughout Part II. Regarding Order Point 4(k) of the October 2023 Order, subparts 1-4 below provide the requested information. As set forth in Section B above, we determine MED thresholds based on using the IEEE 1366 normalization method.

For 2024, we used the following IEEE MED threshold calculation procedures:

- Using the previous five years of outage history for each region, we:
  - Calculate the daily SAIDI;
  - Calculate the Natural Log of each daily SAIDI; and
  - Calculate the Average and Standard Deviation of the Natural Logs.
- Based on the above methodology, IEEE 1366 sets a unique MED threshold for each region. A MED is defined as any day meeting or exceeding the MED SAIDI threshold, which is set at the exponent of the average plus 2.5 standard deviations of the Natural Logs.

As part of the supplemental filing in late August or early September, the Company will provide any explanations and/or action plans for any failures to meet the IEEE Benchmarking results.

Order Point 3 of the Commission's December 12, 2014 Order in Docket No. E002/M-14-131 required the Company:

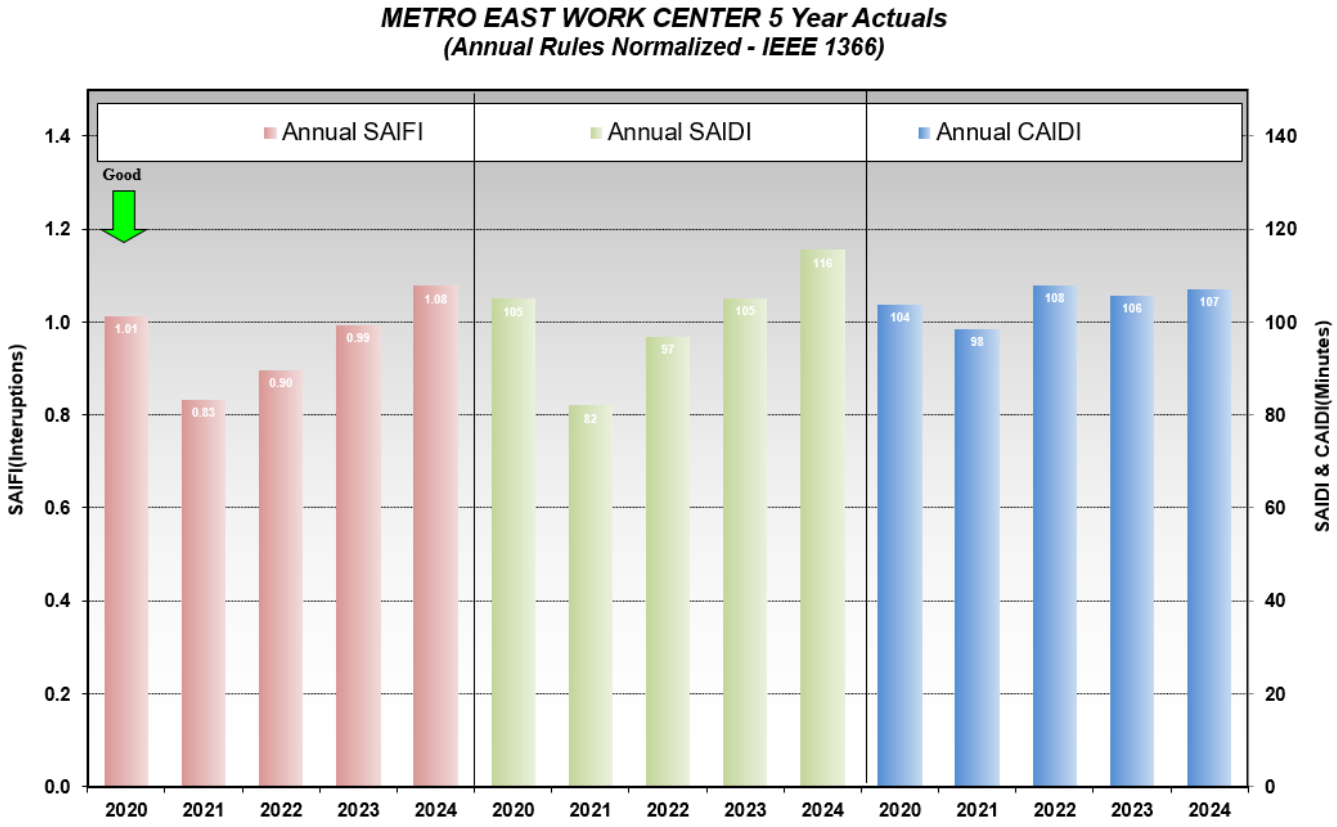
> *to augment its next filing to include a description of the policies, procedures and actions that it has implemented, and plans to implement, to assure reliability, including information on how it is demonstrating pro-active management of the system as a whole, increased reliability, and active contingency planning.*

In accordance with this Order Point, our Reliability Management Program, as summarized in Attachment J, focuses on reviewing outage data, including the items highlighted by work center below, and identifying improvement opportunities through several methods including our Feeder Performance Improvement Program, vegetation management, proactive cable replacements and substation and transformer breaker assessments. The Company will continue our ongoing assessments of reliability and asset health, seeking to implement additional programs that will allow for system improvements and maintenance to achieve the largest improvements in reliability measurements. We are committed to providing reliable service to our customers and discuss the reliability performance of the specific work centers below.

1. Metro East

In Graph 2 we show the five-year trend of all three indices. Graphs 3 and 4 show the top level and cause of outages from the current year that deviated higher and lower than the previous five-year average. Table 15 shows a summary of the MEDs and the top impact days or individual outages.

Graph 2



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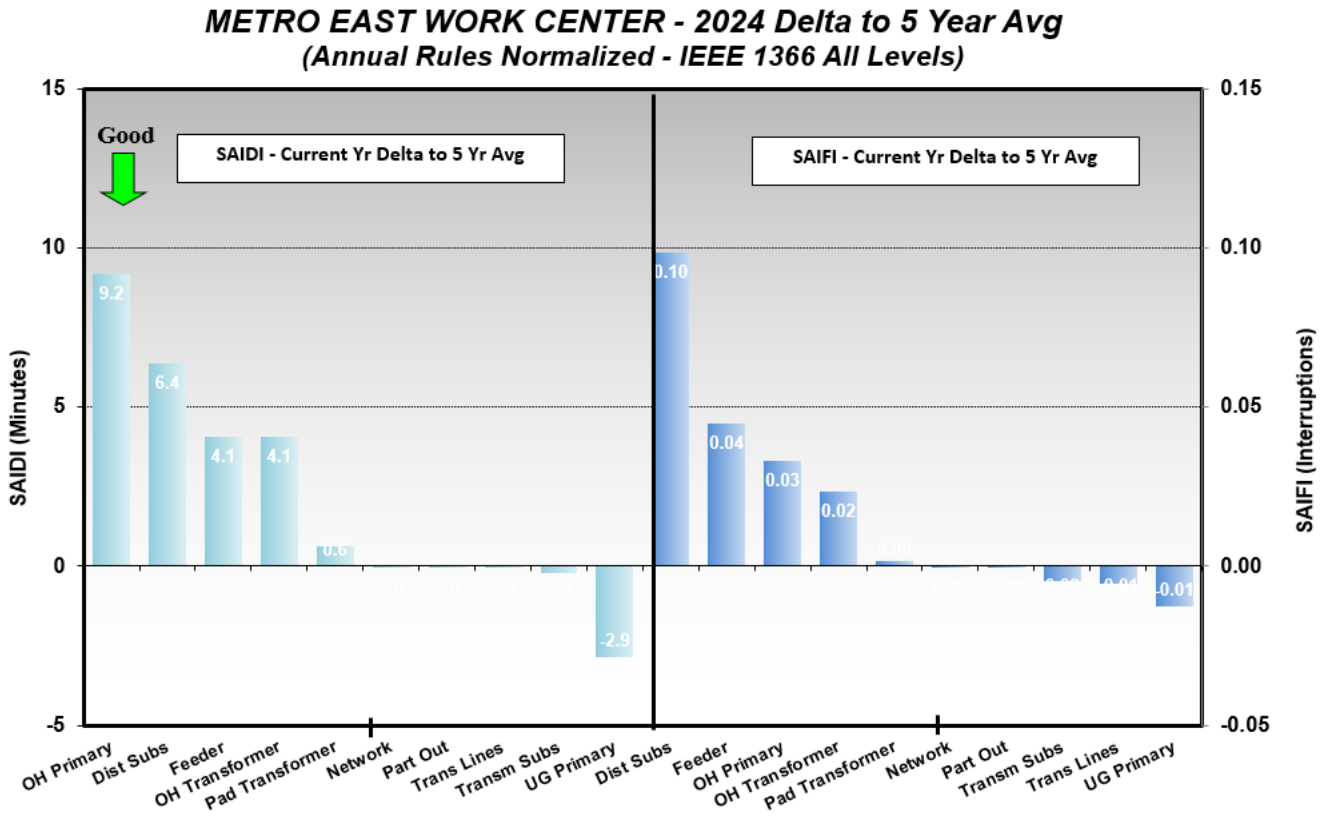
GRAPH 3



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GRAPH 4

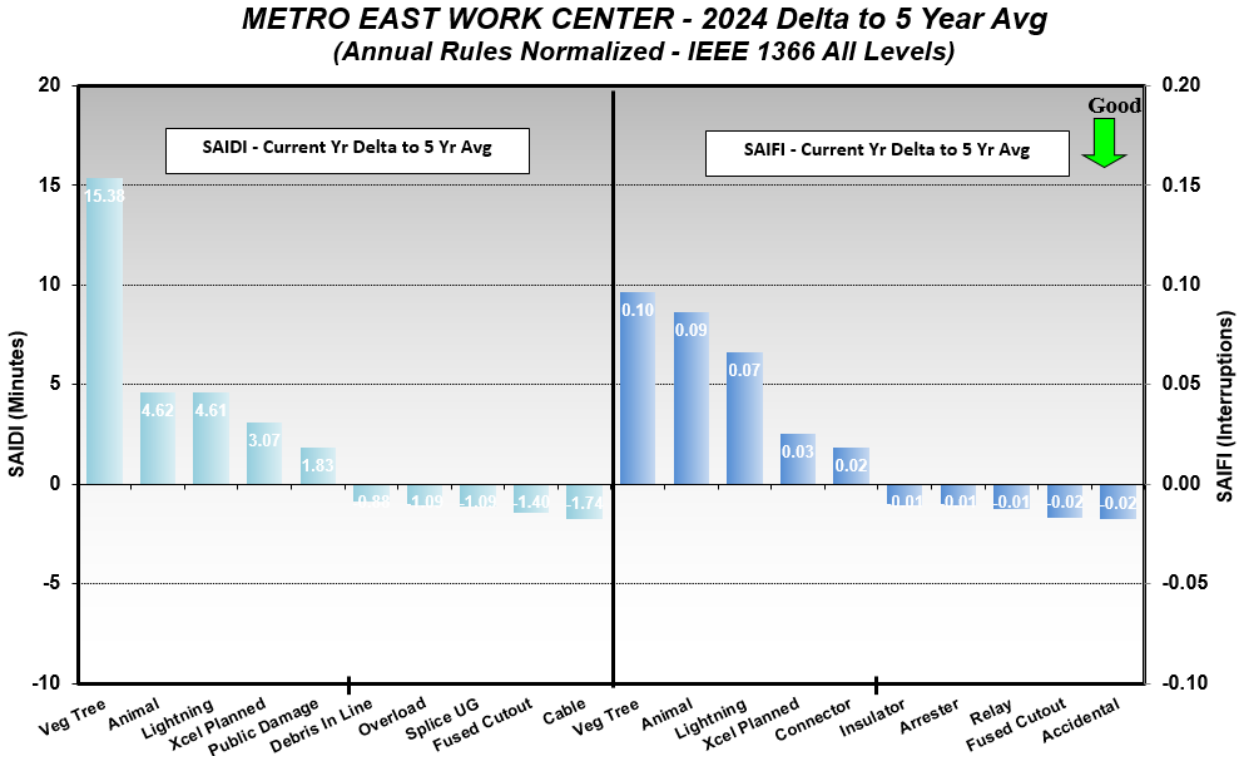

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Table 15
Impact events / days

Major Event Days - Excluded from normalized results

Date	SAIDI	SAIFI	CAIDI	Reason
5/21	7.6	0.09	89	High winds/thunderstorms. Tree contacts
7/14	13.9	0.04	328	High winds/thunderstorms. Tree contacts, lightning strikes, and equipment failures
8/26	52.4	0.07	766	High winds/thunderstorms. Tree contacts, lightning strikes, and equipment failures
8/27	84.6	0.13	641	High winds/thunderstorms. Tree contacts, lightning strikes, and equipment failures
8/29	18.2	0.06	295	High winds/thunderstorms. Tree contacts, lightning strikes, and equipment failures

Moderate Storm Activity

Date	SAIDI	SAIFI	CAIDI	Reason
4/16	3.7	0.03	107	High winds/thunderstorms. Tree contacts
6/4-5	7.8	0.05	168	High winds/thunderstorms. Tree contacts
6/16-18	8.4	0.06	140	High winds/thunderstorms. Tree contacts & substation events
6/27	1.7	0.02	68	High winds/thunderstorms. Tree contacts
7/13 & 15	3.3	0.03	100	High winds / thunderstorms. Tree contacts & equipment failures. Shoulder days to MED
7/22	3.3	0.02	177	High winds / thunderstorms. Tree contacts & equipment failures.
8/5	4.2	0.02	196	High winds / thunderstorms. Tree contacts & equipment failures.
8/28 & 30	2.4	0.01	184	High winds / thunderstorms. Tree contacts & equipment failures. Shoulder days to MED
9/5	1.6	0.02	96	Thunderstorm. Lightning strike in substation

Transmission

Date	SAIDI	SAIFI	CAIDI	Area/s	Reason
4/27	0.1	0.00	41	Eagan	Unknown cause event on transmission line
6/5	0.6	0.01	61	Chisago City / Lindstrom	Tree contact on transmission line - Thunderstorm Conditions

Distribution Substation

Date	SAIDI	SAIFI	CAIDI	Area/s	Reason
4/1	0.1	0.01	21	Shoreview / Arden Hills	Animal contact in the distribution substation
4/14	1.9	0.04	50	Saint Paul / Maplewood	Animal contact in the distribution substation
4/16	0.6	0.01	44	Oak Park Heights / Stillwa	Lightning strike
5/12	1.3	0.03	43	Saint Paul / Maplewood	Animal contact in the distribution substation
5/27	0.6	0.01	55	New Brighton / Roseville	Lightning strike
5/31	0.1	0.01	10	Saint Paul / Lauderdale	Accidental - Coordination error
6/14	0.2	0.01	43	Cottage Grove	Animal contact in the distribution substation
6/16	0.5	0.01	51	Maplewood /Newport	Animal contact in the distribution substation
6/20	0.4	0.01	31	New Brighton / Roseville	Equipment failure - Insulator
7/8	0.7	0.01	51	Saint Paul	Animal contact in the distribution substation
9/5	1.6	0.02	95	Forest Lake / Wyoming	Lightning strike
11/29	1.7	0.02	88	Saint Paul	Public Damage - Vehichle hit pole caused a substation outage

Distribution Lines

Date	SAIDI	SAIFI	CAIDI	Area/s	Reason
11/18	1.5	0.01	162	Lino Lakes/ Shoreview	Tree contact - Windy conditions
7/15	1.3	0.01	125	Lino Lakes / Blaine	Equipment failure - Cable
6/17	1.2	0.01	222	Inver Grove Heights	Tree contact - Windy conditions
11/29	1.2	0.00	437	Stillwater/May Twp	Public damage - Vehichle hit and damaged pole
5/14	1.0	0.01	172	Woodbury	Equipment failure - Transformer
1/14	1.0	0.01	180	Marine Saint Croix	Equipment failure - Cable
5/28	0.9	0.01	181	Mounds View	Public damage - Vehichle hit and damaged guy wire
10/6	0.9	0.00	225	Saint Paul	Public damage - Vehichle hit and damaged pole
6/5	0.8	0.01	144	Saint Paul	Tree contact - Windy conditions
6/3	0.8	0.00	206	Saint Paul	Lightning strike to mainline

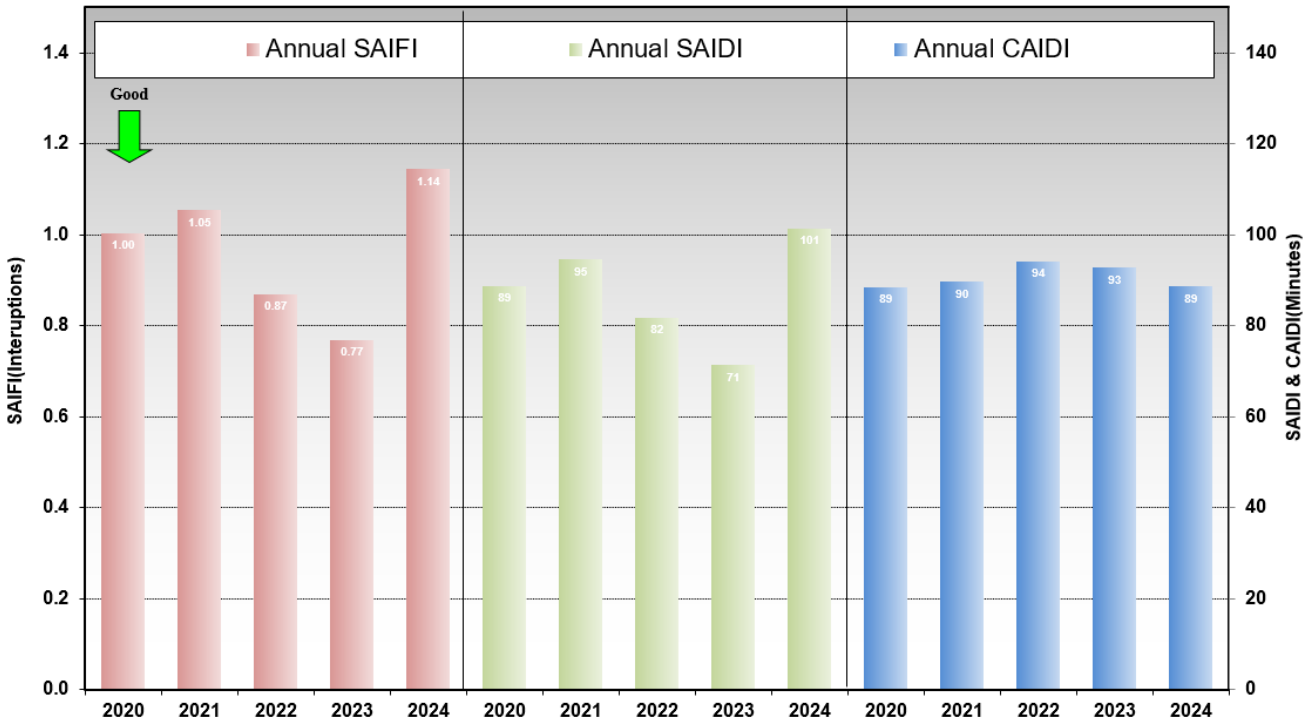
June 2024 was the fourth wettest on record statewide, leading to a period of record flooding along the Minnesota and Mississippi river systems. The saturated soil from record-breaking rainfall made it easier for strong winds to uproot even healthy trees, contributing to the interruptions due to vegetation. These weather events in June scored number one and number two of the top five weather events in 2024, according to Minnesota's Department of Natural Resources, however the impacts were just short of meeting the MED thresholds. The days leading up to and following MED days (MED Shoulder days) were the larger contributing factors in July and August, including July storms, which contained large hail, and the August storms, which had confirmed tornadoes.

2. Metro West

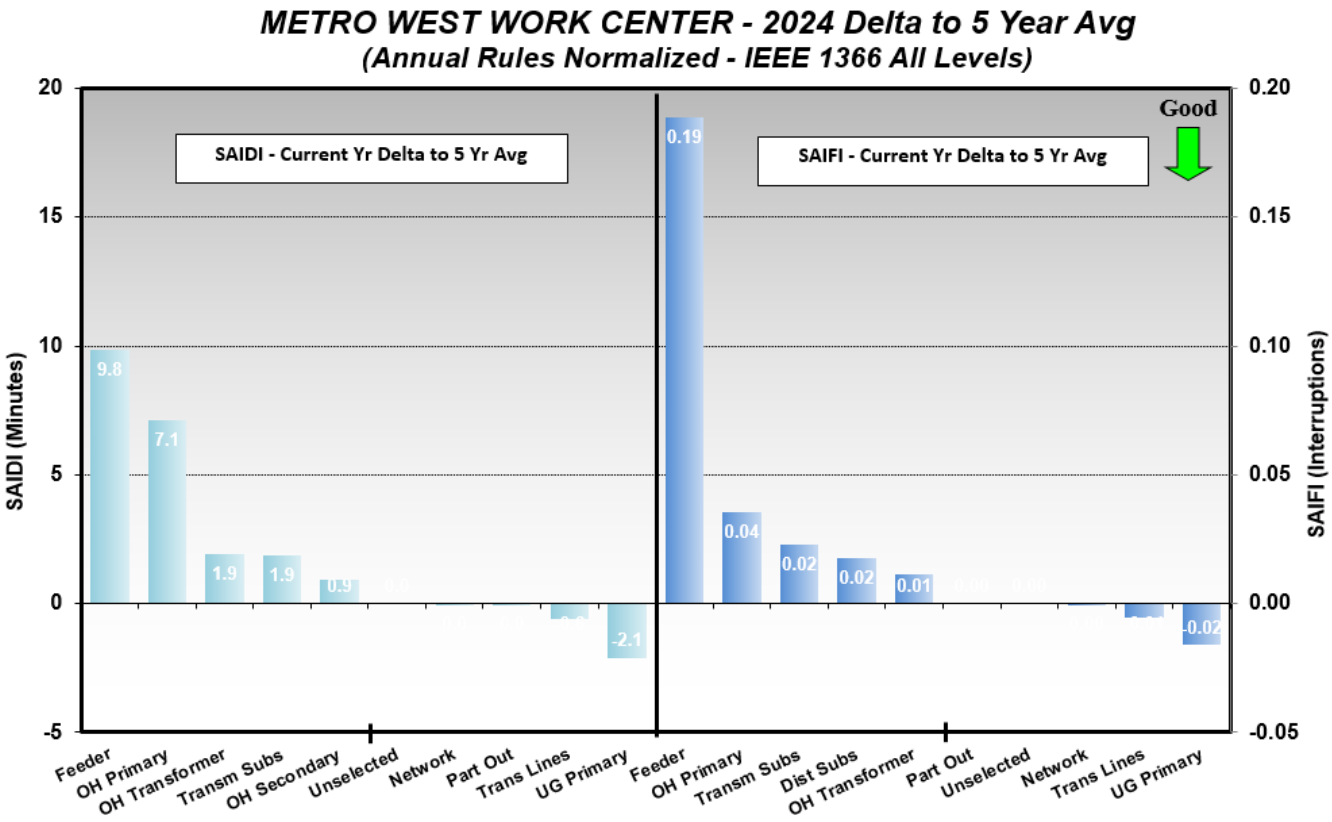
In Graph 5 we show the five-year trend of all three indices. Graphs 6 and 7 show the top level and cause of outages from the current year that deviated higher and lower than the previous five-year average. Table 16 shows a summary of the MEDs and the top impact days or individual outages.

Graph 5

METRO WEST WORK CENTER 5 Year Actuals
(Annual Rules Normalized - IEEE 1366)



Graph 6


METRO WEST WORK CENTER - 2024 Delta to 5 Year Avg
(Annual Rules Normalized - IEEE 1366 All Levels)
SAIDI - Current Yr Delta to 5 Yr Avg
SAIFI - Current Yr Delta to 5 Yr Avg
Good
SAIDI (Minutes)
SAIFI (Interruptions)
20
15
10
5
0
-5
0.20
0.15
0.10
0.05
0.00
-0.05
9.8
7.1
1.9
1.9
0.9
-2.1
0.19
0.04
0.02
0.02
0.01
-0.02
Feeder
OH Primary
OH Transformer
Transm Subs
OH Secondary
Unselected
Network
Part Out
Trans Lines
UG Primary
Feeder
OH Primary
Transm Subs
Dist Subs
OH Transformer
Part Out
Unselected
Network
Trans Lines
UG Primary

Graph 7

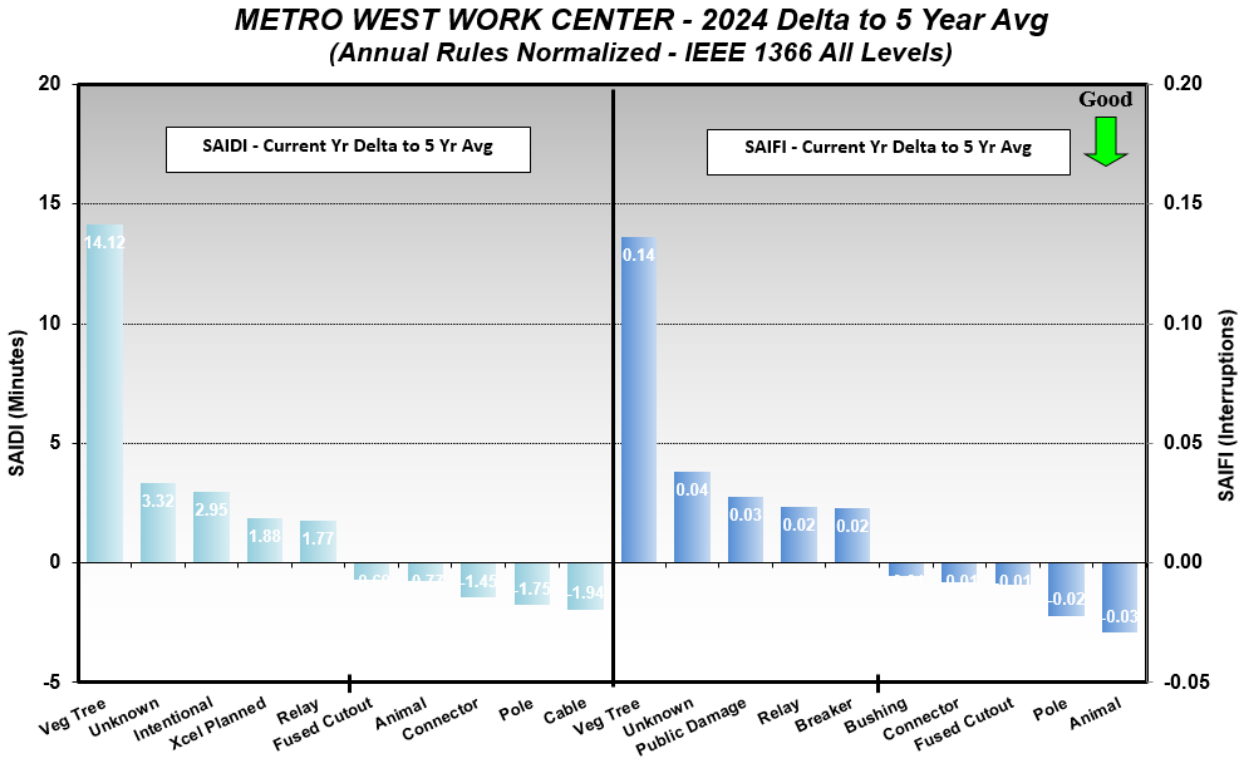

METRO WEST WORK CENTER - 2024 Delta to 5 Year Avg
(Annual Rules Normalized - IEEE 1366 All Levels)
SAIDI - Current Yr Delta to 5 Yr Avg
SAIFI - Current Yr Delta to 5 Yr Avg
Good
SAIDI (Minutes)
SAIFI (Interruptions)
20
15
10
5
0
-5
0.20
0.15
0.10
0.05
0.00
-0.05
14.12
3.32
2.95
1.88
1.77
-1.45
-1.75
-1.94
0.14
0.04
0.03
0.02
0.02
-0.02
-0.03
Veg Tree
Unknown
Intentional
Xcel Planned
Relay
Fused Cutout
Animal
Connector
Pole
Cable
Veg Tree
Unknown
Public Damage
Relay
Breaker
Bushing
Connector
Fused Cutout
Pole
Animal

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Table 16
Impact events / days

Major Event Days - Excluded from normalized results

Date	SAIDI	SAIFI	CAIDI	Reason
7/14	146.1	0.16	888	High winds/thunderstorms. Many tree, lightning strikes, & equipment failures.
8/5	5.8	0.04	132	High winds/thunderstorms. Many tree, lightning strikes, & equipment failures.
8/26	65.7	0.12	548	High winds/thunderstorms. Many tree, lightning strikes, & equipment failures.
8/27	50.5	0.11	480	High winds/thunderstorms. Many tree, lightning strikes, & equipment failures.
8/29	12.1	0.04	278	High winds/thunderstorms. Many tree, lightning strikes
10/31	5.9	0.03	173	High winds/thunderstorms. Many tree, lightning strikes

Moderate Storm Activity

Date	SAIDI	SAIFI	CAIDI	Reason
3/24-25	2.0	0.02	96	High winds/snow/sleet. Tree contacts & equipment failures
5/21-24	4.0	0.05	87	High winds/thunderstorms. Tree contacts
6/3-5	3.9	0.03	116	High winds/thunderstorms. Tree contacts & equipment failures
6/17-18	3.6	0.03	110	High winds/thunderstorms. Tree contacts & lightning strikes
6/22	1.8	0.02	86	High winds/thunderstorms. Tree contacts
7/10	1.9	0.03	71	High winds/thunderstorms. Tree contacts & equipment failures
7/13 & 15	4.8	0.02	208	High winds/thunderstorms. Tree contacts & equipment failures. MED shoulder days.
7/28-29	3.5	0.02	162	High winds/thunderstorms. Tree contacts & equipment failures
7/31-8/1	5.1	0.04	118	High winds/thunderstorms. Tree contacts & equipment failures

Transmission

Date	SAIDI	SAIFI	CAIDI	Area/s	Reason
5/1	0.5	0.00	129	Watertown	Equipment Failure - Bushing
5/1	0.0	0.00	197	Franklin	Unknown cause event on transmission line
5/1	0.0	0.00	7	Watertown	Unknown cause event on transmission line
8/1	0.2	0.00	32	Orono / Maple Plain	Unknown cause event in transmission substation
10/18	1.4	0.01	93	Plymouth / Minnetonka	Public Damage - Dig in causing transmission substation outage
11/10	0.7	0.01	102	Plymouth / Medina	Equipment Failure - Relay

Distribution Substation

Date	SAIDI	SAIFI	CAIDI	Area/s	Reason
5/27	0.9	0.02	56	Minneapolis / Columbia Heights	Lightning strike
5/31	0.0	0.00	25	Minneapolis	Accidental - Switching error
6/20	0.5	0.02	30	Minneapolis / Columbia Heights	Animal contact in the distribution substation
7/10	0.2	0.01	18	Edina	Equipment failure - Relay
8/2	0.6	0.01	91	Mound / Spring Park	Equipment failure - Breaker
8/3	0.2	0.01	24	Brooklyn Center / New Hope	Equipment failure - Breaker
9/3	0.5	0.02	25	St Louis Park / Hopkins	Accidental - Maintenance error
9/10	0.3	0.01	62	Chanhassen	Public Damage - Dig in caused a substation outage
9/23	0.5	0.01	53	Minneapolis / Columbia Heights	Public Damage - Dig in caused a substation outage

Distribution Lines

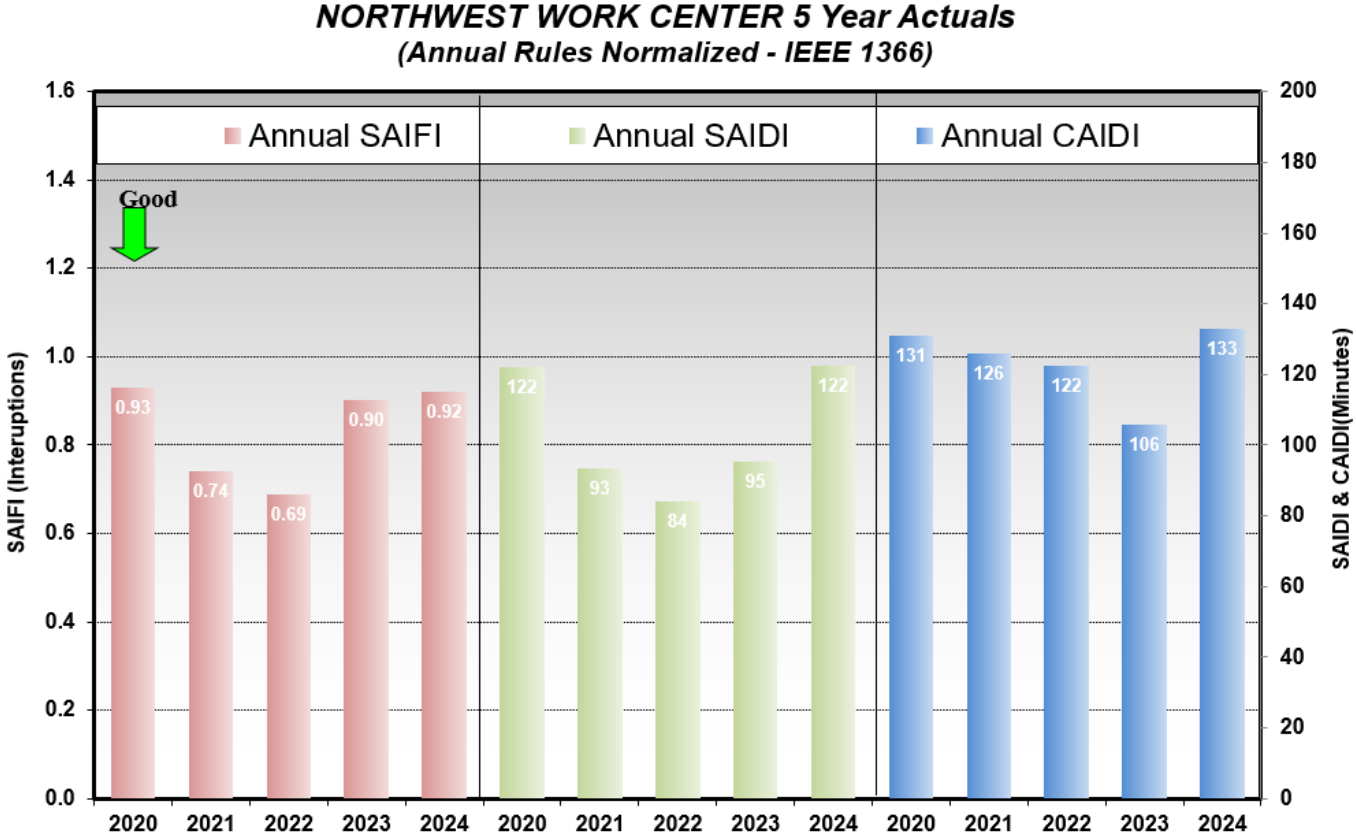
Date	SAIDI	SAIFI	CAIDI	Area/s	Reason
7/28	1.0	0.00	245	Waconia / Minnestrista	Tree contact - Windy conditions
4/29	0.9	0.01	106	Booklyn Park	Equipment failure - Cable mainline
6/22	0.9	0.01	101	Edina	Tree contact - Windy conditions
6/17	0.8	0.01	145	Champlin / Maple Grove	Tree contact - Windy conditions
4/17	0.8	0.00	251	Champlin	Unknown event - No cause found
8/3	0.8	0.00	153	Minnetonka / Eden Prairie	Lightning strike to mainline
6/4	0.7	0.00	506	Minnetrista / St Bomafacius	Unknown event - No cause found
7/2	0.7	0.01	125	Minneapolis	Tree contact - Windy conditions
5/23	0.6	0.01	48	Minneapolis	Equipment failure - Underground switch
6/15	0.6	0.00	521	St Louis Park	Animal Contact

June 2024 was the fourth wettest on record statewide leading to a period of record flooding along the Minnesota and Mississippi river systems. The saturated soil from record-breaking rainfall made it easier for strong winds to uproot even healthy trees, contributing to the interruptions due to vegetation. These weather events in June scored number one and number two of the top five weather events in 2024, according to Minnesota's Department of Natural Resources. Scoring number three was the severe thunderstorms on July 31 to August 1, that produced some of the largest hailstones on record in Minnesota. This contributed to the larger of the non-MED exclusion days.

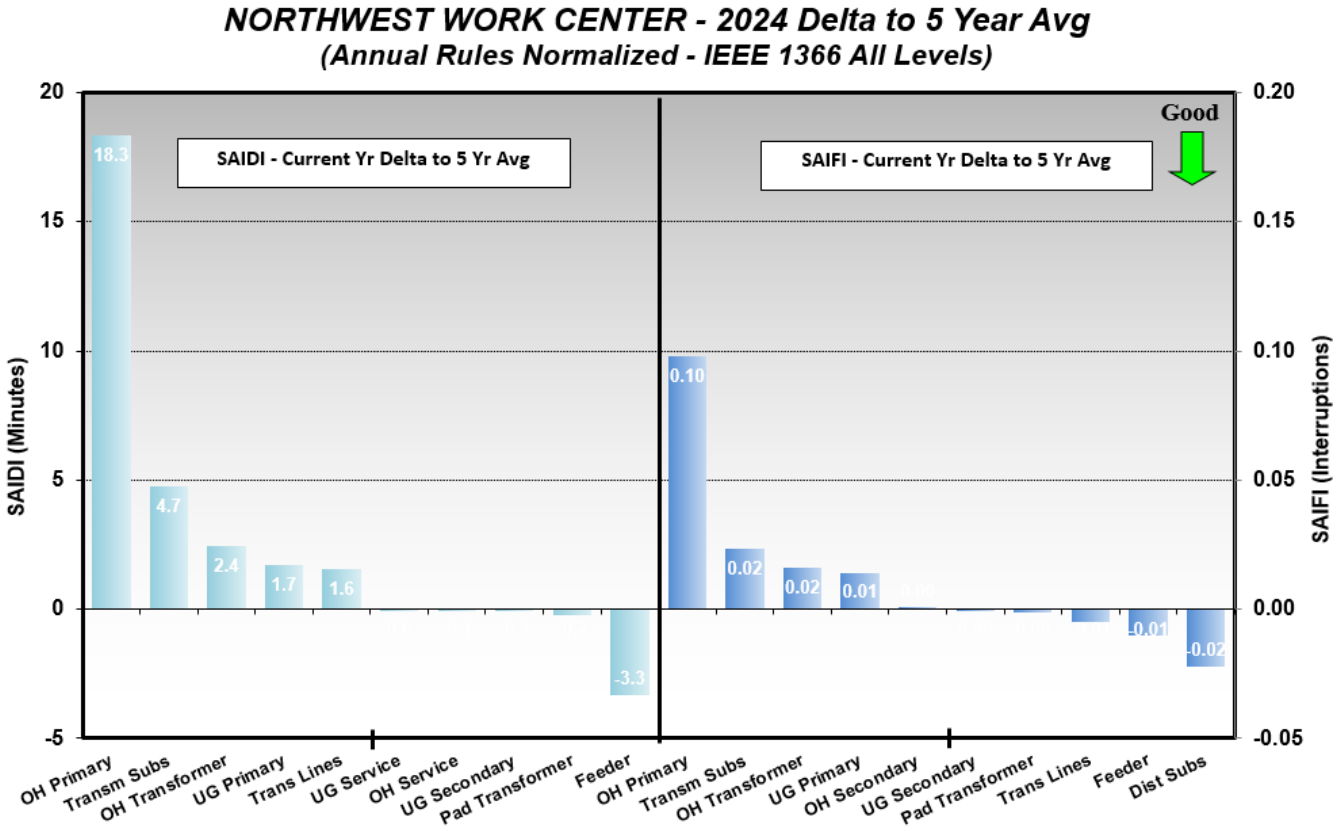
3. Northwest

In Graph 8 we show the five-year trend of all three indices. Graphs 9 and 10 show the top level and cause of outages from the current year that deviated higher and lower than the previous five-year average. Table 17 shows a summary of the MEDs and the top impact days or individual outages.

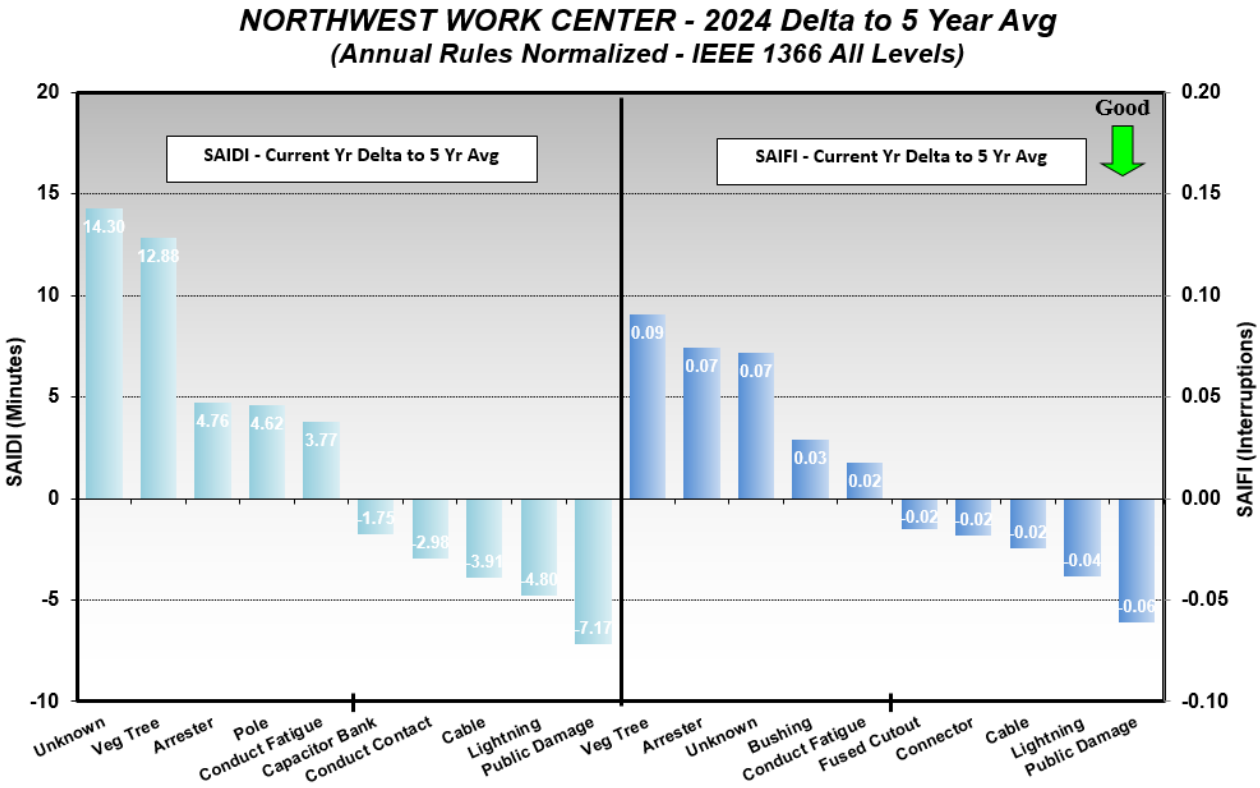
Graph 8



Graph 9


NORTHWEST WORK CENTER - 2024 Delta to 5 Year Avg
(Annual Rules Normalized - IEEE 1366 All Levels)
SAIDI - Current Yr Delta to 5 Yr Avg
SAIFI - Current Yr Delta to 5 Yr Avg
Good
SAIDI (Minutes)
SAIFI (Interruptions)
20
15
10
5
0
-5
0.20
0.15
0.10
0.05
0.00
-0.05
18.3
4.7
2.4
1.7
1.6
-3.3
0.10
0.02
0.02
0.01
-0.01
-0.02
OH Primary
Transm Subs
OH Transformer
UG Primary
Trans Lines
UG Service
OH Service
UG Secondary
Pad Transformer
Feeder
OH Primary
Transm Subs
OH Transformer
UG Primary
OH Secondary
UG Secondary
Pad Transformer
Trans Lines
Feeder
Dist Subs

Graph 10


NORTHWEST WORK CENTER - 2024 Delta to 5 Year Avg
(Annual Rules Normalized - IEEE 1366 All Levels)
SAIDI - Current Yr Delta to 5 Yr Avg
SAIFI - Current Yr Delta to 5 Yr Avg
Good
SAIDI (Minutes)
SAIFI (Interruptions)
20
15
10
5
0
-5
-10
0.20
0.15
0.10
0.05
0.00
-0.05
-0.10
14.30
12.88
4.76
4.62
3.77
-1.75
-2.98
-3.91
-4.80
-7.17
0.09
0.07
0.07
0.03
0.02
-0.02
-0.02
-0.02
-0.04
Unknown
Veg Tree
Arrester
Pole
Conduct Fatigue
Capacitor Bank
Conduct Contact
Cable
Lightning
Public Damage
Veg Tree
Arrester
Unknown
Bushing
Conduct Fatigue
Fused Cutout
Connector
Cable
Lightning
Public Damage

PUBLIC DOCUMENT
NOT-PUBLIC DATA HAS BEEN EXCISED

Table 17
Impact events / days

Major Event Days - Excluded from normalized results

Date	SAIDI	SAIFI	CAIDI	Reason
6/12	12.8	0.06	217	High winds/thunderstorms. Many tree, lightning strikes, & debris in lines
6/18	9.1	0.06	159	High winds/thunderstorms. Many tree, lightning strikes, & debris in lines
7/14	14.3	0.06	246	High winds/thunderstorms. Many tree, lightning strikes, & debris in lines

Moderate Storm Activity

Date	SAIDI	SAIFI	CAIDI	Reason
6/28	4.5	0.07	66	High winds/thunderstorms. Tree contacts & lightning strikes
7/13 & 15	4.3	0.01	305	High winds/thunderstorms. Tree contacts, lightning strikes, & equip failures. MED shoulders.
8/3	5.3	0.04	152	High winds/thunderstorms. Tree contacts & equipment failures
8/26	4.0	0.03	154	High winds/thunderstorms. Tree contacts, lightning strikes, & equipment failures
8/29	4.0	0.02	167	High winds/thunderstorms. Tree contacts & equipment failures
9/21-22	9.8	0.07	148	Thunderstorms. Lightning strikes, equipment failures, & pole fires.
10/6	4.4	0.02	190	High winds/thunderstorms. Tree contacts & equipment failures
10/31-11/1	4.9	0.06	84	High winds/snow/sleet. Tree contacts, lightning strikes, & equipment failures

Transmission

Date	SAIDI	SAIFI	CAIDI	Area/s	Reason
1/2	0.3	0.01	26	Clara City / Raymond	Intentional outage to transmission to clear vehichle/pole outage
5/1	5.2	0.03	203	Montrose / Woodland	Unknown cause event on transmission line
5/24	0.0	0.00	11	Greenwald / Grove	Unknown cause event on transmission line - Windy conditions
5/27	1.6	0.01	320	Hector	Equipment failure - Voltage regulator
8/3	0.5	0.02	28	Albany / Holdingford	Unknown cause event on transmission line - Thunderstorm
8/3	0.3	0.01	56	Cosmos / Lake Lillian	Unknown cause event on transmission line
8/10	3.9	0.05	86	Monticello / St Michael	Unknown cause event on transmission line
12/10	2.2	0.01	220	Cottonwood / Wood Lake	Equipment failure - Breaker

Distribution Substation

Date	SAIDI	SAIFI	CAIDI	Area/s	Reason
8/14	0.7	0.00	206	Belgrade	Intentional outage to substation - Construction
10/12	0.9	0.00	184	Atwater	Animal contact in the distribution substation

Distribution Lines

Date	SAIDI	SAIFI	CAIDI	Area/s	Reason
1/11	4.7	0.03	161	Sauk Rapids / Foley	Unknown event - No cause found
6/28	4.2	0.07	62	St Michaels / Rogers	Equipment failure - Arrester
8/6	3.9	0.04	107	Saint Cloud / Clearwater	Equipment failure - Bushing
9/22	3.9	0.02	214	Saint Cloud	Equipment failure - Conductor
10/25	3.7	0.02	214	Saint Cloud / Le Sauk	Pole Fire
10/6	3.6	0.02	204	Saint Cloud / Le Sauk	Equipment failure - Connector
9/21	3.1	0.02	163	Rogers	Pole Fire
9/22	2.5	0.02	117	Saint Cloud	Equipment failure - Arrester
1/12	2.4	0.01	273	Foley /Gilmanton	Unknown event - No cause found
8/29	2.3	0.01	204	Rogers / Saint Michaels	Equipment failure - Pole

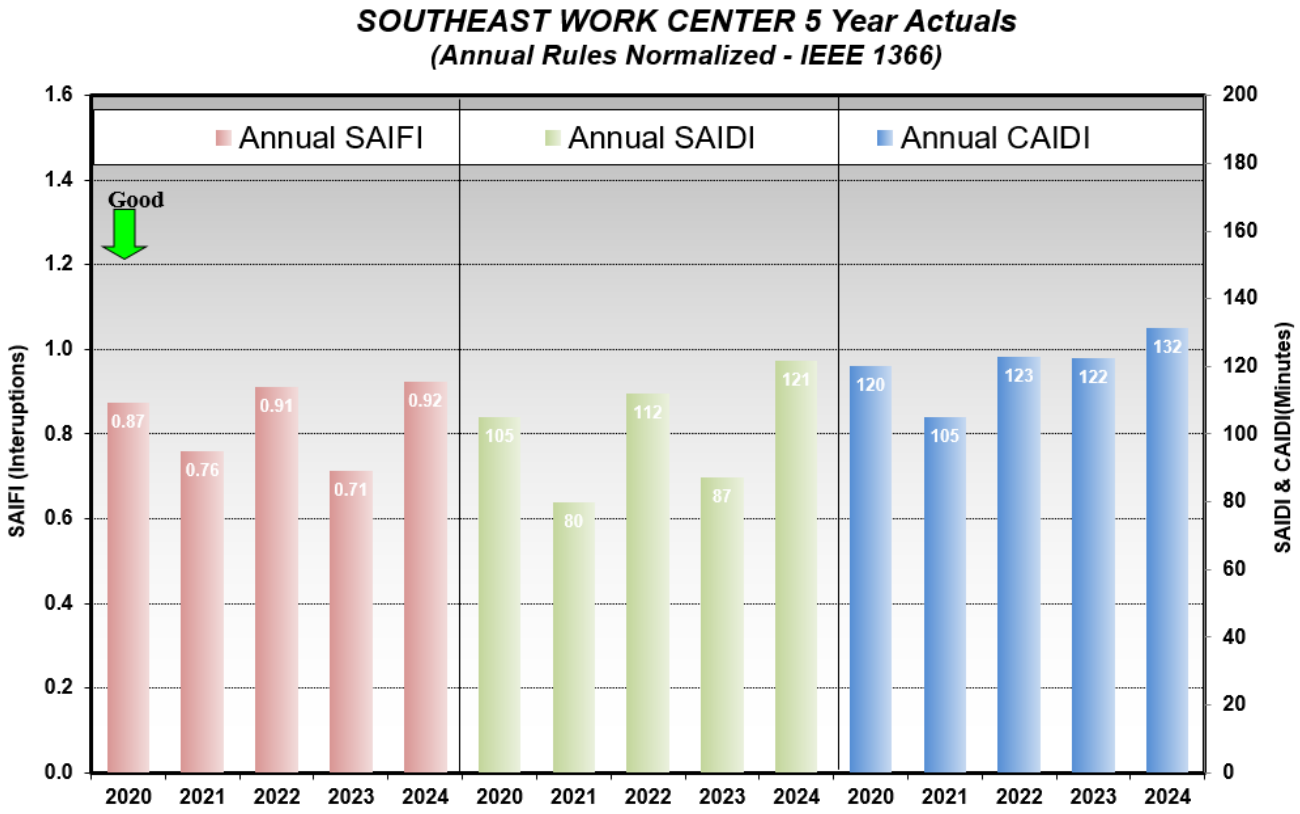
July's impacts were on the shoulders of the severe storm causing the July 14 MED exclusion. On August 3, northwestern Minnesota experienced tornadoes, strong winds, and large hail up to three inches in diameter. An EF-1 tornado impacted Melrose. On August 26-29, the region experienced extreme heat followed by severe storms. Two rounds of severe weather caused significant wind damage and several tornadoes. Six tornadoes were confirmed, with notable damage in areas like Anoka and Dakota counties. On September 21-22, a cold front moved through the region, bringing isolated thunderstorms and heavy rain. Lightning along with pole fires was a major cause of outages during the storm. These September impacts were just short of meeting the MED thresholds.

The Northwest region also had a few impactful transmission-level events throughout the year. The impact on May 1 was due to damaged 69 kV fuses on a substation transformer. The impact on August 10 was due to a 115 kV breaker failure. There was a previously planned outage on another transmission line in the area that hindered restoration capabilities.

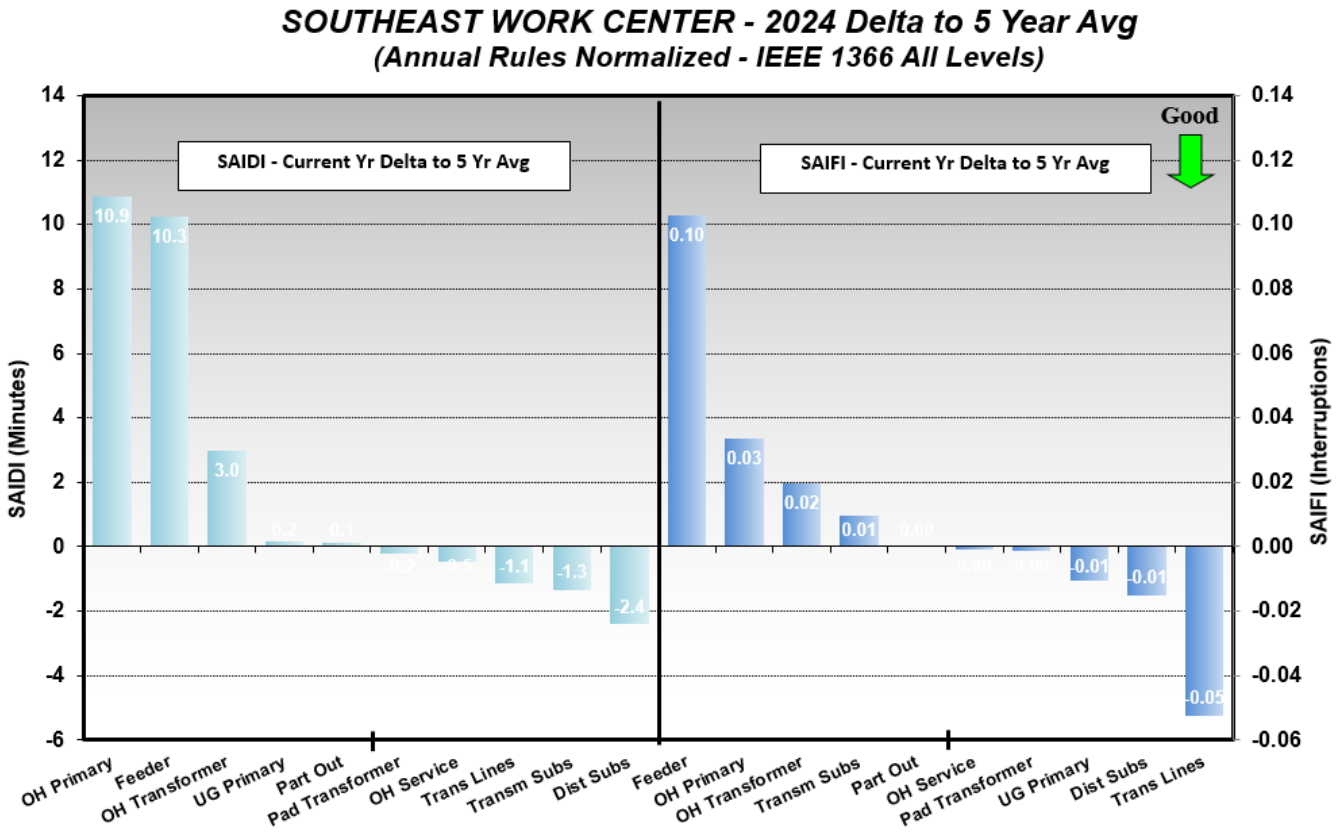
4. Southeast

In Graph 11 we show the five-year trend of all three indices. Graphs 12 and 13 show the top level and cause of outages from the current year that deviated higher and lower than the previous five-year average. Table 18 shows a summary of the MEDs and the top impact days or individual outages.

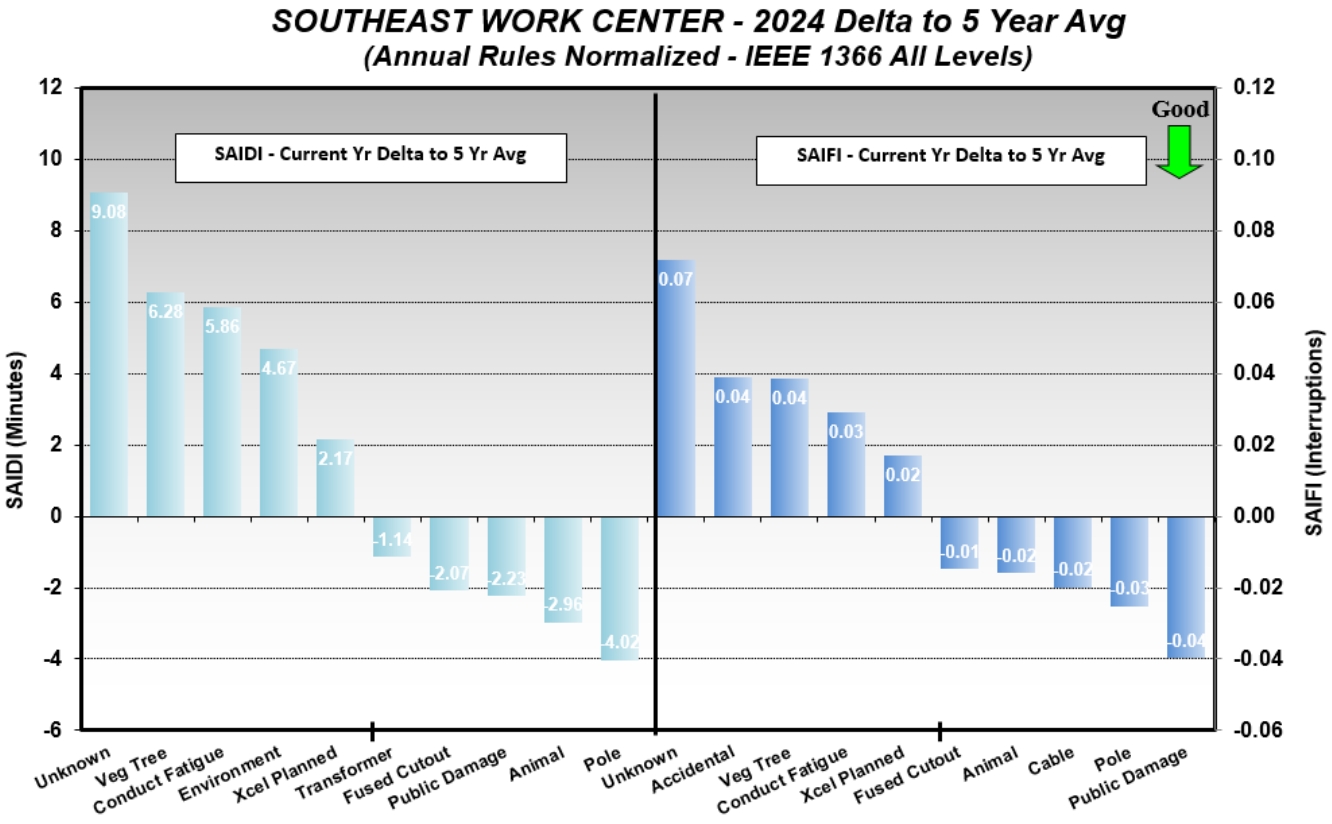
Graph 11


SOUTHEAST WORK CENTER 5 Year Actuals
(Annual Rules Normalized - IEEE 1366)
Annual SAIFI
Annual SAIDI
Annual CAIDI
Good
SAIFI (Interuptions)
SAIDI & CAIDI(Minutes)
1.6
1.4
1.2
1.0
0.8
0.6
0.4
0.2
0.0
200
180
160
140
120
100
80
60
40
20
0
0.87
0.76
0.91
0.71
0.92
105
80
112
87
121
120
105
123
122
132
2020
2021
2022
2023
2024
2020
2021
2022
2023
2024
2020
2021
2022
2023
2024

Graph 12


SOUTHEAST WORK CENTER - 2024 Delta to 5 Year Avg
(Annual Rules Normalized - IEEE 1366 All Levels)
SAIDI - Current Yr Delta to 5 Yr Avg
SAIFI - Current Yr Delta to 5 Yr Avg
Good
SAIDI (Minutes)
SAIFI (Interruptions)
14
12
10
8
6
4
2
0
-2
-4
-6
0.14
0.12
0.10
0.08
0.06
0.04
0.02
0.00
-0.02
-0.04
-0.06
10.9
10.3
3.0
-0.2
-0.1
-1.1
-1.3
-2.4
0.10
0.03
0.02
0.01
-0.01
-0.01
-0.05
OH Primary
Feeder
OH Transformer
UG Primary
Part Out
Pad Transformer
OH Service
Trans Lines
Transm Subs
Dist Subs
Feeder
OH Primary
OH Transformer
Transm Subs
Part Out
OH Service
Pad Transformer
UG Primary
Dist Subs
Trans Lines

Graph 13


SOUTHEAST WORK CENTER - 2024 Delta to 5 Year Avg
(Annual Rules Normalized - IEEE 1366 All Levels)
SAIDI - Current Yr Delta to 5 Yr Avg
SAIFI - Current Yr Delta to 5 Yr Avg
Good
SAIDI (Minutes)
SAIFI (Interruptions)
12
10
8
6
4
2
0
-2
-4
-6
0.12
0.10
0.08
0.06
0.04
0.02
0.00
-0.02
-0.04
-0.06
9.08
6.28
5.86
4.67
2.17
-1.14
-2.07
-2.23
-2.96
-4.02
0.07
0.04
0.04
0.03
0.02
-0.01
-0.02
-0.02
-0.03
-0.04
Unknown
Veg Tree
Conduct Fatigue
Environment
Xcel Planned
Transformer
Fused Cutout
Public Damage
Animal
Pole
Unknown
Accidental
Veg Tree
Conduct Fatigue
Xcel Planned
Fused Cutout
Animal
Cable
Pole
Public Damage

PUBLIC DOCUMENT
NOT-PUBLIC DATA HAS BEEN EXCISED

Table 18
Impact events / days

Major Event Days(MED) - Excluded from normalized results

Date	SAIDI	SAIFI	CAIDI	Reason
5/21	11.1	0.06	175	High winds/thunderstorms. Tree, lightning, and debris strikes to equipment.

Moderate Storm Activity

Date	SAIDI	SAIFI	CAIDI	Reason
6/5-6	5.3	0.04	122	High winds/thunderstorms. Tree contacts & lightning strikes
6/17	6.0	0.03	189	High winds/thunderstorms. Tree contacts / lightning strikes / Equipment Conductors
6/21-22	7.7	0.03	261	High winds/thunderstorms. Tree contacts & lightning strikes
6/24-25	6.6	0.02	418	High winds/thunderstorms/flooding. Tree contacts & unknown cause events
7/13-15	9.3	0.04	237	High winds/thunderstorms. Tree contacts & lightning strikes
7/31-8/1	5.2	0.03	203	High winds/thunderstorms. Tree contacts / lightning strikes / Equipment Conductors
8/5	5.4	0.04	150	High winds/thunderstorms. Tree contacts & lightning strikes
8/29	5.2	0.02	208	High winds/thunderstorms. Tree contacts & lightning strikes
10/24	3.4	0.02	168	High winds/thunderstorms. Lightning strikes & Equipment Insulators

Transmission

Date	SAIDI	SAIFI	CAIDI	Area/s	Reason
2/27	0.6	0.03	22	Mankato	Maintenance error
6/12	0.2	0.01	15	Slayton / Hadley	Unknown cause event on transmission line - Wind/Rain
6/17	0.5	0.01	91	Florence / Frontenac	Unknown cause event on transmission line - Windy conditions
6/22	3.4	0.02	216	Pine Island / New Haven	Unknown cause event on transmission line
7/15	0.7	0.00	152	Gibon / Moltke	Equipment failure - Connector
8/5	0.9	0.01	91	Madison Lake / St Clair	Tree contact on transmission line

Distribution Substation

Date	SAIDI	SAIFI	CAIDI	Area/s	Reason
4/5	1.5	0.02	91	Redwing	Unknown cause event on substation equipment
7/13	0.0	0.00	151	Northfield	Animal contact in the distribution substation
10/18	1.2	0.02	50	Winona	Animal contact in the distribution substation

Distribution Lines

Date	SAIDI	SAIFI	CAIDI	Area/s	Reason
6/24	5.0	0.00	1,182	Good Thunder / Rapidan	Environmental - Flooding
7/13	3.9	0.01	286	Mankato	Equipment failure - Mainline cable
6/17	2.3	0.01	249	Morristown / Warsaw	Equipment failure - Connector
6/6	2.2	0.01	219	Winona / Goodview	Tree contact - Windy conditions
10/24	2.1	0.01	152	Faribault	Equipment failure - Insulator
2/23	1.8	0.01	163	Lonsdale / Wheatland	Equipment failure - Conductor contact
7/28	1.8	0.01	180	Lonsdale / Wheatland	Unknown event - No cause found
8/29	1.8	0.01	118	Faribault	Tree contact - Windy conditions
8/29	1.7	0.00	473	Greenfield	Tree contact - Windy conditions
6/21	1.6	0.00	714	Florence	Tree contact - Thunderstorm conditions

June 2024 was the fourth wettest on record statewide leading to a period of record flooding along the Minnesota and Mississippi river systems. The saturated soil from record-breaking rainfall made it easier for strong winds to uproot even healthy trees, contributing to the interruptions due to vegetation. Rushing water from the Blue Earth River cut a path around the Rapidan Dam and swept an entire power substation

downriver on the morning of June 24. This left nearly 600 customers without power. Xcel Energy crews quickly got to work in the community, working through challenging environmental conditions and collaborating with emergency management and local officials to get customers' power back on by that evening. These impacts were just short of meeting MED exclusions. These weather events in June scored number one and number two of the top five weather events for 2024, according to Minnesota's Department of Natural Resources. On July 13, severe thunderstorms developed, leading to widespread wind and hail damage. A brief tornado was reported in Rice County, causing minor crop damage. Severe thunderstorms on July 31 to August 1, produced some of the largest hailstones on record in Minnesota. A slew of tornadoes again on August 5 and 29 led to collateral outages due to tree damage.

b. Worst Performing Feeders by Work Center

Minn. R. 7826.0500, Subpart 1.H, requires the Company 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 circuit's performance is in last place, and describing any operational changes the utility has made, is considering, or intends to make to improve its performance.*

The Commission's April 7, 2006 Order in Docket No. E-002/M-05-551 *reflected an increase by the Commission of the number of feeders that the Company includes in this portion of the report to 25 per work center, for a total of 100.*

Responding to both Minn. R. 7826.0500, Subpart 1.H and the April 2006 Order, Attachment M to this report provides the required feeder performance data by work center, in two sections, identifying the city where the substation for each feeder is located.

We evaluate the worst performing feeders annually and prepare plans and projects to remedy the causes of outages. These projects are largely prioritized and funded through the Feeder Performance Improvement Plan (FPIP) described below and further detailed in Attachment J. However, despite these efforts, occasionally a feeder will reappear on the worst performer list. This can be caused by several reasons, including storms, distance from first responders, or quickly growing vegetation. In addition, feeders can be on the list due to poor tap performance which may not have been investigated in previous years.

For this reason, some of the feeders listed in Attachment M are not actual "poor performers," but rather, are included in the list only because the Company is required by the April 2006 Order to identify 25 feeders per work center, and their performance values were near the national averages despite being in the lowest performing group of 25 for a particular work center. For top feeders in each region that were identified as poor performers and needing operational change(s) under the internal FPIP, we have completed a reliability review and provide information on the reasons for the poor performance and any planned improvements in the lower section of each work center's report provided in Attachment M.

The Company's FPIP annually identifies poor performing circuits, causes, and changes needed. This cycle begins in September of each year with SAIFI and SAIDI values calculated for the most recent 12 months and cause-data analyzed to determine operational changes. During the fall and early winter months, the construction projects are planned and designed. Construction projects involving overhead equipment begin first with a goal of completion before the spring storm season. Underground construction begins as soon as possible after frost dissipation.

The program's schedule was designed to construct solutions prior to the storm season and to achieve maximum benefit throughout the year. Thus, the data used to determine poor-performing circuits spans September to August rather than a calendar year.

In terms of criteria used to identify the feeders, Xcel Energy defines poor performing feeders as those with a SAIFI exceeding three times the average feeder SAIFI value, SAIDI exceeding four times the average feeder SAIDI value, top 10 percent of customer minutes out per line mile ratio, or CAIDI value in the highest 10 percent in current and either of the previous two years. The data used to calculate SAIFI, SAIDI, and CAIDI are not normalized for storm events, but do exclude outages from transmission and substation as well as planned outage and public damage causes.

The feeder numbers and substation names in Attachment M have been marked as protected data, but pursuant to the Commission's discussion of previous Annual Reports, the Company has added a column providing publicly the city in which the substation is located. The protected data is "security information" as defined by Minn. Stat. § 13.37, subd. 1(a). Xcel Energy believes the information could be manipulated to reveal the number of customers served by a particular feeder. The public disclosure or use of this information creates an unacceptable risk because those who want to disrupt the electrical grid for political or other reasons may learn which facilities to target to create the greatest disruption. For this reason, pursuant to Minn. Stat. §

13.37, subd. 2, we have excised this data from the public version of our report.

3. BULK POWER INTERRUPTIONS

Minn. R. 7826.0500, Subpart 1.F requires the Company 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 interruption, duration of interruption, and any remedial steps that have been taken or will be taken to prevent future interruption.*

During 2024, there were no generation outages on Xcel Energy's system that caused an interruption of service to firm electric customers. All curtailments of customers subject to load management rates or Demand-Side Management (DSM) programs were consistent with the terms of the load management tariffs and DSM programs.

We provide the required information regarding transmission outages as Attachment N to this report. As the incidents shown were reactionary due to storms, public damage, or other activities associated with random and unforeseen events, no plans have been developed to address the specific issues encountered. However, the Transmission Line Performance (TLP) work area works very closely with the area account representatives and trouble men, Transmission Construction, System Operations, and other work areas to proactively inspect and maintain our infrastructure. When determined applicable, TLP will apply specific asset renewal or reliability enhancement programs to identified circuits that extend the circuit's service life and enhances its reliability.

The transmission line names in Attachment N have been marked as protected data. This information is "security information" as defined by Minn. Stat. § 13.37, subd. 1(a). Xcel Energy believes the information could in some circumstances be manipulated to reveal potential vulnerabilities in our system. The public disclosure or use of this information creates an unacceptable risk because those who want to disrupt the electrical grid for political or other reasons may learn which facilities to target to create the greatest disruption. For this reason, pursuant to Minn. Stat. § 13.37, subd. 2, we have excised this data from the public version of our report.

4. OUTAGE COMMUNICATIONS

a. Outage Communications to the CAO

Minn. R. 7826.0500, Subpart 1(G) requires the Company to provide *"a copy of each*

report filed under part 7826.0700." Minn. R. 7826.0700, subpart 1, requires the Company to

> *"promptly inform the commission's Consumer Affairs Office (CAO) of any major service interruption" occurring on the utility's system and "provide the following information, to the extent known:*
>
> *A. the location and cause of the interruption;*
> *B. the number of customers affected;*
> *C. the expected duration of the interruption; and*
> *D. the utility's best estimate of when service will be restored."*

Subpart 2 further requires that:

> *Within 30 days, a utility shall file a report on any major service interruption in which 10 percent or more of its Minnesota customers were out of service for 24 hours or more. This report must include at least a description of:*
>
> *A. the steps the utility took to restore service, and*
> *B. any operational changes the utility has made, is considering, or intends to make to prevent similar interruptions in the future or to restore service more quickly in the future.*

In addition, Order Point 4 of the Commission's December 18, 2020 Order in Docket No. E-002/M-20-406 granted a variance to Minn. R. 7826.0500, subp.1, item G and *requires the Company to file a summary table that includes the information contained in the reports similar to Attachment G of Xcel's filing.* The information is included in Attachment O.

"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 hour(s). Xcel Energy complies with Minn. R. 7826.0700, subpart 1, as it sends the CAO notification of sustained outages occurring at the feeder level or above; these notifications also include reporting outages that are not necessarily large enough or long enough to meet the definition of a major service interruption under Minn. R. 7826.0200, subp. 7.

We are committed to providing the CAO with timely and accurate information. Our Customer Advocate Group generally sends these notifications via e-mail directly to the CAO with the required information, to the extent known. During 2024, there were 492 outages on Xcel Energy's system that met the definition of major service interruption under Minn. R. 7826.0200, subp. 7. Please see Attachment O for a

summary of the 2024 qualifying outages.

Attachment O contains summary information regarding the Company's feeders and other system components, and associated customers served. This information is "security information" as defined by Minn. Stat. § 13.37, subd. 1(a). Xcel Energy believes the information could be manipulated to reveal the number of customers served by a particular feeder. The public disclosure or use of this information creates an unacceptable risk because those who want to disrupt the electrical grid for political or other reasons may learn which facilities to target to create the greatest disruption. For this reason, pursuant to Minn. Stat. § 13.37, subd. 2, we have excised this data from the public version of our report.

In an effort to provide information as quickly as we can, whenever possible, our Customer Advocate Group sends the CAO the first outage notification received from the Control Center for an outage event. First notifications often do not include full cause and/or follow-up action information, since the restoration crew may not have yet completed its work related to the event. However, we believe it is more important to give the CAO notification as soon as possible rather than waiting for complete information before sending the CAO an alert.

During high volume outage times, it is possible the Control Center does not send an email for each and every outage event. Often during these high-volume events, the Company's Customer Advocate Group works with the Control Center to obtain more general status updates in lieu of individual emails. These updates, which are also forwarded to the CAO, typically include information on which communities were affected, total customers out of service, and any available information on expected restoration times. If available, information is also provided regarding crews brought in from other areas to assist restoration during times of escalated operations.

As with any process that involves human intervention and handoffs, errors will occur, and in such instances, notices may not be sent to the CAO. There are instances when the Control Center may not create a notice, or the Company's Customer Advocates do not forward a notice to the CAO. In 2024, we did not send an email notice to the CAO for 118 of 492 major service interruptions. These were not sent due to human error and are reflected in Attachment O. Potential process improvements to reduce the possibility of error will be considered in future discussion with the Control Center and our regulatory team.

With respect to Minn. R. 7826.0700, subpart 2, the Company had no major service interruptions on our system in 2024 in which 10 percent or more of its Minnesota

customers were out of service for 24 hours or more.

b. Outage Communications to Customers (Estimated Restoration)

Order Point 4(d) in the Commission's October 20, 2023 Order in Dockets No. E002/M-22-162 requires the Company:

> *to provide estimated restoration time accuracy, using a) within -90 minutes to 0 of estimated restoration time and b) within 0 to +30 minutes of estimated restoration time.*

On a monthly basis, the Company pulls year-to-date data from its Outage Management System (OMS) that itemizes each outage along with associated outage data such as: (i) time of outage; (ii) number of customers impacted, (iii) interrupting device; (iv) level of outage; (v) estimated restoration time (ERT) pre-determined by the Company; and (vi) actual restoration time. The information is used to analyze the accuracy of our estimated restoration times when compared to the actual restoration time.

When an outage is first discovered (by customer notice or otherwise), refined estimates are developed as the Company learns more information. When an outage is identified, an initial automated message is sent to the customer within the first 15 minutes of our Control Center being notified of a customer outage. This message either confirms their outage if they reported it, or notifies them of an outage we believe is impacting them.

An ERT is not communicated in the initial customer message. A second communication is sent 20 minutes later, following an escalation process to categorize the outage level, feeder, tap or transformer of an identified outage. If an ERT is available, it is provided at this time. A standard three-hour outage estimate is assumed when we first discover an outage. A second estimate is created when the Company's first responder gets on site in the field and begins their investigation. Finally, a third, more refined estimate is developed when field personnel are able to assess the cause of the outage and determine the necessary remediation action. Additional messages to the customer during the outage will be dependent on ERT changes or the outage being closed. The final message the customer receives will confirm their power has been restored and provides a way for the customer to report if they are still without power.

The current ERT metric includes those generated by our model (which is based on

the impacted device(s) and algorithms) and ERTs entered by field and control center personnel. The model usually provides an estimate within 20 minutes after notification of an outage. The -90 to 0 minute window of accuracy is used by the Company to track our accuracy of reporting to customers. The Commission also requested that we provide information about our accuracy for the 0 to +30 window of accuracy; we have provided "+1 to +30" to ensure we are not double counting any instances where the outage is restored exactly at 0. We have included an additional table that provides accuracy of +1 to +90. Pursuant to Order Point 4(d), we provide Tables 19, 20, and 21 which summarize the annual percent accuracy of ERT estimates provided to electric customers in the NSPM Operating Company, as well as the Minnesota Jurisdiction for the years 2019 thru 2024.

Table 19

Estimated Restoration Time Accuracy							
Entity	**Accuracy Criteria**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**
NSPM	Within -90 to+0	48.3%	53.4%	53.9%	50.4%	48.3%	59.9%
MN Only	Within -90 to+0	49.9%	54.3%	54.8%	51.6%	49.5%	60.6%

Table 20

Estimated Restoration Time Accuracy							
Entity	**Accuracy Criteria**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**
NSPM	Within +1 to +30	10.0%	10.4%	11.3%	12.5%	9.5%	17.1%
MN Only	Within +1 to +30	10.4%	10.3%	10.9%	11.5%	8.2%	17.6%

Table 21

Estimated Restoration Time Accuracy							
Entity	**Accuracy Criteria**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**
NSPM	Within +1 to +90	18.6%	16.6%	19.3%	23.8%	20.6%	17.6%
MN Only	Within +1 to +90	18.7%	16.4%	18.5%	19.9%	17.6%	17.4%

Overall, ERT accuracy has slightly increased in NSPM and MN in the -90 to 0 minute window from 2019 to 2024. This process includes our manual ERT's, or the estimates field representatives provide after they have been able to assess the cause of the outage and determine the necessary remedial action. Field representatives are trained annually on how to assess the ERT in differing situations to help refine the restoration window.

We continue to provide several proactive communication channels when an outage occurs such as email, text, and push notifications via a mobile app. We also provide notification channels that require the customer to pull the information such as our website, social media and outage maps.

Pull channels (website, social media, and outage map) leverage the same data sources as our push channels. This ensures consistent information across channels and provides additional resources to our customers. Customers can also receive information via two-way text. A customer can text us "OUT" to report an electric outage or "STAT" and receive an on-demand text message as to the status of their outage.

The Company continues to identify systems and tools to be used during outages to help improve the outage customer experience. For instance, in 2022 the Company successfully implemented the Electric Outage Restoration (EOR) App. The EOR provides an alternative for receiving assigned outages, completing more convenient and timely status updates and closing electric outage orders in the field. Benefits include increased mobility, integrated customer information and navigation assistance. Ongoing development of the EOR application in 2024 has further improved the timeliness of status updates made by the field personnel, which allows the customer to be well-informed of any updates to the estimated restoration timing.

5. VOLTAGE FLUCTUATIONS

Minn. R. 7826.0500 Subpart 1.I requires the Company to provide:

> *data on all known instances in which nominal electric service voltages on the utility's side of the meter did not meet the standards of the American National Standards Institute for nominal system voltages greater or less than voltage range B.*

Voltage deviations typically result from customers experiencing problems with electrical equipment. High voltage can shorten the life of lightbulbs or result in electric motor damage. Low voltage can have equally significant consequences.

A first responder initially handles customer voltage complaints. If a non-voltage cause cannot be found, we initiate a voltage investigation and install a recording voltmeter. In the metro area, Xcel Energy has a dedicated technician that sets these recorders and performs the voltage investigations. In the non-metro areas, a first responder or a district representative conducts the voltage investigations.

Xcel Energy's allowable service voltage range is 120 volts plus/minus five percent, or a minimum of 114 volts to a maximum of 126 volts. As shown in Table 22, Xcel Energy's allowable service voltage range is within the American National Standards Institute (ANSI) voltage range B.

Table 22
Allowable Service Voltage Range

	Minimum Voltage	Maximum Voltage
ANSI Voltage Range B (service voltage)	110	127
Xcel Energy Range (service voltage)	114	126

During 2024, the Company conducted 338 voltage investigations. The investigations resulted in a diagnosis of a specific voltage problem where voltage did not meet the standards of ANSI Voltage Range B in 102 of the cases. These problems are typically the result of transformer overloads or some other equipment malfunction, such as capacitor banks or voltage regulators. Continuing with 2024, we are experiencing voltage investigations related to an increase in the penetration of solar generation, which can cause additional volt/var variance. In all other cases, either no problem was found, or the root cause was attributed to something other than voltage deviations. In cases where the Company finds the voltage to be out of the acceptable range, we take appropriate actions, including but not limited to swapping transformers, upgrading transformers, or checking capacitor banks.

6. STAFFING

Minn. R. 7826.0500 Supb. 1.J requires the Company 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 addition, Order Point 4(j) in the Commission's October 20, 2023 Order in Docket No. E002/M-22-162, requires the Company to provide *"separate information on the number of contractors for each work center."*

In response to both subpart 1.J and Order Point 4(j), Table 23 below reflects staffing

levels by work center. This table also includes counts for work center personnel that support the electric distribution function such as Administrative Assistant, Ops Coordinators, Designers, Field Operations Associates, Operations Managers, Operations Specialists, Electric Meter Specialists, Distribution Design Supervisor, Field Ops Supervisor, Meter Technician, etc. The total headcount reflects Company employees with a limited number of staff augmentation employees that fill the job of electric service designers. In 2024, Trouble and Operation and Maintenance (O&M) staffing increased in Metro West by fourteen employees; however, three other work centers decreased due to attrition and employee relocations to other work centers. Work center support staff fluctuated by one to eight employees, with a total decrease of thirteen employees.

Table 23
2024 Staffing Levels by Work Center

	Metro East	Metro West	Northwest	Southeast	Other *
Trouble and O&M Staffing	134	210	30	51	49
Work Center Support (and Contractors)	49 (5)	62 (7)	15 (0)	25 (0)	32 (1)

* Xcel Energy personnel associated with the South Dakota / North Dakota work centers provide support in western Minnesota and the Dakotas.

Open and posted Trouble and O&M positions as of year-end 2024 include one in the Northwest work center and three in the Southeast work center. Open and posted work center support positions as of year-end include two in the Northwest work center, four in the Metro East work center, one in the Metro West work center, and one in the Southeast work center.

We note that although we are reporting staffing levels by work center, our field personnel continue to respond to trouble and perform duties in other work centers as need arises.

The contractor counts included in Table 23 above are for a limited number of positions that fulfill the role of Service Designers in our work centers. The Company also hires contractors to perform field and maintenance work, but the Company's contracts with its bargaining employees contain certain agreements regarding when and how contractors can be used. As a general principle, the number of contractors in a region cannot exceed the number of internal field and maintenance personnel. The Company hires contractors to assist with large requests for new service or maintenance projects such as large pole replacement projects discovered through our

pole testing program or major distribution line rebuilds. Contractors can also perform outage response if the Company experiences staffing constraints or if there is emergent outage work (for example, an anticipated large storm system) and the Company determines it is reasonable to redeploy contract crews to the area to respond to expected outages.

Because of the nature of this work, contractors are not assigned to a particular work center. Rather, they work in various work centers depending on the service needs of our customers in Minnesota. Historically, the Company uses the most contractors during the summer months (when most contractor time is used to assist with large requests for new service) and fewer contractors during the winter months. However, the Company does utilize contractors in the winter for programmatic maintenance work, such as the pole replacements or distribution rebuilds described above.

C. OTHER RELIABILITY METRICS REQUESTED BY THE COMMISSION

1. MAIFI

In the Commission's October 20, 2023 Order in Docket No E002/M-22-162, Order Point 4(c), the Commission required the Company to provide *normalized and non normalized reporting of MAIFI data.*

Momentary outage information is available at the feeder level and above, by feeder circuit, and only on feeders that are located in substations with Supervisory Control and Data Acquisition (SCADA) capability. With current distribution infrastructure, there is SCADA capability at 77 percent of our substations and approximately 90 percent of customers are served from these substations. Since MAIFI reporting at the substation level requires this capability, our reporting for MAIFI would also cover approximately 90 percent of our customers. The final installation of AMI meters is targeted to be completed by year end 2025. After the completion of meter installs and network updates, the company will have the capability to utilize AMI technology in reliability reporting.

Table 24 contains our 2024 MAIFI results. Descriptions of the MAIFI calculation methodologies we applied can be found following Table 25.

PUBLIC DOCUMENT
NOT-PUBLIC DATA HAS BEEN EXCISED

Table 24
2024 MAIFI Results

	Non-Normalized	Xcel Energy QSP Tariff	Xcel Energy Annual Rules
Region	**2024**	**2024**	**2024**
Minnesota	0.91	0.62	0.74
Metro East	0.82	0.57	0.71
Metro West	0.88	0.63	0.65
Northwest	1.12	0.65	0.92
Southeast	1.16	0.65	1.12

Table 25 provides our MAIFI performance from 2015 to 2024 for the Tariff and Rules method on a normalized basis using the 2.5 beta method outlined in IEEE 1366. In addition, Table 24 includes non-normalized values per the Commission's Decision in Docket No. E002/M-18-239.

Table 25
MAIFI 2015 – 2024 Normalized

All Days - All Levels, All Causes

MAIFI(<=5Mins)	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Metro East	0.89	0.80	0.82	0.84	0.74	0.97	0.77	0.82	0.60	0.82
Metro West	0.73	0.85	0.61	0.56	0.64	0.72	0.53	0.70	0.62	0.88
Northwest	1.44	1.42	1.37	1.42	1.52	1.27	1.41	0.85	1.27	1.12
Southeast	0.88	1.05	0.73	0.92	1.22	0.96	0.83	0.78	0.79	1.16
Minnesota	0.86	0.91	0.76	0.77	0.82	0.88	0.72	0.76	0.69	0.91

Tariff - IEEE No Transmission Line, All Causes

MAIFI(<=5Mins)	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Metro East	0.81	0.70	0.65	0.81	0.54	0.85	0.69	0.61	0.45	0.57
Metro West	0.55	0.65	0.51	0.53	0.61	0.62	0.50	0.56	0.55	0.63
Northwest	0.69	0.64	0.85	0.75	0.84	0.75	0.95	0.62	0.86	0.65
Southeast	0.32	0.39	0.37	0.44	0.48	0.56	0.52	0.42	0.36	0.65
Minnesota	0.62	0.64	0.57	0.63	0.60	0.70	0.60	0.57	0.53	0.62

Annual Rules - IEEE All Levels, All Causes

MAIFI(<=5Mins)	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Metro East	0.82	0.76	0.79	0.83	0.70	0.95	0.73	0.67	0.49	0.71
Metro West	0.64	0.76	0.55	0.55	0.64	0.63	0.51	0.60	0.57	0.65
Northwest	1.44	0.95	1.28	1.42	1.43	1.22	1.37	0.76	1.25	0.92
Southeast	0.88	1.00	0.73	0.78	0.99	0.90	0.79	0.74	0.78	1.12
Minnesota	0.80	0.80	0.71	0.75	0.77	0.82	0.69	0.65	0.63	0.74

Below is a description of how each of the three MAIFI performance methods is calculated:

Non-normalized (or "All Days" in Graph 14 below)

- Includes outages occurring at all levels (distribution, substation, and transmission).
- Includes all outage cause codes.

- Calculations are based on the number of customers' billing accounts and meters.
- Include all days in calculations.

Xcel Energy (Quality of Service Plan Tariff Method)

- Excludes outages occurring at Transmission Line level.
- Includes all outage cause codes.
- Calculations are based on the number of customers' billing accounts and meters.
- Excludes all Major Event Days that qualify under IEEE 2.5 normalization method after removing Transmission Line level.

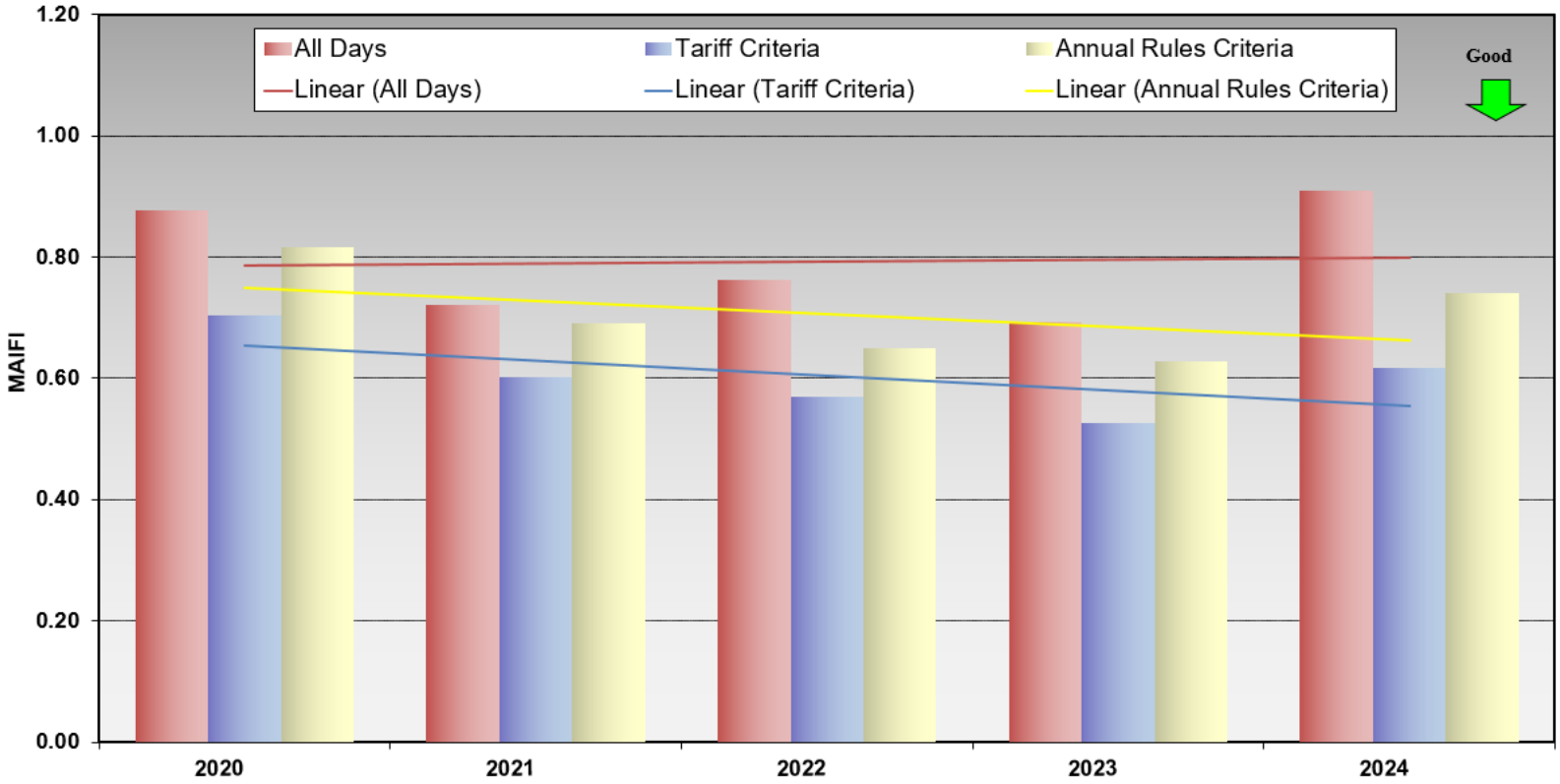
Xcel Energy (Annual Rules Method)

- Includes outages occurring at all levels (distribution, substation, and transmission).
- Includes all outage cause codes.
- Calculations are based on the number of customers' billing accounts and meters.
- Excludes all Major Event Days that qualify under IEEE 2.5 normalization method using all levels.

Graph 14 provides a five-year historical look for Minnesota MAIFI showing the three different normalization methodologies and the associated trend lines.

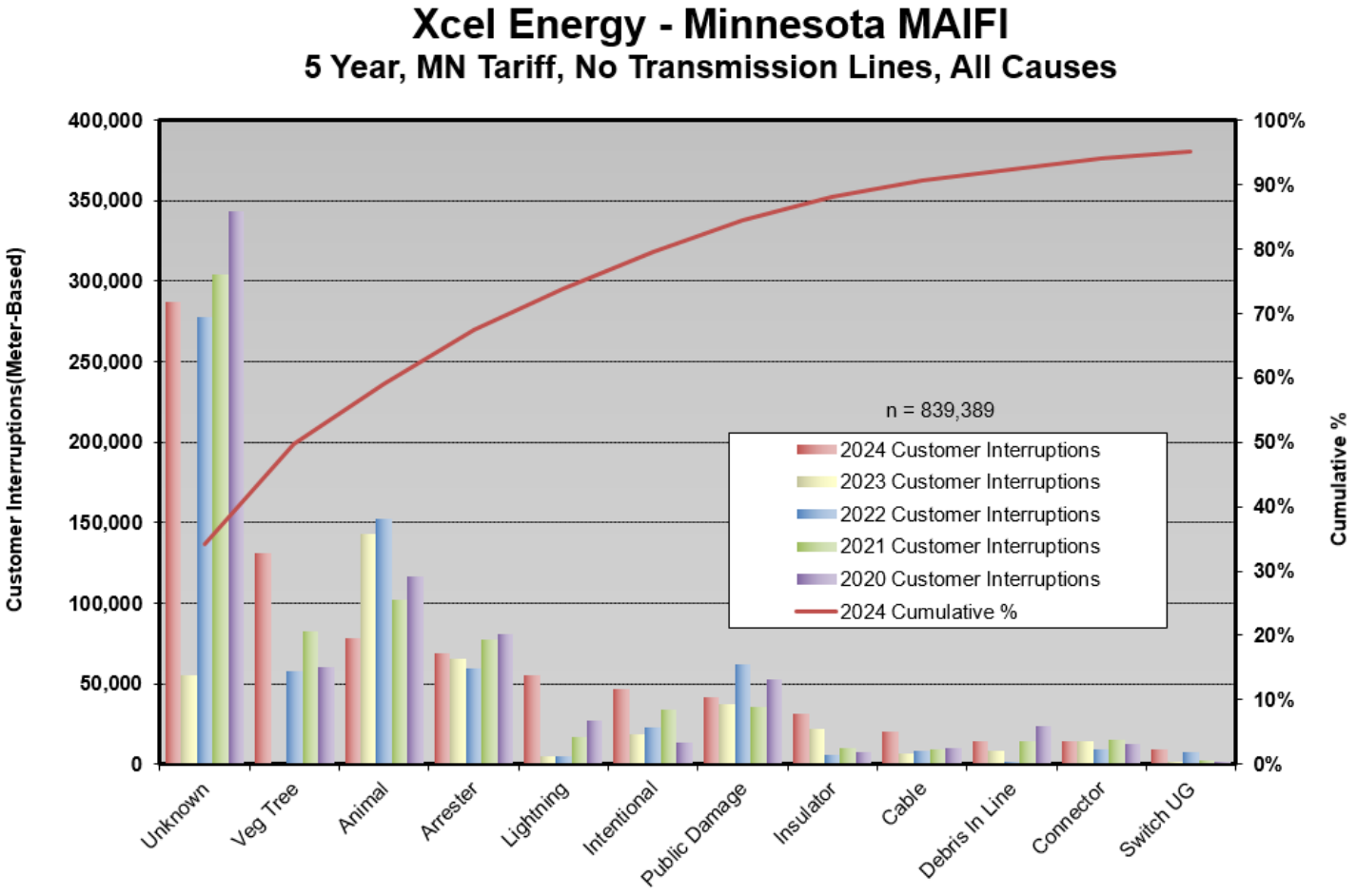
Graph 14

Xcel Energy - Minnesota MAIFI



Graph 15 below is the pareto chart showing the top causes for interruptions for the past five years.

Graph 15



Attachment P provides the detailed MAIFI results and Customer Interruptions by month and by work center for 2020 to 2024.

Our system capabilities and procedures have changed and evolved over time. Therefore, the historical MAIFI results will be based on what our protocol and physical capabilities were for capturing momentary events at that point in time.

2. Customers Experiencing Multiple Interruptions (CEMI)

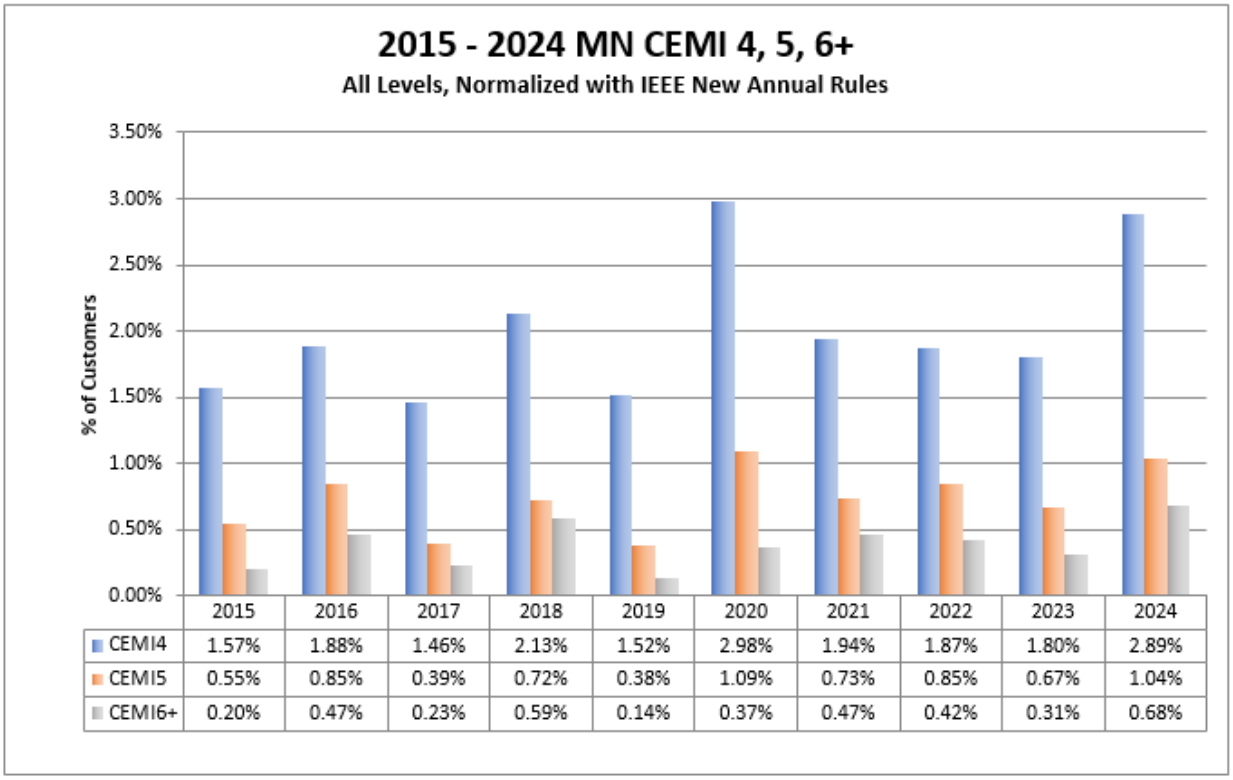
The Commission's October 20, 2023 Order in Docket No E002/M-22-162 at Order Point 4(e) required the Company *to provide CEMI at normalized and non-normalized outage levels of 4, 5, and 6*.

Below, Graph 17 illustrates CEMI results for 2015-2024, normalized using the IEEE 1366 Annual Rules methodology. The bar graph breaks out Minnesota customers that experienced four, five, or six plus events. As shown, the customers experiencing six or more events are typically a much smaller percentage than those experiencing only four or more events. Internally, the Company tracks those experiencing four or more outages on a 12-month rolling basis and reviews opportunities to improve performance through mitigation efforts such as additional tree trimming or installation of animal protection. Just as SAIDI varies from year-to-year, CEMI will vary from year-to-year typically due to weather patterns.

It should be noted that under our Service Quality Tariff, CEMI-related outage credits are given to customers experiencing six or more outage events in a year based on the tariff normalization methodology.

As noted in prior sections, Minnesota experienced increased weather and storm activity in 2024 with a total of 15 Work Center MEDs which is five more than experienced in 2023, and more than any of the prior 10 years. With an increase in weather related outage events and impacts like vegetation, debris on line, damaged poles the company has increased the pole replacement and Feeder Performance Improvement budgets for 2025. Below some of the effects of 2024 weather related events are discussed.

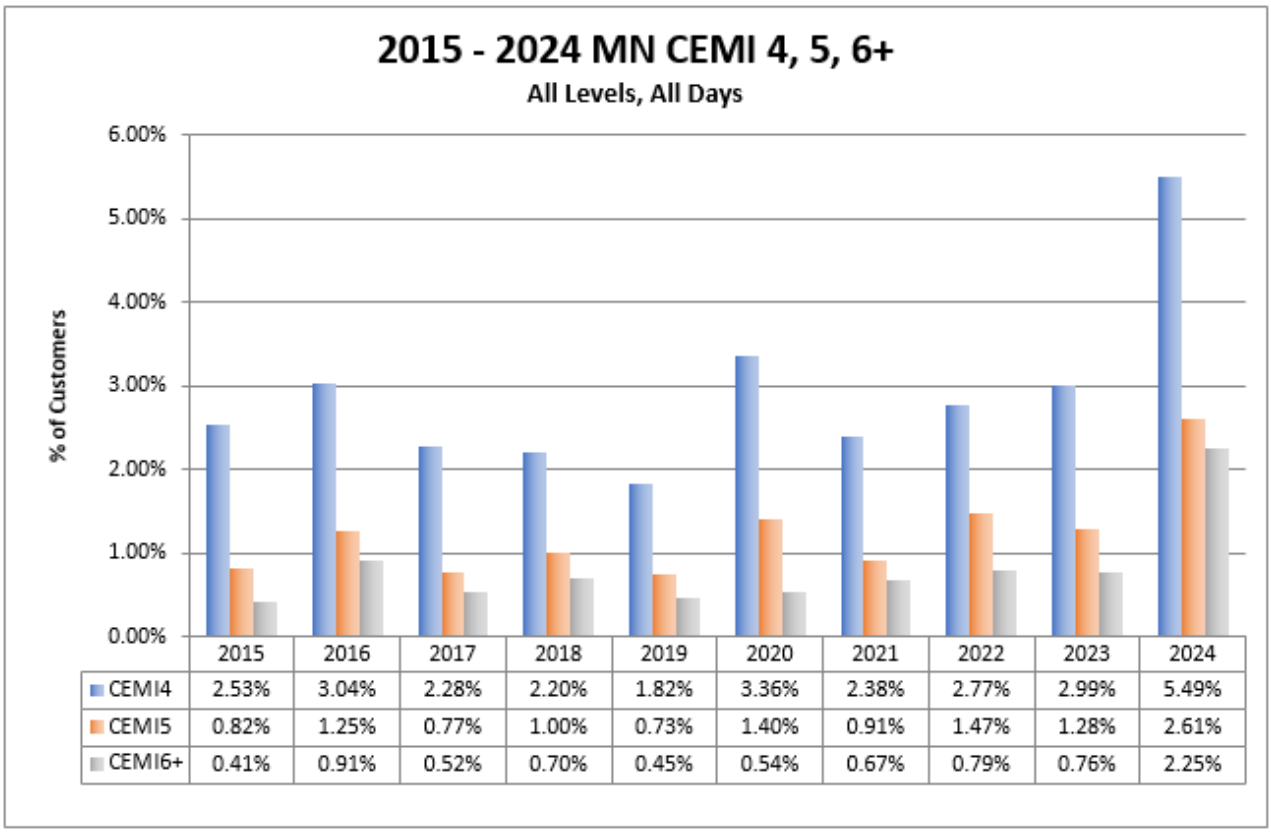
Graph 16



	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
CEMI4	1.57%	1.88%	1.46%	2.13%	1.52%	2.98%	1.94%	1.87%	1.80%	2.89%
CEMI5	0.55%	0.85%	0.39%	0.72%	0.38%	1.09%	0.73%	0.85%	0.67%	1.04%
CEMI6+	0.20%	0.47%	0.23%	0.59%	0.14%	0.37%	0.47%	0.42%	0.31%	0.68%

Graph 17 illustrates CEMI, non-normalized (with MEDs) 2015–2024 data.

Graph 17



	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
CEMI4	2.53%	3.04%	2.28%	2.20%	1.82%	3.36%	2.38%	2.77%	2.99%	5.49%
CEMI5	0.82%	1.25%	0.77%	1.00%	0.73%	1.40%	0.91%	1.47%	1.28%	2.61%
CEMI6+	0.41%	0.91%	0.52%	0.70%	0.45%	0.54%	0.67%	0.79%	0.76%	2.25%

The Commission's October 20, 2023 Order, in Docket N. E002/M-22-162 Order Point 4(f) further required the Company *to provide the highest number of interruptions experienced by any one customer (or feeder, if customer level is not available.)*

In 2024, 14 customers had the highest number of normalized outages (18 outages) and 14 customers had the highest number for all days (18 outages). The customers and the outages were the same for both the normalized and all day group, with all the customers residing in the Metro West region.

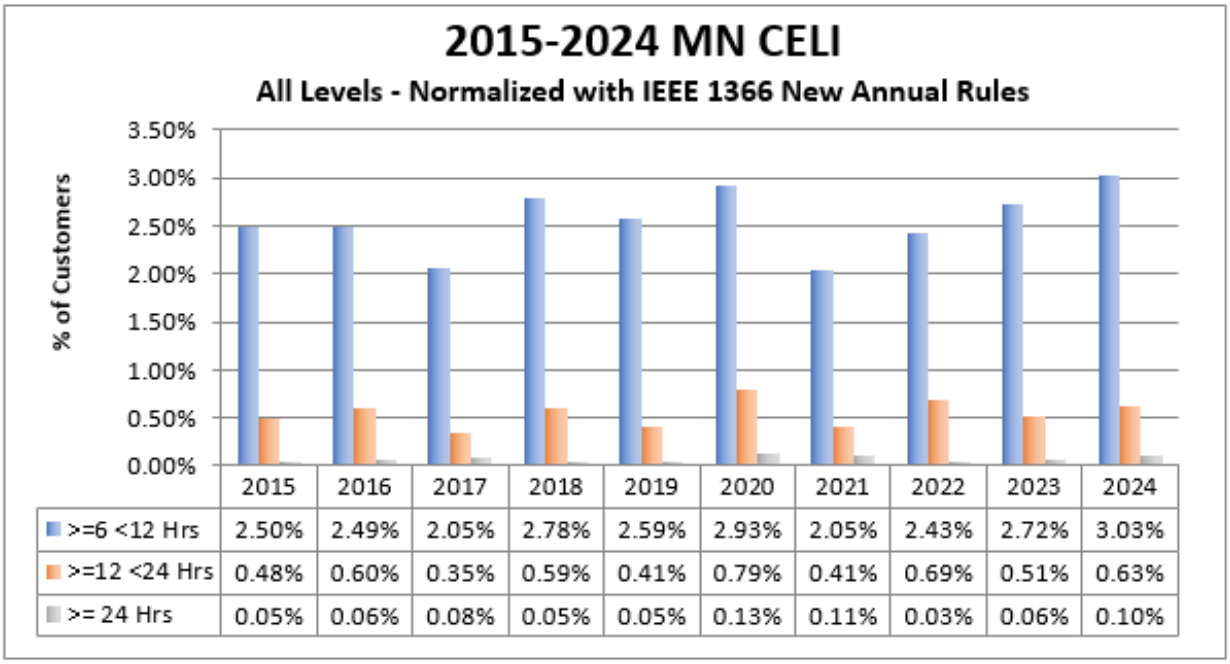
The outages affecting the top normalized and all days customers were the same. The outages were caused by six animal contacts, three equipment failures (connector), three intentional/planned, two tree limb contacts, and single events from lightning strike, damage from the public, human error, and unknown cause.

3. Customer Experiencing Lengthy Interruptions (CELI)

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

Graphs 18 and 19 (normalized and non-normalized, respectively) illustrate the Company's CELI for the percentage of Minnesota customers that experienced long outages. The outages are categorized by those lasting six hours or more but less than 12 hours, 12 hours or more but less than 24 hours, and 24 hours or more during a calendar year. If a customer experienced an outage, this represents the percent chance, by year, of the outage lasting more than six, 12, or 24 hours. Ten years of data are represented (2015-2024) and are normalized based on the IEEE 1366 methodology. Graph 19 provides a slightly different view than the CELI based outage credits in our Service Quality Tariff. The Tariff credits are provided to customers that experience an outage greater than 24 hours based on the tariff methodology. As with the other metrics, although the normalization method attempts to remove the year-to-year variability, variability still occurs, typically due to weather patterns.

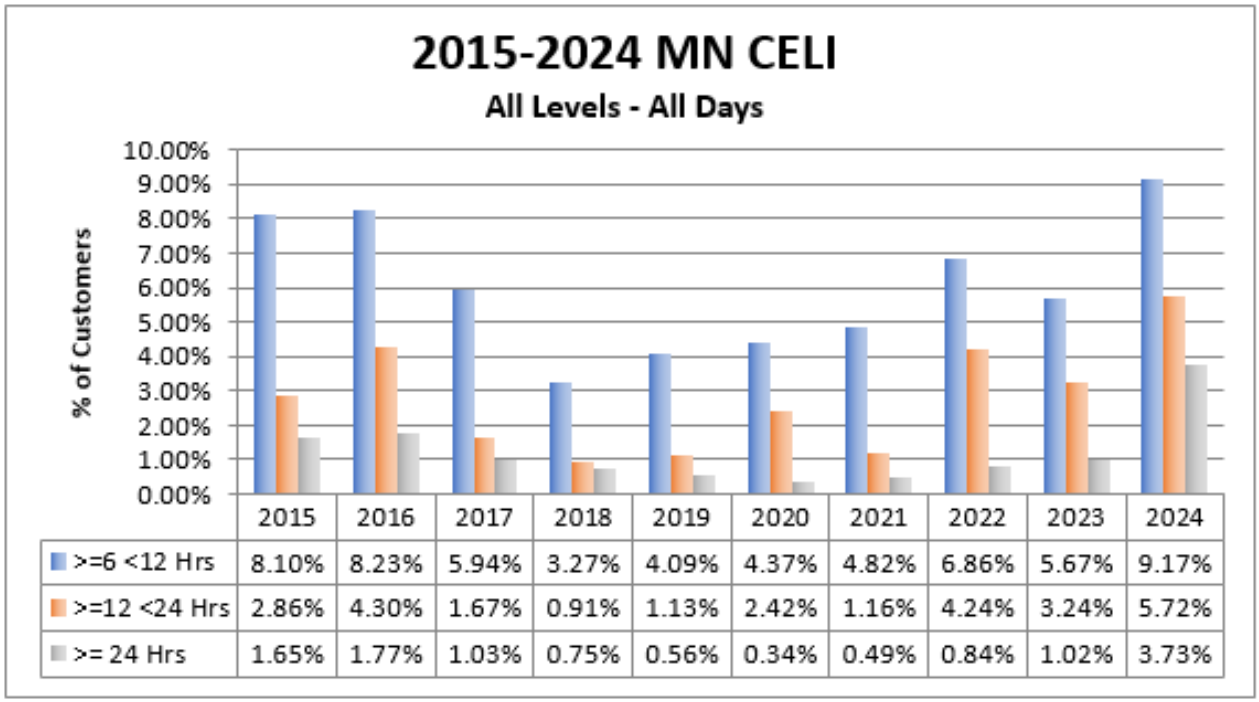
Graph 18



	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
>=6 <12 Hrs	2.50%	2.49%	2.05%	2.78%	2.59%	2.93%	2.05%	2.43%	2.72%	3.03%
>=12 <24 Hrs	0.48%	0.60%	0.35%	0.59%	0.41%	0.79%	0.41%	0.69%	0.51%	0.63%
>= 24 Hrs	0.05%	0.06%	0.08%	0.05%	0.05%	0.13%	0.11%	0.03%	0.06%	0.10%

Graph 20 illustrates CELI, non-normalized (with storms) 2015–2024 data.

Graph 19



	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
>=6 <12 Hrs	8.10%	8.23%	5.94%	3.27%	4.09%	4.37%	4.82%	6.86%	5.67%	9.17%
>=12 <24 Hrs	2.86%	4.30%	1.67%	0.91%	1.13%	2.42%	1.16%	4.24%	3.24%	5.72%
>= 24 Hrs	1.65%	1.77%	1.03%	0.75%	0.56%	0.34%	0.49%	0.84%	1.02%	3.73%

The Commission's October 20, 2023 Order in Docket No E002/M-22-162, Order Point 4(h) further required the Company *to provide the longest experienced interruption by any one customer (or feeder, if customer level is not available.)*

The longest duration outage for both all days and normalized outages was due to an overloaded fuse that blew on July 7, 2024. This outage had a duration of 6,317 minutes which affected two customers in the Metro East region. Customers were out of town at the beginning of the outage and were unaware of the outage until their return. Data from the customer's meter was used to establish the actual outage start time.

We note that the IEEE Distribution Reliability Working Group does not benchmark CEMI or CELI, and the Edison Electric Institute (EEI) benchmark information for CEMI is proprietary. As a result, we are unable to share it. However, the CEMI information stated here is similar in metric design to what EEI uses (which is the count of customers who experience "x" number of outages or more in a year using normalized data) based on several counts of outages.

4. Electric Service Quality Interactive Map

Order Point 19 in the Commission's December 18, 2020 Order in Docket No. E002/M-20-406 requires that:

> *Xcel must work with the workgroup to develop an interactive map, with input from stakeholders on the scope and details of the map. Xcel must file an update on the development of the map by October 1, 2021.*

In compliance with Order Point 19, and in conjunction with a stakeholder workgroup, the Company developed an interactive map that contains increased granularity on certain electric reliability and service quality data, as well as low-income program participation. This map was first made available on the Xcel Energy website on April 1, 2022 and updated annually with our Service Quality Report. The data is combined with demographic data from the U.S. Census Bureau. Any Census Block with 15 or fewer Xcel Energy premises has been excluded to protect customer confidentiality and privacy. The interactive map can be accessed at the link below:[3]

MN Service Quality - Electric

[3] https://experience.arcgis.com/experience/928c8b0e3cd3475fbb7c23b355c2df37

V. PROPOSED ELECTRIC RELIABILITY STANDARDS FOR 2025

Minn. R. 7826.0600, subp. 1 *requires each utility to propose standards for the following reliability indices:*

- *System Average Interruption Duration Index (SAIDI),*
- *System Average Interruption Frequency Index (SAIFI), and*
- *Customer Average Interruption Duration Index (CAIDI).*

Minn. R. Chapter 7826 allows utilities to report reliability performance using normalized data. Normalized data is defined by Minn. R. 7826.0200, subp. 9 as "data that has been adjusted to neutralize the effects of outages due to major storms."

A. Benchmarking the Company's SAIDI, SAIFI, and CAIDI Performance with IEEE

Order Point 5 of the Commission's December 5, 2023 Order in Docket No. E002/M-23-73, directed the Company *to provide an analysis of the incremental costs associated with achieving IEEE first quartile performance that includes a discussion of timeframes, costs, and benefits in their SRSQ 2024 filing.*

Order Point 5 was part of the Commission's acceptance of Xcel Energy's Safety, Reliability and Service Quality Report for 2022, and Xcel Energy provided the analysis requested above as part of its 2023 Report. Because the data was included in the 2023 Report, Xcel Energy understands that it complied with the Commission's directive, and, therefore, did not carry this reporting forward in the instant filing. Xcel Energy can commit to updating in reply comments if there are concerns with this approach.

Order Point 6 of the Commission's December 5, 2023 Order in Docket No E002/M-23-73, requires the Company *to discuss how to lower the difference in SAIDI, SAIFI, and CAIDI between feeders associated with the different customer classes in our 2024 filing, including costs and benefits to implementation. This requirement ends on December 31, 2024, unless the Commission changes or extends it.*

Residential customers make up nearly 90 percent of the statewide reliability indices. As seen in table 14B, commercial and industrial customer classes generally experience fewer service interruptions. These customers are often located in areas with more underground distribution infrastructure and higher load density than residential areas. That higher load density necessitates shorter feeder lengths which also reduces exposure to outage risks. The difference in the CAIDI metric between customer

classes does not appear to be significant. The company is beginning an initial implementation of a targeted undergrounding distribution program that is expected to narrow the difference in reliability performance between customer class. However, the longer distances involved with residential and rural feeders will limit the opportunity to fully match the reliability performance of commercial and industrial areas.

B. Recommendation for 2025 Standards

Minn. R. 7826.0600, subp. 1, requires the Company *to annually propose standards for SAIFI, SAIDI, and CAIDI.* In addition, *the Commission's January 13, 2025 Order in Docket E002/M-24-27, Order Points 6 and 7:*

> *6. Xcel's 2024 statewide Reliability Standard is set at the IEEE benchmarking second Quartile for large utilities. Xcel's Southeast and Northwest work center reliability standards are set at the IEEE benchmarking second quartile for medium utilities. Xcel's Metro East and Metro West work center reliability center standards are set at the IEEE benchmarking second quartile for large utilities.*
>
> *7. Xcel must file a supplement to its 2024 safety, reliability, and service quality report 30 days after IEEE publishes the 2024 benchmarking results, with an explanation for any standards the utility did not meet.*

Minn. R. 7826.0200, subp. 13 defines work center as a portion of a utility's assigned service area that it treats as an administrative subdivision for purposes of maintaining and repairing its distribution system, and Xcel Energy applies that definition as our regional service areas. Customer outages on our system are categorized by region and our delivery system work management is tied to these regional divisions. These regions are Metro East, Metro West, Northwest, and Southeast.

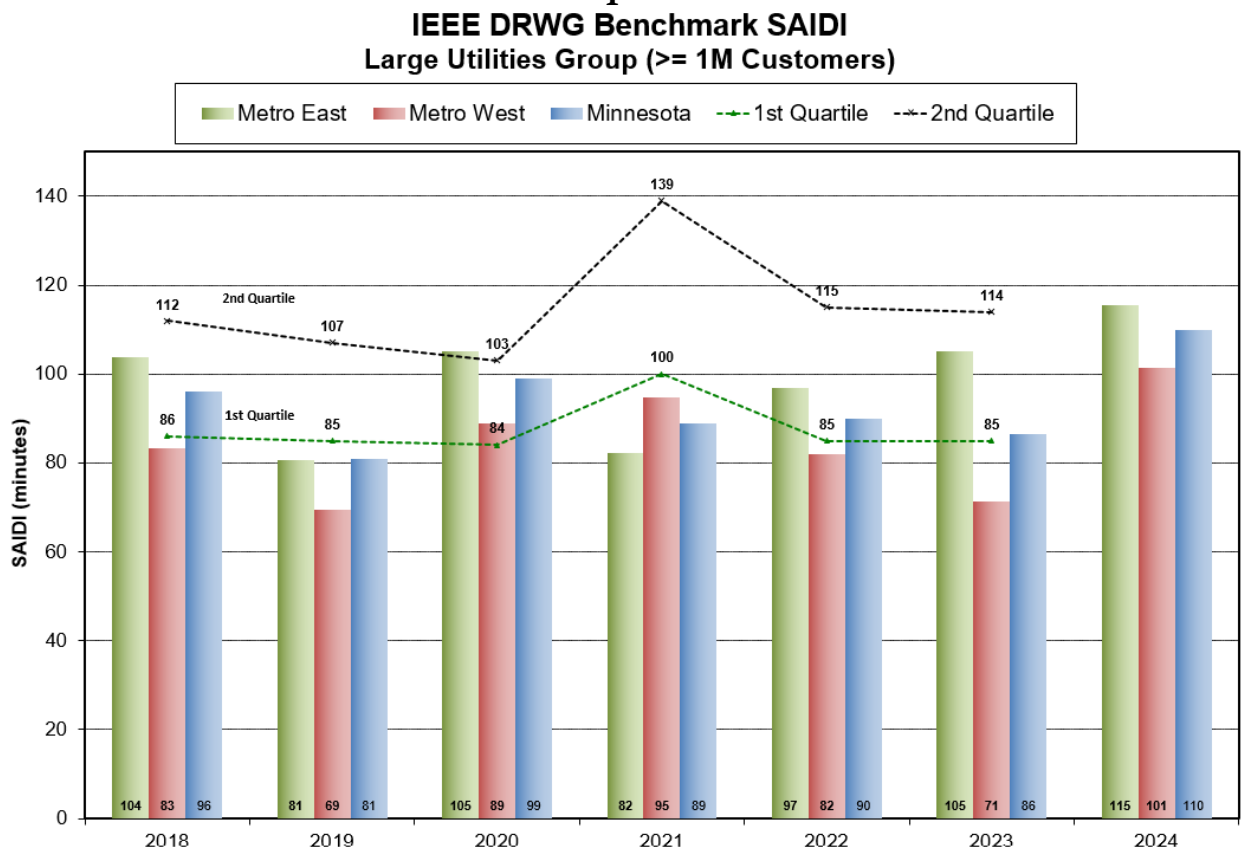
Consistent with the Commission's January 13, 2025 Order, we propose 2025 reliability standards as follows: (1) second quartile for our Metro East and Metro West work centers where our peers are other large utilities; and (2) second quartile for our Southeast and Northwest work centers where our peers are medium utilities. Because the IEEE benchmarking data for the previous year is not available until the third quarter of the following year, the 2025 benchmarking data will not be available until the third quarter of 2026.

Graphs 20 to 25 below show our historical performance for SAIDI, SAIFI, and CAIDI compared to the corresponding benchmark. Graphs 21 to 24 provide the large

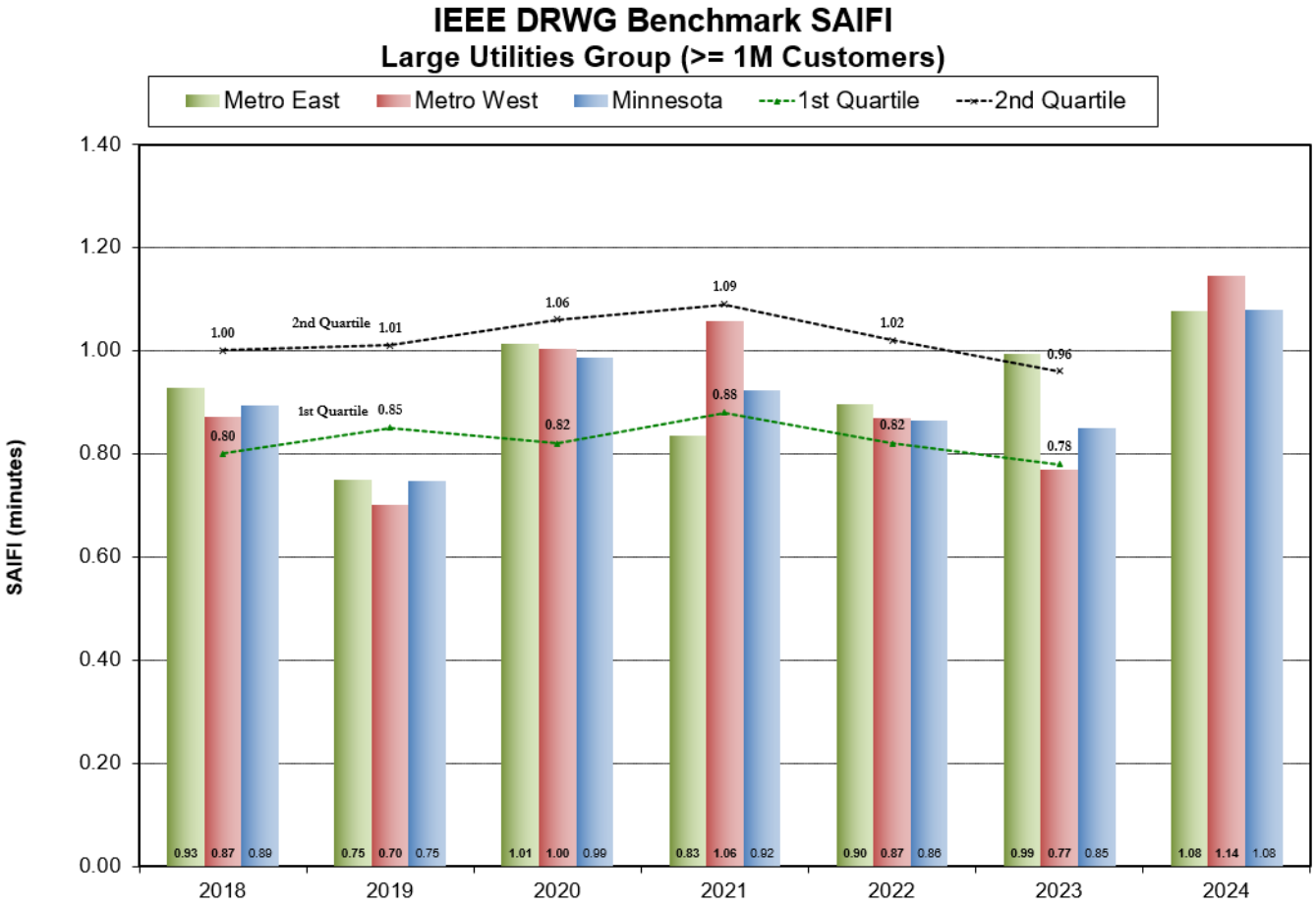
utility information for our Metro West and Metro East work centers. Graphs 23 to 25 provide the medium utility information for our Southeast and Northwest work centers.

Graphs to 25 will be updated in our Supplemental filing consistent with the Commission's November 9, 2022 Order, Order Point 4, providing the 2024 IEEE benchmarking results compared to the Company's 2024 reliability. If our proposed 2025 standards are approved, we would submit a similar filing in the summer of 2026.

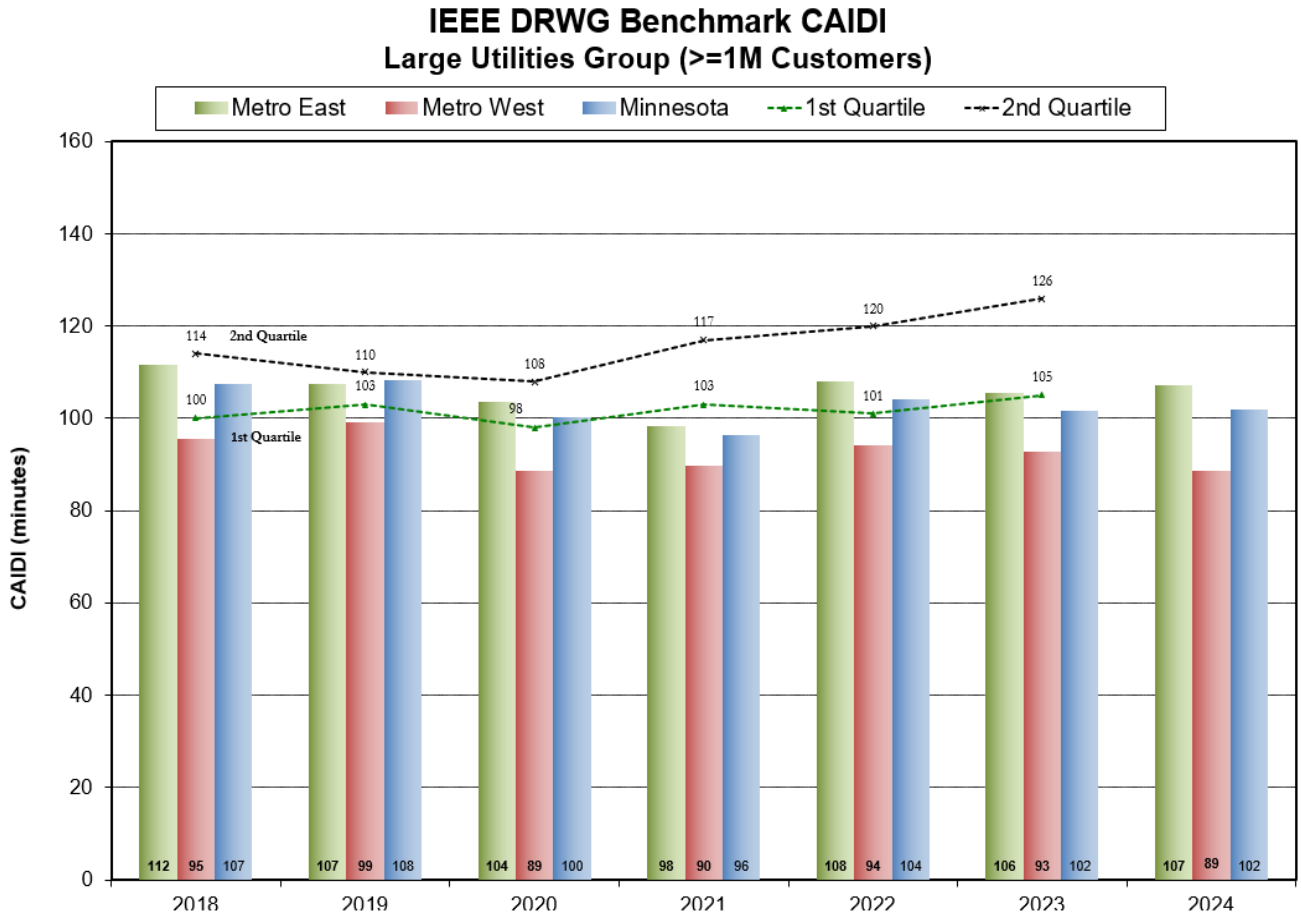
Graph 20



GRAPH 21


IEEE DRWG Benchmark SAIFI
Large Utilities Group (>= 1M Customers)
Metro East
Metro West
Minnesota
1st Quartile
2nd Quartile
SAIFI (minutes)
1.40
1.20
1.00
0.80
0.60
0.40
0.20
0.00
2018
2019
2020
2021
2022
2023
2024
2nd Quartile
1st Quartile
1.00
1.01
1.06
1.09
1.02
0.96
0.85
0.82
0.88
0.82
0.78
0.93 0.87 0.89
0.75 0.70 0.75
1.01 1.00 0.99
0.83 1.06 0.92
0.90 0.87 0.86
0.99 0.77 0.85
1.08 1.14 1.08

GRAPH 22


IEEE DRWG Benchmark CAIDI
Large Utilities Group (>=1M Customers)
Metro East
Metro West
Minnesota
1st Quartile
2nd Quartile
CAIDI (minutes)
160
140
120
100
80
60
40
20
0
2018
2019
2020
2021
2022
2023
2024
114
110
108
117
120
126
100
103
98
103
101
105
112
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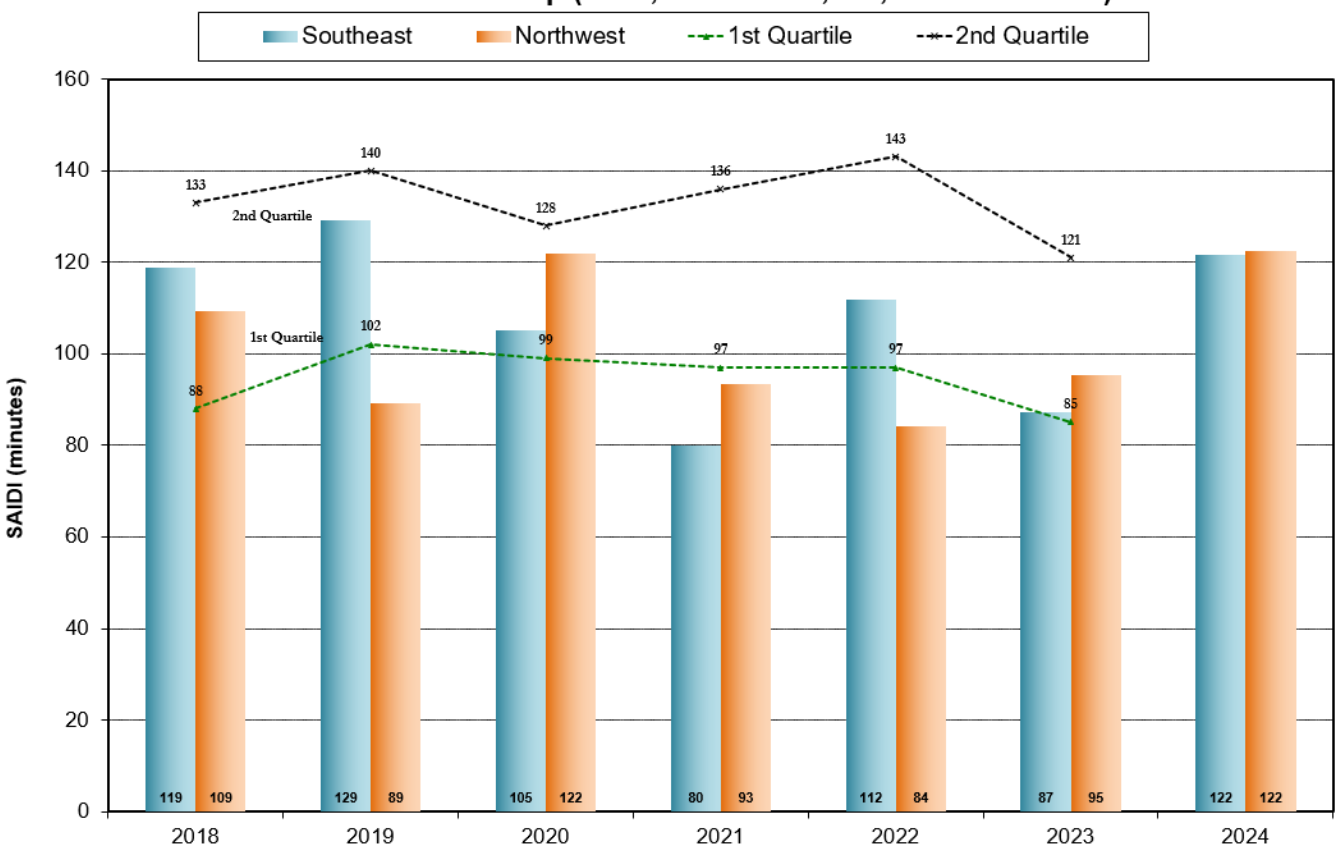
PUBLIC DOCUMENT
NOT-PUBLIC DATA HAS BEEN EXCISED

GRAPH 23

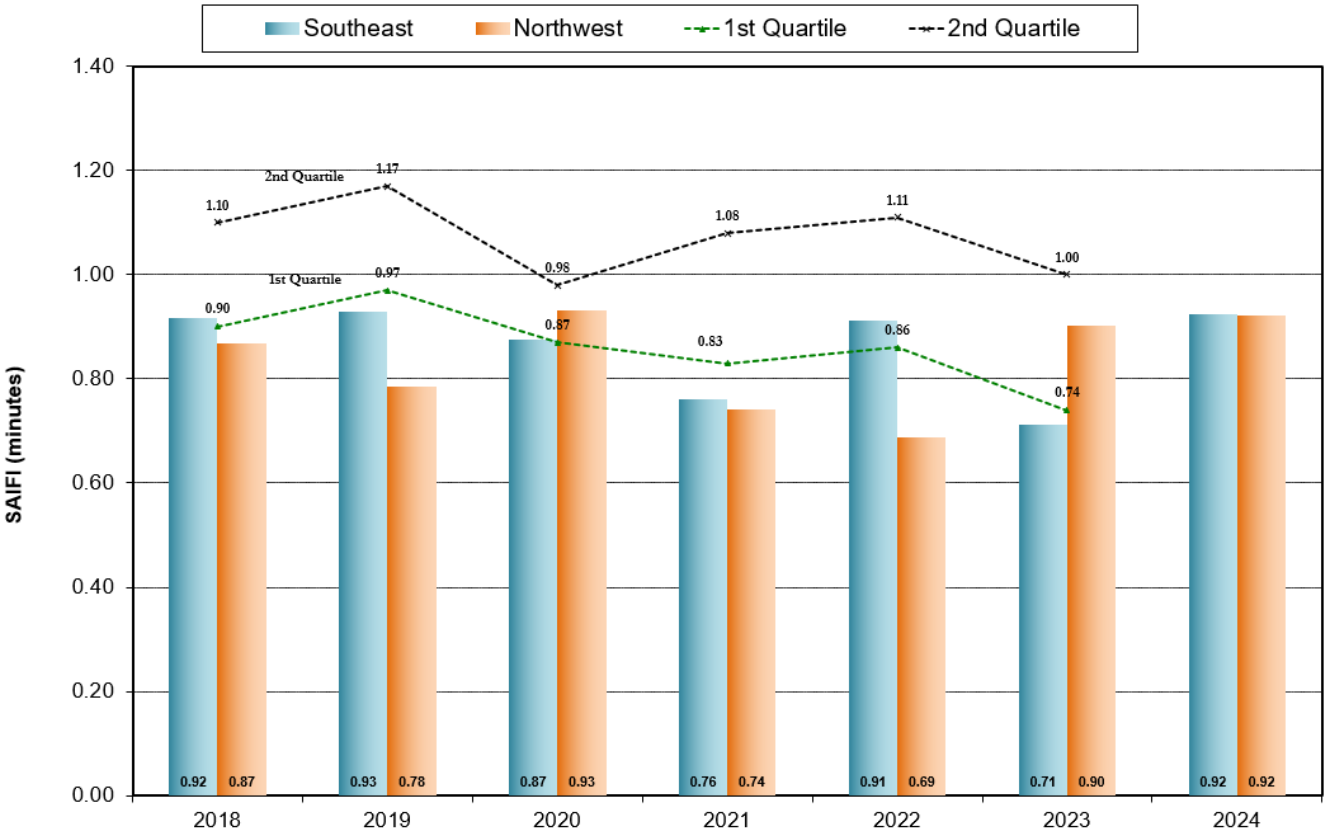


PUBLIC DOCUMENT
NOT-PUBLIC DATA HAS BEEN EXCISED

GRAPH 24

IEEE DRWG Benchmark SAIFI

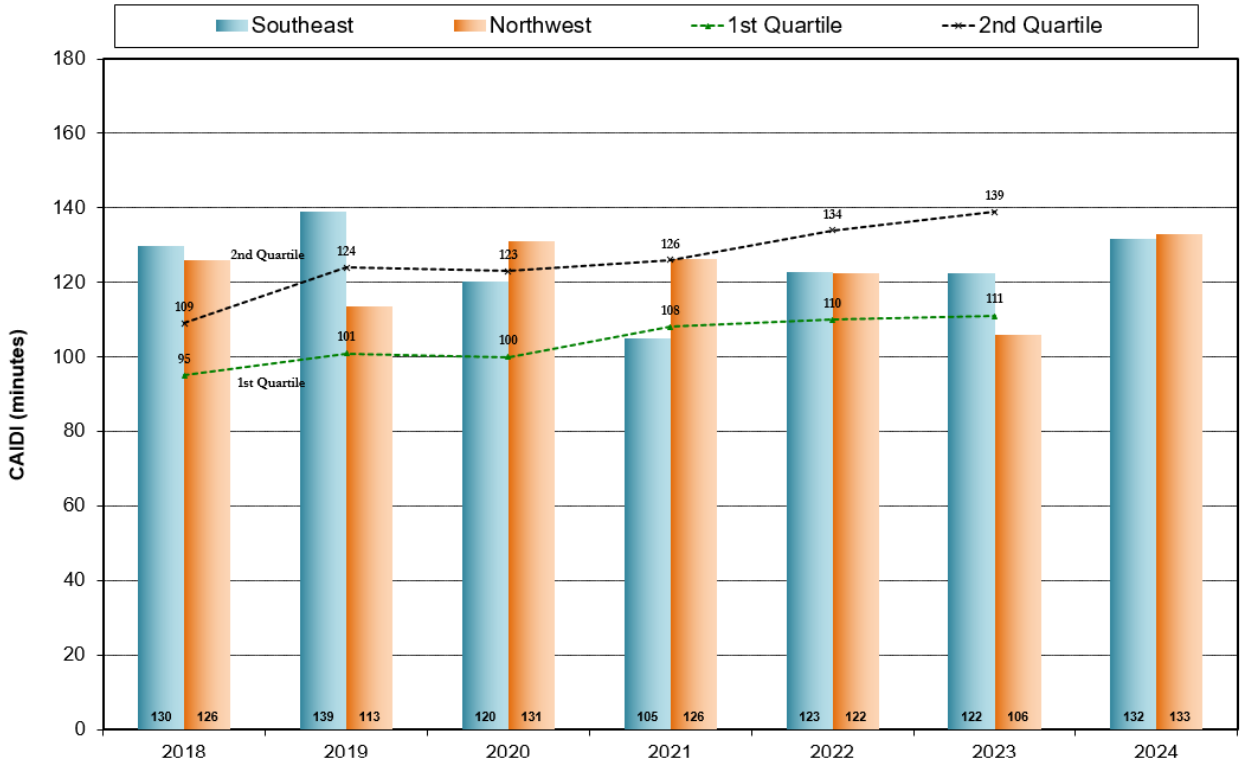
Medium Utilities Group (>100,000 and < 1,000,000 Customers)



Graph 25

IEEE DRWG Benchmark CAIDI

Medium Utilities Group (>100,000 and < 1,000,000 Customers)



DELIVERING CLEAN, SAFE, RELIABLE ELECTRICITY

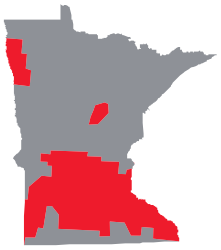
INFORMATION SHEET
MINNESOTA

MINNESOTA SERVICE QUALITY AND RELIABILITY

Xcel Energy®

ABOUT XCEL ENERGY MINNESOTA

At Xcel Energy, we provide our customers with safe, clean, reliable electricity.



1.36 million
electric customers served in Minnesota

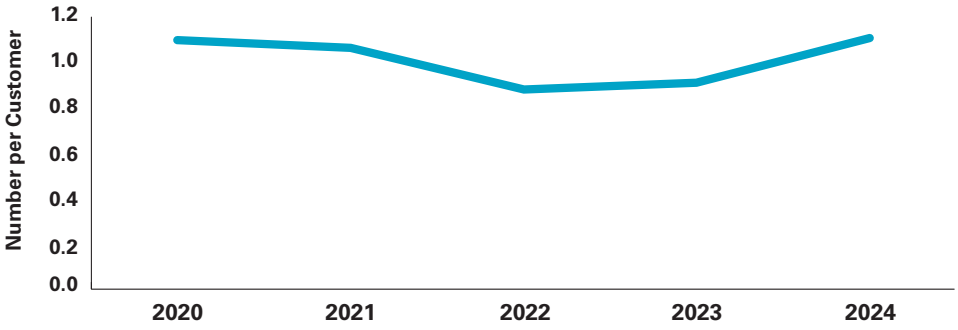
99.979%
Percentage of time Minnesota customers had power in 2024*

110 minutes
Average total time a customer was without power in 2024**

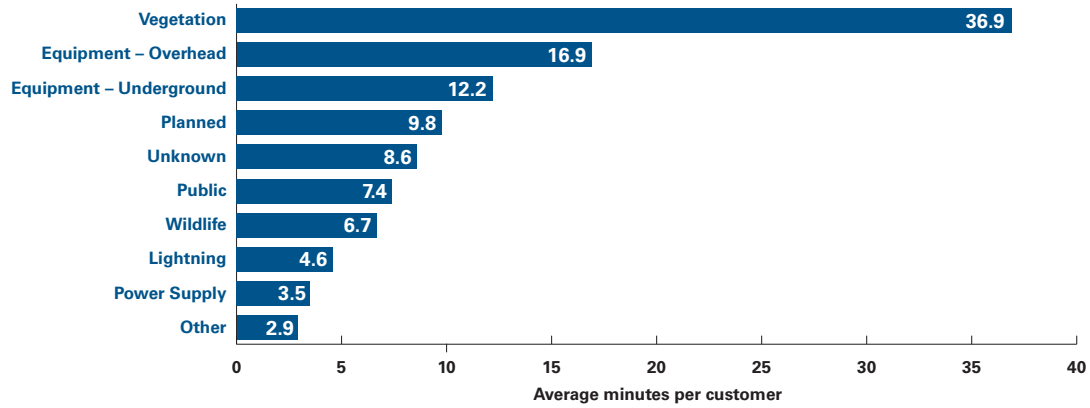
OUR COMMITMENT TO RELIABILITY

Each year, we report on various measurements of electric service reliability. Here are some highlights.

Average number of outages per customer†



Top ten outage causes in 2024**



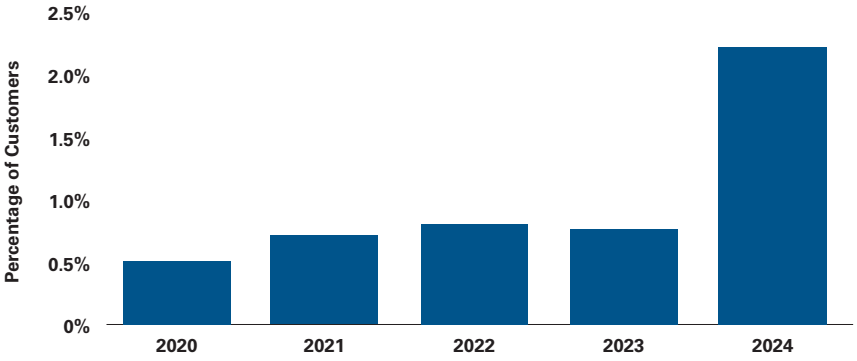
* Also known as Average Service Availability Index, or ASAI. Excludes major event days, which include high-impact storms.
** Also known as System Average Interruption Duration Index, or SAIDI. Excludes major event days, which include high-impact storms.
† Also known as System Average Interruption Frequency Index, or SAIFI. Excludes major event days, which include high-impact storms.
All figures represent 2024 averages for all Minnesota customers, unless otherwise noted.

INFORMATION SHEET

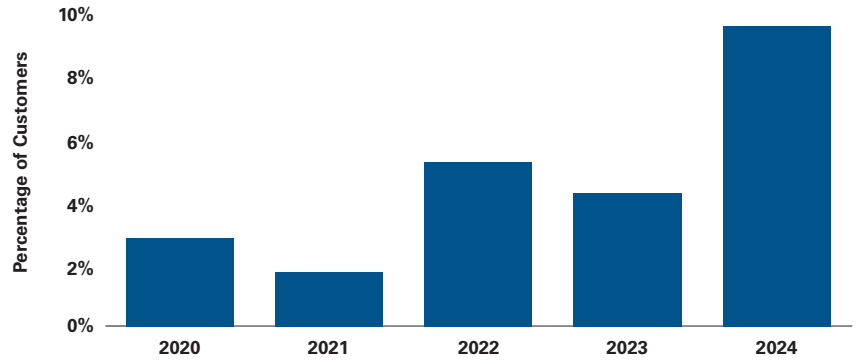
DELIVERING CLEAN, SAFE, RELIABLE ELECTRICITY

MINNESOTA

Percentage of customers with six or more power outages††



Percentage of customers with a power outage lasting twelve or more hours§



The Company has averaged 611 customer complaints per year over the five years from 2020 to 2024. This compares to an average of 376 complaints allowed under the Company's Service Quality Tariff during those years.

2024 Reliability Performance Results

Minnesota	
Average outage duration per customer**	110 minutes
Average number of outages per customer†	1.08
Average outage length***	102 minutes

6,966
New residential electric service installations completed in 2024

30 days
Average time to complete a new residential service installation

CONTACT INFORMATION

Customers can contact us and learn more by visiting **xcelenergy.com**, calling customer service at **800-895-4999**, or finding us on Facebook or Twitter.

If you believe we have not resolved your concerns, you may contact the Minnesota Public Utilities Commission, Consumer Affairs Office at 651-296-0406 or 800-657-3782 or email at consumer.puc@state.mn.us at any time.

†† Also known as Customers Experiencing Multiple Interruptions, or CEMI, includes major event days

§ Also known as Customers Experiencing Lengthy Interruptions, or CELI, includes major event days

** Also known as System Average Interruption Duration Index, or SAIDI. Excludes major event days, which include high-impact storms.

† Also known as System Average Interruption Frequency Index, or SAIFI. Excludes major event days, which include high-impact storms.

*** Also known as Customer Average Interruption Duration Index, or CAIDI. Excludes major event days, which include high-impact storms.

Xcel Energy®

Distribution System Performance Summary

Each year, Xcel Energy develops and manages programs to maintain and improve the performance of its transmission and distribution assets. We identify and implement these programs in an effort to assure reliability, enable proactive management of the system as a whole, and effectively respond when outages occur.

A. Reliability Management Program Development

Causes and trends for historical outages are monitored and reviewed to identify opportunities to maintain and improve reliability. Investments in reliability improvement are made in addition to other capital programs that provide for adequate capacity to meet customer requirements. Investments for improvement become part of the reliability management program. A reliability core team, consisting of both field and planning functions, monitors system performance and progress against performance targets on a regular basis, taking actions as necessary to ensure the best possible system performance.

High-value, 2024 core reliability programs that are continuing into 2025 include our Feeder Performance Improvement Program (FPIP); proactive mainline and tap cable replacement; substation transformer and breaker condition assessment; and vegetation management (tree trimming). The vegetation management program includes investigation of tree-related events causing large outages to determine if the outage would have been preventable if trimming had occurred the day before the outage. These programs all target primary outage cause codes identified in 2024 and prior years' performance and are expected to support strong system performance. The reliability core team will continue to monitor system performance on a regular basis to determine if additional and/or shifts in these programs should be initiated as the year unfolds.

Wildfire Safety Operations (WSO) is a new operational procedure that the Company enables to reduce the risk of a wildfire ignition. The procedure involves feeder breakers and reclosers alternative settings being enabled during evaluated wildfire risk days.

WSO operational mitigations include Enhanced Powerline Safety Settings (EPSS) and Public Safety Power Shutoff (PSPS). EPSS is the Company's standard settings for feeder breakers and reclosers that help reduce the risk of wildfire ignition. When activated, EPSS implements protection settings that could de-energize more of the Company's system following an electrical fault. EPSS therefore is only activated during conditions of elevated wildfire risk. A PSPS will be initiated during severe fire weather conditions that pose elevated risk of wildfire caused by Company equipment as a tool for use in cases where risk is not adequately reduced by other methods. When conditions dictate, the PSPS process will culminate in the de-energization of those portions of the Company's assets that pose a

severe fire risk to surrounding communities. Due to the nature of wildfire and severe weather events, customers deenergized from EPSS or PSPS events may experience longer outage durations which in turn may reduce a customers CAIDI (Customer Average Interruption Duration Index). Before the system is reenergized after EPSS or PSPS events the feeders must be physically inspected for damage, which contributes to longer outage durations.

1. FLISR Reliability Performance

Beginning in 2021 and through 2027, we will continue our long-term Fault Location Isolation and Service Restoration (FLISR) deployment. FLISR technology has the potential for reducing the number of customers experiencing service interruptions for feeder level outages. A five-year history of outages will be evaluated to determine feeders that would benefit and justify FLISR investment. The installation of automated field devices such as reclosers provide initial reliability benefits once they are operational in the field and additional reliability benefits as we integrate and enable the automated field devices and functionality with Advanced Distribution Management System (ADMS).

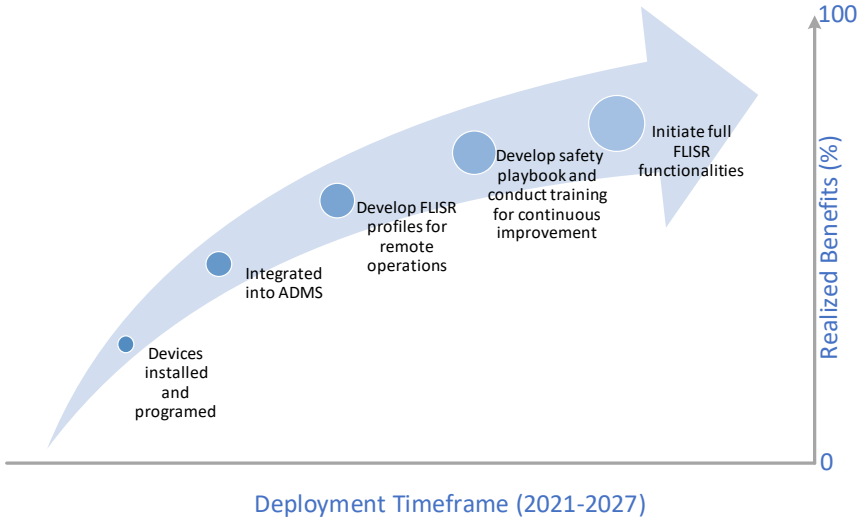
We expect that FLISR will improve our overall reliability performance and a customer's overall outage experience. However, our performance in certain reliability metrics may decline after the FLISR technology is enabled. For instance, FLISR will help some customers avoid sustained outages. Sustained outages are tracked by the System Average Interruption Duration Index (SAIDI) and System Average Interruption Frequency Index (SAIFI) metrics (annual average number of sustained service interruptions per customer served), and shorter duration outages (less than five minutes) are tracked by the Momentary Average Interruption Frequency Index (MAIFI) metric. In essence, we expect that FLISR will result in some customers having a momentary outage that would have previously been a sustained outage.

As a result, we expect that customers will experience fewer sustained outages, improving our SAIDI and SAIFI performance, while our MAIFI performance may decline. We also expect that FLISR may cause our Customer Average Interruption Duration Index (CAIDI) metric to decline over-time. CAIDI is a measure of the length of time the average customer can expect to be without power during an interruption, calculated by dividing the sum of customer interruption durations by the total number of customer interruptions. CAIDI can decline when there is higher volume from outages other than on mainline feeders, which can take longer to address. This does not mean our response or performance is declining; rather, the metric calculation reflects that fewer customers are impacted by shorter duration outages. While there is nuance to how FLISR may impact each of the reliability indices on an overall basis, the FLISR technology provides overall benefits to customers by reducing the numbers of customers experiencing sustained service interruptions and reducing the duration of feeder level outages.

The remote and automated switching capabilities associated with FLISR support a more resilient grid, in addition to reliability benefits. Whether storm-related or due to other unforeseen circumstances that limit employee movement (such as the COVID-19 pandemic), remote operations capabilities provide a means by which to perform critical operations when staff is otherwise limited in numbers or movement. This is a benefit to our customers that is difficult to quantify, but valuable nonetheless.

The outright reliability benefit of FLISR feeders is not easily quantifiable with minimal years and events available for data collection and analyzing. Even without years of system trend data for FLISR feeders, we have still observed a reduction in sustained outages. As an example, a feeder level outage occurred on February 28, 2025 and was caused by a tree in a distribution feeder line. A recloser was installed towards the middle part of the feeder as part of the FLISR project. The recloser was operational in "local mode" on the feeder. When the tree contacted the distribution lines, the recloser opened instead of the feeder breaker, resulting in 1,020 customers that did not have an outage, totaling approximately 54,000 avoided customer minutes out. As the Company enables the full functionality of FLISR in ADMS, it is likely it could result in even greater reliability benefits. Figure J1 is an illustrative representation of the benefits as we enable FLISR functionality across the different phases and as we expand the functionality to a greater number of feeders.

Figure J1
Phases of FLISR Functionality and Benefits



As depicted in Attachment J-1, we have 226 devices installed and programmed on 117 feeders operating in 'Local Mode' of which there are 30 feeders operating in full FLISR functionality or 'Closed Loop Mode'. We plan to continue to expand the number of devices installed and programmed and the number of feeders enabled with the full FLISR functionality through 2027.

2. Reliability Management Programs – "Star Chart"

After considering the most common failures and their causes, as well as at-risk equipment, we have developed work plans, or programs, to target our reliability investments; we show a summary of these programs in the "Star Chart" below. These programs represent proactive investments in our transmission and distribution systems that we believe are most likely to improve overall reliability, asset health, and meet various contingency planning requirements. These investments are made in addition to other capital investments that provide for adequate capacity to meet customer requirements and to accommodate load switching during outage response to minimize customer impacts.

Table 1
Minnesota Program Summary
Reliability Management Program Impacts (Star Chart)

NSPM Program Summary

	Funded Programs	Description	2022 Actuals (k$)	2023 Actuals (k$)	2024 Actuals (k$)	IMPACTS			
						SAIFI	CAIDI	CEMI	Complaints
Reliability	**Feeder Perf. Improvement Program** (OH & UG)	FPIP evaluates and implements improvements for feeders experiencing an increased number of outages based on prior year information.	3,271	6,501	1,866	★		★	★
	Outage Exception Reporting Tool (OH & UG)	OERT process provides automatic notification to area engineers when repeating outage criteria have been met and engineering solutions are implemented to eliminate recurring problems.	668	1,548	726			★	★
	Mainline Cable Replacement, (UG)	Deteriorating non-jacketed cable is failing and causing repeat outages. Proactive and reactive replacement of this cable reduces the outages.	4,448	2,207	4,268	★			★
	Tap (URD) Cable, (UG)		31,980	25,628	31,936	★	★		★
	Feeder Infrared Evaluation (OH)	Many pieces of equipment show excess heating prior to failure. The FIRE program provides infrared scans of overhead mainline which reveal specific equipment that is likely to fail so it can repaired prior to causing an outage.	45	67	103	★			
	Vegetation Management (Transmission & Distribution)	Cost benefit prioritized circuit trimming in NSPM. Continued reactive "Hot Spot" trimming.	35,522	27,067	27,713	★		★	★
Integrity	**Pole Assessment & Replacement** (Distribution)	Pole Assessment include an above groundline visual inspection. Groundline inspections are based on age and environment and may include visual, sound and bore and excavation. Life extension preservative treatments occur on majority of poles starting in 2021.. Based on results poles may be tagged for replacement.	25,621	29,254	80,857	★	★		
	Transmission Substation	Replaces end-of-life equipment in order to reduce maintenance costs and improve reliability.	15,373	33,763	36,448	★			
	Line ELR Work (Transmission)	Identifies lines that have components that have reached their end of life or where significant refurbishment work is needed to enhance system performance and reliability. Project focus may be to extend life of existing asset 20 + years or to replace and address future capacity upgrade cconcerns.	5,200	6,289	1,965	★			★

Footnote: The above table reflects multi-year initiatives that are part of the Reliability Management Program (RMP). Information is based on current RMP and is subject to change.

Funding information for previous years is a combination of Capital and O&M dollars; most of the equipment replacement dollars are capital expense while the inspection and testing programs include O&M dollars; O&M dollars and capital for pole replacements and FIRE program are currently estimates since changes are included in broader programs of work (e.g., OH rebuild OH maintenance accounts).

We have indicated the primary performance impacts of these programs with a red star, where applicable; performance impacts include SAIFI , CAIDI, CEMI and Customer Complaints.

3. Management Programs – Key Initiatives

Table 2 below outlines primary program indicators for our key reliability initiative and programs. The actual amount of work completed under each program varies from year-to-year and is based primarily on assessments of those areas requiring the greatest attention, as well as the results of our condition assessment (i.e., the number of deficiencies requiring corrective action). For further description of the programs described in Table 2 below, please see the Star Chart (Table 1) above.

Table 2

	2024	2023	2022	2021	2020	2019	2018
Vegetation Management Program							
Total Overhead Distribution miles completed	1,050	1,128	2,239	2,019	1,606	2,647	2,307
Total Overhead Transmission miles completed	641	670	807	754	762	896	768
Normalized Tree-coded Sustained Cust Ints.(W/O Storms)	350,300	247,376	231,463	168,848	184,302	170,994	214,299
Non-normalized Tree-coded Sustained Cust Ints.(With Storms)	747,861	444,037	405,731	285,454	286,735	242,158	243,867
Underground Cable Replacement Program							
# of Segments That Have Been Replaced (est.)	2,541	2,526	2,591	2,252	2,579	1,158	1,504
# of Failures(Only on Primary Cable)	1,197	1,269	1,429	1,656	1,459	1,301	1,366
Feeder Infrared Evaluation (FIRE)							
# of Feeders Scanned	272	126	270	276	259	280	209
# of Hot Spots Corrected	17	18	16	28	66	55	67
Feeder Performance Improvement Plans (FPIP)							
Investigations Completed	150	109	91	97	112	111	108
Wood Pole Inspection Plan							
Total Distribution Wood Poles Inspected	53,626	54,642	42,330	39,045	40,179	10,312	33,720
Total Transmission Wood Poles Inspected	4,547	1,915	4,329	4,945	3,124	3,381	2,464

Reliability Management Key Initiatives/Programs

Information based on Current RMP and is subject to change

4. Reliability Management Programs – Work Practices

Improvements to existing work practices that the reliability core team members identify and implement are also an important contributor to the customer reliability experience and our reliability performance. These are operational and/or procedural changes intended to either reduce the duration of outages should they occur, or to reduce the frequency of outages.

As noted in the Reliability Management Work Practices Table 3 below, we assess and prioritize the actions based on a balance of their ability to positively impact reliability (high, medium or low), as well our ability to incorporate into standard work practices, with most occurring concurrently. Many of these actions do not require additional funding to implement and are achieved via ongoing employee training and/or incorporation into

standard work procedures. We continuously monitor all actions and update our plan as appropriate.

Table 3
Reliability Management Work Practices

Areas of Opportunity	Key Initiative	Action/ Program	Description	Reliability Impact
Resource Management	Duration	Work Coordination	Introducing a full-time work coordinator to support and schedule all appointment work when able. The coordinator will be in contact with customers prior-to, during and following their scheduled appointment. This will optimize use resources in support our customers. Better customer service for appointments and resource availability for outage restoration work will result.	Medium
Substations	Frequency	System Integrity	Substation inspection done on every substation specific to identifying vegetation issues, in addition moving to an electronic work collection APP to track and prioritize timely maintenance.	High
	Duration	Equipment Failure Response	Install Mobile subs and connection cables as quickly as possible when customers are out due to equipment failure.	Medium
Feeders	Duration	Restore before repair	During a feeder event Control Center personnel restore service to as many customers as possible before making temporary/permanent repairs.	Medium
	Duration	Patrol Optimization	Use of application software to assist manual patrol of outages and momentary outages. This will allow for quicker response and permit a single resource to respond to a greater number of outages or appointments.	Medium
	Frequency	Intentional Outages	Reduce impact of intentional outage to ensure all steps are being taken to keep the maximum number of customers on. Verify switching to reduce customer counts. Repair while hot instead of taking outage.	Medium
	Frequency & Duration	VM Partnership	Partner with Vegetation Management leadership to prioritize trimming of circuits that are scheduled to be trimmed. Substations to be trimmed with associated feeders.	High
	Frequency & Duration	Feeder Patrol Program	Looking for unfused taps and animal protection. Continued use of IR/thermo imaging to identify problems.	Medium
	Frequency	Condition Assessment & Correction	Utilizing UAS (Drone) technology to complete a comprehensive inspection of our worst performing feeders upon request.	High
Control Center	Duration	Restore before repair	Advanced technology going into the control centers and the field.	High
	Duration	Distribution Operations Model	ADMS (Advanced Distribution Management System) application is live in all NSP Control Centers (4); as the application matures, we are working to locate the fault on the circuit to cut down on the response time.	High
	CAIDI	Model 1/0 Switching	Standard operating procedure to model 1/0 URD as close to real time so the OMS model will reflect the configuration of the URD circuit after it has been switched.	Medium
	CAIDI	Validate Restoration Times	Tighten up existing process on actual restoration times, utilize approver process to ensure outage times are correct.	High
COM	CAIDI	COM Saturday Crews	Crews metro COM Saturday Crews. 3 Metro East and 3 Metro West	Medium
	CAIDI	Backup Crews	Currently negotiating on-call crews for outage response, Friday-Monday to enhance response time to customer outages.	Medium
	SAIFI & CAIDI	Underground Cable Repair	Repair and/or replace cables as directed by engineering	High
	SAIFI	REMS/CEMI Work	Complete work referred by engineering in a timely manner	Low
Reliability Team/ Communications	SAIFI & CAIDI	On-going Regular Reliability Meeting	Meet regularly to review reliability and share ideas to improve reliability performance.	Low
	CAIDI	Continuous Improvement	In 2021, Control Center Leadership is producing a detailed CAIDI report on a monthly basis, the purpose and impact of the report is to call out opportunities for improvement on response, meet with the first responders to develop plans to remove obstacles to response and holding employees accountable to timeliness of response using the data and operator comments.	Medium

5. CEMI Tools

Xcel Energy developed tools that allow us to better track the causes of our CEMI (Customers Experiencing Multiple Interruptions). In conjunction with a mapping tool that identifies customers with multiple outages over a revolving 12 months, we can look at our customers' experiences and then provide a visual representation of those outages in our service territory. Although the metric measures customers who have experienced at least six sustained outages during non-storm days, we can study customers' experiences earlier. This customer-centric tool helps highlight customers that have had outages from different causes rather than a single root cause. In other words, this tool does not look at the device that caused the outage, rather it examines how many times a customer was out of service regardless of the reason.

These tools complement other programs that help us identify specific equipment issues (for instance, the same device tripping multiple times). The CEMI tools provide the link from the outage information to the specific customer information on a holistic basis. Since much of our analysis has focused on a system perspective, this tool enhances our reliability planning by helping focus on the customers' experiences.

There are many reasons a customer could have an outage. These causes include downed trees, animal contact, a car hitting a pole, or even a lightning strike. Each one of these causes could show up on a different report for a different piece of equipment that all flow down to the same customer. The CEMI tools allow us to analyze customer experience truly from a customer perspective. These tools also help our efforts in the long term to reduce repeated outages for customers.

The Company provides more detail about CELI metrics, including responding to specific Commission order points, in the body of its Annual Report.

B. Conclusion

In accordance with Order Point 3 in the Commission's December 12, 2014 Order in Docket No. E-002/M- 14-131, we include this process summary with the data we use to determine areas of greatest impact, develop targeted investment strategies, ensure the execution of annual work plans, and assure reliability and ongoing satisfactory performance of the system as a whole. We know that positive results are a direct reflection of consistent and sustained focus, and as such, believe our reliability management programs and other actions provide a solid foundation on which to deliver and maintain reliable performance of our distribution system.

	Field Device Installations					FLISR Enablement
Circuit ID	2019	2022	2023	2024	TOTAL	Closed Loop Enabled
XCEL4605				1	1	N
XCEL2014				2	2	Y
XCEL4897				2	2	Y
XCEL1069				4	4	Y
XCEL9640				1	1	N
XCEL7694			2	1	3	N
XCEL2840			1		1	N
XCEL8809					0	N
XCEL3294				1	1	N
XCEL7190				1	1	N
XCEL5751				4	4	N
XCEL5447				2	2	N
XCEL7511				2	2	N
XCEL3641				2	2	N
XCEL1761				1	1	N
XCEL9708				2	2	N
XCEL5093				2	2	N
XCEL4211				3	3	N
XCEL8119				3	3	N
XCEL4453				1	1	N
XCEL7260				2	2	N
XCEL5775				2	2	N
XCEL2049				3	3	N
XCEL1959				4	4	N
XCEL9238				1	1	N
XCEL9909				1	1	N
XCEL1875				1	1	N
XCEL1440				1	1	N
XCEL1199			1	2	3	N
XCEL4439				3	3	N
XCEL6612				2	2	Y
XCEL8195	3				3	Y
XCEL7761				2	2	Y
XCEL8168				2	2	N
XCEL4224			1	2	3	N
XCEL4151			2	1	3	N
XCEL4567				2	2	N
XCEL4727	3				3	Y

	Field Device Installations					FLISR Enablement
Circuit ID	2019	2022	2023	2024	TOTAL	Closed Loop Enabled
XCEL4165				1	1	N
XCEL4673			2		2	N
XCEL2977			1		1	N
XCEL8595			1		1	N
XCEL9579			1		1	N
XCEL7715			3		3	N
XCEL5702		1			1	N
XCEL6309			1		1	N
XCEL5584		1	1		2	N
XCEL6227			1		1	N
XCEL3581			1		1	N
XCEL9545			1		1	N
XCEL5003			3		3	Y
XCEL7797			3		3	Y
XCEL5042			2		2	N
XCEL8174			1		1	N
XCEL8689			1		1	N
XCEL8767			4		4	N
XCEL7040			1		1	N
XCEL9321				1	1	N
XCEL5124				1	1	N
XCEL9489				1	1	Y
XCEL9029				2	2	Y
XCEL8372				2	2	Y
XCEL5240				1	1	N
XCEL6093				2	2	Y
XCEL8402			1		1	N
XCEL2893				1	1	N
XCEL4075				2	2	N
XCEL1922				1	1	N
XCEL8341				1	1	N
XCEL4797				1	1	N
XCEL5057				1	1	N
XCEL5615			2		2	N
XCEL9137			1		1	Y
XCEL3732				2	2	N
XCEL8291				2	2	N
XCEL1124				4	4	Y
XCEL3393				1	1	N
XCEL4891				1	1	N
XCEL2323			3	1	4	Y
XCEL6213		1	2		3	N

	Field Device Installations					FLISR Enablement
Circuit ID	2019	2022	2023	2024	TOTAL	Closed Loop Enabled
XCEL8711				4	4	N
XCEL7265				2	2	N
XCEL4731				1	1	N
XCEL4989				2	2	N
XCEL2616				1	1	N
XCEL1913				2	2	N
XCEL5666				2	2	N
XCEL9017				3	3	Y
XCEL2329			1		1	N
XCEL8923			1		1	N
XCEL2861				4	4	N
XCEL5269				2	2	N
XCEL8759				2	2	N
XCEL5488			2	2	4	N
XCEL6486			1	1	2	Y
XCEL3321				1	1	N
XCEL4071				1	1	N
XCEL6396			1	1	2	N
XCEL3941				2	2	N
XCEL9521				3	3	Y
XCEL2604				1	1	Y
XCEL4205				3	3	Y
XCEL9970				1	1	N
XCEL6446				2	2	Y
XCEL3092		4			4	Y
XCEL2201		2			2	Y
XCEL7061		2			2	Y
XCEL5904				1	1	N
XCEL7510			2		2	Y
XCEL2084			1		1	Y
XCEL4715				3	3	Y
XCEL8333			1	1	2	N
XCEL7370			2		2	Y
XCEL3500				3	3	Y
XCEL4003			3		3	N
XCEL5950			2		2	N
XCEL2236			1		1	N
XCEL7194				1	1	N
Total	**6**	**11**	**62**	**147**	**226**	

* 2019 Field Device Installations were complete as part of initial testing for ADMS deployment

						All levels, All Causes included			All Causes, Distribution Substation, Transmission Substation, and Transmission Line levels			All levels, No "Planned" Cause Includes Bulk Power Supply			All levels, "Planned" Cause only Includes Bulk Power Supply		
Metro East						**Total**			**Bulk Power Supply**			**Unplanned**			**Planned**		
	Feeder ID	Substation	City	SAIFI	SAIDI	CAIDI	Outages	Customers Affected	Customer Mins Out	Outages	Customers Affected	Customer Mins Out	Outages	Customers Affected	Customer Mins Out	Outages	Customers Affected	Customer Mins Out
	[Protected Data Begins																	
1			Saint Paul	1.50	677.7	452	2	3	1,355	0	0	0	2	3	1,355	0	0	0
2			Saint Paul	4.33	624.7	144	5	65	9,370	0	0	0	4	50	8,616	1	15	754
3			Roseville	2.36	478.1	203	8	901	182,641	1	382	12,079	6	898	182,191	2	3	450
4			Saint Paul	1.24	460.9	370	12	1,479	547,519	0	0	0	6	1,373	534,979	6	106	12,539
5			Cottage Grove	2.94	406.5	138	29	1,067	147,568	0	0	0	26	1,062	147,146	3	5	423
6			Stillwater	2.15	364.2	170	138	4,437	752,056	1	2,058	83,040	93	4,211	727,832	45	226	24,225
7			Saint Paul	2.12	350.7	165	28	3,723	615,463	0	0	0	27	3,711	613,987	1	12	1,476
8			Saint Paul	5.06	345.0	68	11	1,645	112,123	2	639	29,717	9	1,643	112,033	2	2	90
9			Little Canada	1.50	338.6	226	43	2,946	667,008	0	0	0	22	2,569	626,893	21	377	40,115
10			Mahtomedi	1.05	334.0	318	112	2,360	751,600	0	0	0	67	1,933	705,600	45	427	46,000
11			Forest Lake	2.11	328.2	156	268	13,806	2,150,403	0	0	0	201	12,866	2,093,400	67	940	57,003
12			Saint Paul	2.77	325.0	118	43	6,336	744,567	1	2,290	116,721	26	5,724	695,104	17	612	49,464
13			Forest Lake	4.33	312.0	72	90	10,784	776,501	1	2,486	236,170	46	10,413	737,008	44	371	39,493
14			Maplewood	2.25	294.8	131	19	2,072	271,799	0	0	0	18	2,071	271,626	1	1	173
15			New Scandia	2.19	289.7	132	119	6,794	899,805	1	3,079	221,688	107	6,671	890,304	12	123	9,502
16			Saint Paul	3.57	286.2	80	12	1,420	113,896	0	0	0	11	1,418	113,740	1	2	156
17			Oak Park Heights	2.82	281.3	100	20	1,751	174,940	1	621	24,977	10	1,653	156,216	10	98	18,724
18			Saint Paul	2.41	278.0	115	22	3,368	388,870	0	0	0	13	3,168	363,418	9	200	25,452
19			Maplewood	3.22	273.8	85	26	2,150	182,643	0	0	0	22	2,102	170,409	4	48	12,234
20			W Saint Paul	2.12	272.8	129	46	5,118	658,432	0	0	0	37	5,049	648,764	9	69	9,668
21			Bayport	3.55	264.7	75	83	7,678	572,081	1	2,134	86,961	69	7,483	561,823	14	195	10,258
22			Lino Lakes	1.61	264.3	164	108	6,730	1,102,471	0	0	0	42	5,686	1,033,260	66	1,044	69,211
23			W Saint Paul	2.42	259.6	107	26	3,968	425,447	0	0	0	22	3,912	421,199	4	56	4,248
24			Roseville	1.06	257.8	243	4	143	34,804	0	0	0	4	143	34,804	0	0	0
25			New Brighton	2.38	251.8	106	44	4,077	431,804	0	0	0	30	3,988	411,352	14	89	20,451

(1) Based on **Jan 1-Dec 31, 2024**, year-end normalized data (IEEE Op Co Level)
"Total" includes all causes, all levels
"Bulk Power Supply" includes Distribution Substation, Transmission Substation, and Transmission Line levels, all cause codes
"Unplanned" includes all levels and no outages with a primary cause code of "Intentional/Planned", Includes Bulk Power Supply outages
"Planned" includes all levels and only outages with a primary cause code of "Intentional/Planned", Includes Bulk Power Supply outages

Metro East Poor Performing Feeders (2)
Based on performance **Sept 2023 to Aug 2024**, Major Event Days are included

CMO: customer minutes out

Feeder ID	Substation	City	SAIFI	SAIDI	CAIDI	Reasons for Poor Performance	Operational Changes Made, Considering or Planned
		Afton	2.9	1513.8	520.22	85.2% of CMOs are due to vegetation/storms. 10.3% of CMOs are unknown, but are likely vegetation.	Replacing hydraulic reclosers, installing wildlife protection, installing new fuses, relocating ~1.27mi mainline overhead conductor.
		Hugo	2.7	872.9	329.40	89.2% of CMOs are due to vegetation/storms.	Identified 221,000ft of small conductor replacement and tree trimming. Identified 29,100ft of feeder targeted underground and 8,000ft of tap targeted underground. Replacing 5 hydraulic reclosers.
		St. Paul	1.5	1547.7	1,052.86	94.5% of CMOs are due to vegetation.	Replace 4 poles/crossarms/insulators, trim trees as needed.
		Afton	1.2	948.4	771.04	87.8% of CMOs are due to vegetation. 9.1% of CMOs are due to equipment failures.	Replacing 250+ fuses, converting an overhead tap to underground, replacing copper overhead conductore, replacing 6 hydraulic reclosers, and trimming vegetation.
		Stillwater	2.8	1056.0	374.45	94.6% of CMOs are due to vegetation.	Replacing hydraulic reclosers, installing wildlife protection, installing new fuses, reconfiguring single phase and enabling single phase trip / single phase lockout.
		Cottage Grove	1.7	1134.8	655.97	86.5% of CMOs are due to vegetation. 8.4% of CMOs are due to OH equipment.	Reconfigure large overhead tap into 2 UG loops. Install 3 viper reclosers on the feeder, convert 2 additional taps to UG, and install 1 tripsaver.
		St. Paul	1.8	971.7	552.12	80.3% of CMOs are due to vegetation. 17.5% of CMOs are due to OH equipment.	Replace two crossarms, convert ~1 mile of OH mainline to UG, finish 4kV conversion of taps.

Protected Data Ends]

(2) Distribution outages only, Major Event Days are included

Metro West

	Feeder ID	Substation	City	SAIFI	SAIDI	CAIDI	All levels, All Causes included: Total Outages	Total Customers Affected	Total Customer Mins Out	All Causes, Distribution Substation, Transmission Substation, and Transmission Line levels: Bulk Power Supply Outages	Bulk Power Supply Customers Affected	Bulk Power Supply Customer Mins Out	All levels, No "Planned" Cause Includes Bulk Power Supply: Unplanned Outages	Unplanned Customers Affected	Unplanned Customer Mins Out	All levels, "Planned" Cause only Includes Bulk Power Supply: Planned Outages	Planned Customers Affected	Planned Customer Mins Out
	[Protected Data Begins																	
1			Waconia	4.52	798.0	177	79	15,373	2,714,812	0	0	0	66	15,321	2,713,074	13	52	1,738
2			Minnetonka	5.90	767.7	130	135	10,056	1,308,124	0	0	0	117	9,974	1,288,738	18	82	19,386
3			St Louis Park	1.45	690.0	477	41	886	422,256	0	0	0	18	761	411,787	23	125	10,469
4			Watertown	5.19	681.4	131	104	7,090	930,068	2	2,248	124,245	51	6,082	616,451	53	1,008	313,617
5			Plymouth	2.35	533.3	226	8	445	100,785	1	189	16,254	5	396	97,441	3	49	3,343
6			Minnetonka	3.58	532.4	149	39	3,179	473,334	0	0	0	21	3,091	465,526	18	88	7,808
7			St Louis Park	2.74	511.8	187	38	3,844	718,569	0	0	0	30	3,804	702,731	8	40	15,838
8			Franklin Twp	5.74	402.5	70	17	425	29,788	1	119	9,573	3	147	16,364	14	278	13,424
9			Hopkins	2.21	382.7	173	7	1,013	175,272	0	0	0	5	813	165,249	2	200	10,024
10			Minnetonka	3.68	377.9	103	104	5,727	588,041	0	0	0	55	5,408	569,285	49	319	18,757
11			Savage	4.11	366.4	89	19	11,545	1,029,946	0	0	0	14	11,508	1,020,498	5	37	9,449
12			Plymouth	3.25	348.2	107	5	2,829	302,934	1	869	220,726	5	2,829	302,934	0	0	0
13			Minneapolis	1.00	348.0	348	1	2	696	0	0	0	1	2	696	0	0	0
14			Plymouth	1.23	338.5	275	52	637	174,982	0	0	0	30	509	162,159	22	128	12,823
15			Watertown	3.16	323.4	102	56	4,989	510,049	2	3,127	234,593	37	4,901	505,688	19	88	4,361
16			Edina	1.33	323.1	243	11	418	101,455	0	0	0	5	382	97,548	6	36	3,907
17			Chanhassen	2.48	322.6	130	2	342	44,521	0	0	0	2	342	44,521	0	0	0
18			Tonka Bay	1.43	299.6	210	92	2,323	487,409	0	0	0	49	2,064	456,329	43	259	31,080
19			St Louis Park	3.00	298.0	99	50	3,233	320,664	0	0	0	21	2,863	282,804	29	370	37,860
20			Minneapolis	2.92	285.9	98	3	140	13,724	1	48	2,850	3	140	13,724	0	0	0
21			Winsted	3.43	281.8	82	41	3,930	322,602	0	0	0	29	1,607	286,402	12	2,323	36,200
22			Burnsville	2.61	276.9	106	23	2,902	308,435	0	0	0	22	2,895	307,707	1	7	728
23			Minnetonka	2.59	272.9	105	79	4,188	441,587	0	0	0	65	4,116	439,014	14	72	2,573
24			Plymouth	1.19	268.9	226	60	1,237	279,375	0	0	0	49	1,171	271,725	11	66	7,650
25			Minneapolis	1.00	268.1	268	1	1	268	0	0	0	1	1	268	0	0	0

(1) Based on **Jan 1-Dec 31, 2024**, year-end normalized data (IEEE Op Co Level)
"Total" includes all causes, all levels
"Bulk Power Supply" includes Distribution Substation, Transmission Substation, and Transmission Line levels, all cause codes
"Unplanned" includes all levels and no outages with a primary cause code of "Intentional/Planned", Includes Bulk Power Supply outages
"Planned" includes all levels and only outages with a primary cause code of "Intentional/Planned", Includes Bulk Power Supply outages

Metro West Poor Performing Feeders (2)
Based on performance **Sept 2023 to Aug 2024**, Major Event Days are included

CMO: customer minutes out

Feeder ID	Substation	City	SAIFI	SAIDI	CAIDI	Reasons for Poor Performance	Operational Changes Made, Considering or Planned
		Mound	3.57	1,438.99	403.08	The largest contributor of CMOs have been feeder level outages. 5 of the 10 feeder level outages have been caused by Transmission/Substation events. Vegetation has been the primary outage cause.	Recommended the following projects: -Rebuild the head end of the MND071 feeder from the 1-MND071 switch to the MND071-MND072-A tie switch. The feeder is currently underbuilt on an abandoned transmission line. Design to evaluate whether undergrounding through this area is feasible. -Replace hydraulic recloser R21140L with a Viper. This recloser has operated frequently and would benefit from a replacement to a Viper with communications. -Replace rotted crossarms along mainline that were identified on a feeder patrol. -Replace a tie switch that has reached end of life and is on a shorter pole with poor clearances.
		Minnetonka	7.91	1,753.35	221.66	Vegetation is primary outage cause. There is existing copper mainline and old arresters/cutouts. Lightning has caused several flashover outages.	Convert portion of overhead mainline feeder to underground. Reconfigure large tap underground loop. Replace cutouts and arresters. Correct tap coordination.
		Waconia	5.72	1,272.52	222.47	WWK311 is a long 34.5kV feeder with a significant amount of mainline exposure. Mainline events make up 70% of the feeder's CMOs with vegetation being the top outage cause. The SCADA Mate switches have not properly operated on several events which has had a negative reliability impact. Additionaly, the three-phase overhead tap serving Crown College has had outage issues.	Recomendation is to remove the SCADA Mates and replace them with Viper reclosers in order to minimize the impact of mainline events. Also, the three-phase overhead feed to Crown College should be retired and a new underground feed installed.
		Saint Louis Park	3.12	3,199.76	1,025.56	56.4% of CMOs caused by vegetation, 18.7% of CMOs caused by underground equipment, 4.1% of CMOs caused by overhead equipment, 14.3% of CMOs caused by other equipment.	Replace fuse, replace ~800ft of undergound feeder cable, replace ~40,000ft of tap cable, replace transformers, replace LBCs, replace poles, replace pedestals, replace ~14,000ft secondary wire, replace 4 switchgear with remote supervisory switchgear, install fault indicators.
		Saint Louis Park	2.60	2,711.99	1,043.07	48.9% of CMOs caused by vegetation, 27.6% of CMOs caused by overhead equipment, 22.6% of CMOs caused by planned work.	Replace hydraulic reclosers, add/replace tap fusing, install wildlife protection.
		Eden Prairie	5.53	1,749.84	316.43	The primary contributor of CMOs have been mainline events. This feeder was hit particularly hard by storms in 2024. A significant portion of the feeder mainline was recently rebuilt as part of a Transmission line rebuild project. Also, a project to improve SCADA Mate comms is in progress.	Replace back lot line overhead tap with underground loop. Replace fuse with tripsaver. Install wildlife protection at transformer pole.
		Edina	2.41	2652.48	1,100.61	96.3% of CMOs caused by vegetation or storms.	Replace hydraulic reclosers, add/replace tap fusing, install wildlife protection.

Protected Data Ends]

(2) Distribution outages only, Major Event Days are included

						All levels, All Causes included			All Causes, Distribution Substation, Transmission Substation, and Transmission Line levels			All levels, No "Planned" Cause Includes Bulk Power Supply			All levels, "Planned" Cause only Includes Bulk Power Supply		
Northwest						**Total**			**Bulk Power Supply**			**Unplanned**			**Planned**		
	Feeder ID	Substation	City	SAIFI	SAIDI	CAIDI	Outages	Customers Affected	Customer Mins Out	Outages	Customers Affected	Customer Mins Out	Outages	Customers Affected	Customer Mins Out	Outages	Customers Affected	Customer Mins Out
	[Protected Data Begins																	
1			Wood Lake	5.92	619.3	105	39	2,766	289,199	1	465	68,355	26	2,733	284,708	13	33	4,491
2			St Cloud	3.28	509.1	155	15	7,422	1,152,014	0	0	0	15	7,422	1,152,014	0	0	0
3			St Cloud	2.69	405.7	151	67	12,749	1,926,181	1	4,743	913,834	61	11,360	1,774,610	6	1,389	151,570
4			Sauk Rapids	2.18	379.9	174	72	8,282	1,440,046	0	0	0	63	6,496	1,238,892	9	1,786	201,155
5			Atwater	1.52	349.9	230	11	920	211,658	1	604	111,136	11	920	211,658	0	0	0
6			Raymond	2.79	346.7	124	29	2,490	308,861	1	886	23,497	26	1,591	284,784	3	899	24,077
7			Hector	1.13	339.2	300	15	740	221,846	1	666	213,020	7	687	214,966	8	53	6,880
8			Sartell	2.16	326.6	151	47	7,975	1,204,228	0	0	0	46	7,967	1,202,628	1	8	1,600
9			Waite Park	2.17	315.2	145	9	1,073	155,711	0	0	0	8	1,043	155,332	1	30	379
10			Cottonwood	1.43	314.4	220	22	1,187	261,570	1	832	217,152	21	1,177	260,690	1	10	880
11			Greenwald	2.20	305.3	139	11	644	89,460	1	292	3,212	10	352	28,432	1	292	61,028
12			Morgan	1.60	303.9	190	114	1,740	331,195	0	0	0	34	1,419	299,841	80	321	31,354
13			Sartell	1.58	279.4	177	26	2,151	381,348	0	0	0	26	2,151	381,348	0	0	0
14			Montrose	1.58	256.5	163	36	3,154	512,790	1	1,988	373,744	32	3,149	511,895	4	5	895
15			Woodland Twp	1.18	251.4	214	38	1,562	334,065	1	1,311	296,286	22	1,541	332,166	16	21	1,899
16			Sumter Twp	1.42	242.6	171	8	78	13,341	0	0	0	6	76	12,913	2	2	428
17			Morton	1.09	225.5	206	7	348	71,720	0	0	0	6	347	71,612	1	1	108
18			Sedan	1.62	221.3	136	5	120	16,378	0	0	0	4	48	8,962	1	72	7,416
19			Belgrade	1.06	213.9	203	4	478	96,892	1	468	96,408	3	10	484	1	468	96,408
20			Rogers	1.61	201.8	125	14	3,968	497,694	0	0	0	12	3,964	496,980	2	4	714
21			Osakis	0.50	200.1	399	16	545	217,672	0	0	0	16	545	217,672	0	0	0
22			Glenwood	0.64	198.8	309	44	1,229	379,379	0	0	0	36	1,174	368,384	8	55	10,996
23			Clear Lake Twp	0.83	197.4	239	31	566	135,202	0	0	0	30	501	123,571	1	65	11,630
24			St Cloud	1.19	192.5	162	32	3,843	621,665	0	0	0	23	2,885	589,658	9	958	32,007
25			Acton Twp	1.05	191.5	183	3	44	8,043	1	42	7,728	3	44	8,043	0	0	0

(1) Based on **Jan 1-Dec 31, 2024**, year-end normalized data (IEEE Op Co Level)
"Total" includes all causes, all levels
"Bulk Power Supply" includes Distribution Substation, Transmission Substation, and Transmission Line levels, all cause codes
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"Planned" includes all levels and only outages with a primary cause code of "Intentional/Planned", Includes Bulk Power Supply outages

Northwest Poor Performing Feeders (2)
Based on performance **Sept 2023 to Aug 2024**, Major Event Days are included

CMO: customer minutes out

Feeder ID	Substation	City	SAIFI	SAIDI	CAIDI	Reasons for Poor Performance	Operational Changes Made, Considering or Planned
		Paynesville	3.88	344.54	88.80	60.8% of CMOs caused by vegetation, or vegetation likely. 33.5% of CMOs caused by overhead equipment.	This feeder is under total mainlne rebuild. 3 momentary events caused sustained feeder outages due to breaker being on manual during construction. No new action.
		Paynesville	2.69	387.92	144.21	63.3% of CMOs caused by vegetation, 23.6% of CMOs caused by overhead equipment.	Replacing 5.8 miles of small wire, reconfiguring underground tap loop, creating new tap loop, replacing 500+ porecelain cutouts, replacing arrestors, replacing crossarms, replacing insulatos, replacing poles, adding communications to viper reclosers, and trimming trees
		Buffalo	1.32	239.87	181.72	90.3% of CMOs caused by vegetation.	Relocating overhead line and trimming trees along tap.
		Sauk Rapids	2.10	380.89	181.38	72.5% of CMOs caused by vegetation, or vegetation likely. 12.1% of CMOs caused by planned work	Updated settings on recloser that mis-coordinated, replacing 27 arresters, replacing 15 cross arms and insulators, and replacing 1 pole

Protected Data Ends]

						All levels, All Causes included			All Causes, Distribution Substation, Transmission Substation, and Transmission Line levels			All levels, No "Planned" Cause Includes Bulk Power Supply			All levels, "Planned" Cause only Includes Bulk Power Supply		
Southeast						**Total**			**Bulk Power Supply**			**Unplanned**			**Planned**		
	Feeder ID	Substation	City	SAIFI	SAIDI	CAIDI	Outages	Customers Affected	Customer Mins Out	Outages	Customers Affected	Customer Mins Out	Outages	Customers Affected	Customer Mins Out	Outages	Customers Affected	Customer Mins Out
	[Protected Data Begins																	
1			Good Thunder	2.82	1,338.1	474	28	1,595	756,032	0	0	0	17	1,498	750,160	11	97	5,872
2			Lonsdale	7.73	878.1	114	34	11,445	1,299,604	0	0	0	30	11,435	1,298,613	4	10	991
3			Florence Twp	2.05	563.1	275	67	1,491	410,478	0	0	0	34	1,344	389,197	33	147	21,281
4			Butterfield	1.01	395.4	390	3	275	107,139	0	0	0	2	5	1,839	1	270	105,300
5			Gillford Twp	0.81	382.3	475	62	636	302,029	0	0	0	43	594	298,720	19	42	3,309
6			Cortland	0.89	355.8	401	5	402	161,191	0	0	0	5	402	161,191	0	0	0
7			Iona	3.48	344.8	99	24	721	71,362	1	206	3,090	10	687	66,940	14	34	4,422
8			Jasper	1.48	335.7	226	48	1,588	359,153	0	0	0	35	1,477	350,881	13	111	8,272
9			Mankato	1.22	330.6	272	11	2,222	604,072	0	0	0	11	2,222	604,072	0	0	0
10			Pine Island	1.42	323.4	227	46	1,563	355,086	1	1,090	235,440	27	1,525	348,733	19	38	6,353
11			Wacouta Twp	1.60	289.2	180	20	654	117,982	0	0	0	17	564	116,338	3	90	1,644
12			Wabasha	0.83	261.8	317	42	722	228,804	0	0	0	40	720	228,491	2	2	313
13			Winona	1.31	251.2	192	11	1,739	333,292	0	0	0	6	1,554	311,859	5	185	21,433
14			North Mankato	3.48	250.1	72	25	3,989	286,337	0	0	0	21	2,803	262,411	4	1,186	23,925
15			New Richland	1.42	244.5	172	131	3,872	667,575	0	0	0	94	3,511	619,757	37	361	47,818
16			Slayton	3.09	239.7	77	82	1,507	116,753	1	479	7,185	8	1,011	44,139	74	496	72,615
17			Rollingstone	3.70	239.7	65	67	3,733	241,611	0	0	0	47	2,616	197,242	20	1,117	44,369
18			Northfield	1.97	226.7	115	3	59	6,801	1	29	4,379	3	59	6,801	0	0	0
19			Tracy	0.65	224.1	344	37	652	224,550	0	0	0	27	606	216,947	10	46	7,603
20			Pine Island	1.05	222.8	212	9	1,115	235,975	1	1,046	225,936	6	1,090	233,514	3	25	2,461
21			Meriden Twp	1.30	186.6	144	32	798	114,775	0	0	0	31	788	112,635	1	10	2,140
22			Wabasha	0.98	186.2	189	96	2,738	518,804	0	0	0	90	2,699	510,761	6	39	8,043
23			Hatfield	1.42	183.7	129	7	81	10,472	0	0	0	3	71	9,505	4	10	967
24			Dodge Center	1.27	173.0	137	13	1,049	143,238	0	0	0	13	1,049	143,238	0	0	0
25			Lime Twp	1.70	169.7	100	30	919	91,793	0	0	0	24	903	88,976	6	16	2,818

(1) Based on **Jan 1-Dec 31, 2024**, year-end normalized data (IEEE Op Co Level)
"Total" includes all causes, all levels
"Bulk Power Supply" includes Distribution Substation, Transmission Substation, and Transmission Line levels, all cause codes
"Unplanned" includes all levels and no outages with a primary cause code of "Intentional/Planned", Includes Bulk Power Supply outages
"Planned" includes all levels and only outages with a primary cause code of "Intentional/Planned", Includes Bulk Power Supply outages

Southeast Poor Performing Feeders (2)
Based on performance **Sept 2023 to Aug 2024**, Major Event Days are included **CMO: customer minutes out**

Feeder ID	Substation	City	SAIFI	SAIDI	CAIDI	Reasons for Poor Performance	Operational Changes Made, Considering or Planned
		Mankato	2.74	1345.59	491.09	Large flood caused significant outages and loss of substation	New substation and line relocation.
		Wabasha	2.20	433.21	196.91	Vegetation/storms primary cause for outages.	Replacing hydraulic reclosers, replacing small wire overhead, replacin/installing tap fuses, relocation overhead taps, replacing poles/crossarms.

Protected Data Ends]

Line	Begin Date	Begin Time	Duration Hours	Duration Minutes	Cause	Remedial Action
[PROTECTED DATA BEGINS						
	3/24/2024	14:56	1	57	Unknown misoperation	Returned to service
	3/24/2024	15:36	2	33	Vehicle hit pole	Switching to isolate issues / Replace pole
	4/7/2024	8:20		21	Storms / Lightning	Line patrol found no issues on the line
	5/1/2024	9:47	3	46	Relay settings too sensitive	Foreign utility revised their relay settings
	5/1/2024	21:27		7	Motor operator disconnect issue	Fix motor operator disconnect
	5/24/2024	19:38		4	Unknown	Switching to isolate issues
	5/24/2024	19:43		3	Unknown	Switching to isolate issues / Foreign utility patrolled their tap line
	6/3/2024	15:06	1	54	Substation equipment issue	Switching to isolate issues / Repair substation equipment
	6/5/2024	14:00	2	15	Storm / Tree in line	Remove tree / Repair conductor
	6/5/2024	18:32	1	5	Storm	Switching to isolate issues / Foreign utility patrolled their line segment
	6/17/2024	17:15	1	15	Storm / Tree in line	Remove tree
	6/22/2024	1:16	3	37	Storm / Wire down	Reattach conductor
	7/15/2024	12:24		41	Mobile substation issue	Fix mobile substation issue
	8/3/2024	20:20		28	Storm / Lightning	Replace broken insulators
	8/3/2024	22:11		57	Storm / Lightning	Switching to isolate issues / Foreign utility patrolled their tap line
	8/5/2024	18:09	2	4	Storm / Tornado	Replace structures
	8/8/2024	19:22		3	Tree on line	Remove tree
	8/10/2024	23:57	3	13	Fault on foreign utility line with shared breaker	Foreign utility cleared fault
	9/12/2024	9:13		2	Switch closure issue	Relaying information not available to troubleshoot problem
	9/28/2024	18:44		3	Distribution issue on foreign tap line	Switching to isolate issues / Foreign utility fixed issue
PROTECTED DATA ENDS]						

	Feeder	Primary Event #	Begin Time	Completion Time	Duration Min.	Customers Out	Region	Email sent to CAO
	[PROTECTED DATA BEGINS							
	JANUARY = 6 total qualifying event, 0 event with no email							
1		2522080	1/10/2024 18:31	1/10/2024 19:57	85	245	Maple Grove_MW	X
2		2522194	1/11/2024 8:44	1/11/2024 9:48	64	1,506	Northwest-St Cloud_NT	X
3		2522548	1/11/2024 21:24	1/12/2024 0:09	323	1,732	Northwest-St Cloud_NT	X
4		2523314	1/14/2024 4:49	1/14/2024 7:49	180	2,412	Newport_ME	X
5		2524683	1/14/2024 4:49	1/14/2024 7:21	152	1,632	Newport_ME	X
6		2525491	1/19/2024 18:26	1/19/2024 19:36	70	2,063	Newport_ME	X
	FEBRUARY = 11 total qualifying events, 3 events with no email							
1		2530501	2/4/2024 14:14	2/4/2024 15:32	77	2,112	Mpls_Mtka_Plymouth_MW	X
2		2530998	2/5/2024 12:32	2/5/2024 14:00	88	2,724	Minnetonka_MW	X
3		2531950	2/7/2024 23:35	2/8/2024 1:05	90	1,995	Minnetonka_MW	X
4		2536670	2/24/2024 8:30	2/24/2024 10:26	116	1,469	Faribault_Mankato_SE	X
5		2536766	2/24/2024 13:16	2/24/2024 13:26	10	1,469	Faribault_Mankato_SE	X
6		2536759	2/24/2024 12:41	2/24/2024 13:17	36	232	Mpls_Mtka_Plymouth_MW	X
7		2536779	2/24/2024 12:41	2/24/2024 15:13	151	1,637	Mpls_Mtka_Plymouth_MW	X
8		2531253	2/5/2024 4:52	2/5/2024 18:12	80	519	St Paul_ME	
9		2532057	2/8/2024 9:01	2/8/2024 10:10	69	765	Chestnut_MW	
10		2533270	2/13/2024 9:02	2/13/24 11:11 AM	128-545	505	Newport_ME	
11		2534444	2/16/2024 3:35	2/16/2024 21:34	101-359	2438	Minnetonka_MW	X
	MARCH = 10 total qualifying events, 1 event with no email							
1		2539360	3/2/2024 10:49	3/2/2024 19:35	78-458	829	White Bear_ME	X
2		2539605	3/3/2024 13:20	3/3/2024 16:20	180	1098	Northwest-St Cloud_NT	X
3		2541085	3/6/2024 23:54	3/7/2024 1:10	76	663	Faribault_Mankato_SE	X
4		2542450	3/12/2024 7:06	3/12/2024 8:12	66	954	Maple Grove_MW	X
5		2543797	3/16/2024 7:00	3/16/2024 8:54	114	1,735	Northwest-St Cloud_NT	
6		2544662	3/19/2024 14:49	3/19/2024 16:44	115	665	White Bear_ME	X
7		2546193	3/24/2024 15:36	3/24/2024 18:09	153	1,358	Minnetonka_MW	X
8		2546194	3/24/2024 15:36	3/24/2024 18:09	153	1,557	Minnetonka_MW	X
9		2546519	3/24/2024 22:05	3/24/2024 23:05	60	1,535	Edina_MW	X
10		2546776	3/24/2024 23:27	3/25/2024 0:27	60	609	Minnetonka_MW	X
	APRIL = 17 total qualifying events, 9 event with no email							

1		2551229	4/3/2024 4:39	4/3/2024 17:54	74	701	Minnetonka_MW	
2		2552761	4/6/2024 2:13	4/6/2024 15:33	79	743	St Paul_ME	
3		2553989	4/8/2024 13:02	4/8/2024 13:45	42-369	1,206	St Paul_ME	X
4		2557643	4/15/2024 5:09	4/15/2024 7:02	113	1,257	Minnetonka_MW	X
5		2557953	4/5/2024 22:57	4/6/2024 0:28	91	828	Winona_SE	
6		2557960	4/5/2024 22:57	4/6/2024 0:28	91	1,032	Winona_SE	X
7		2557996	4/15/2024 13:55	4/15/2024 14:30	34-402	1,534	Maple Grove_MW	X
8		2558679	4/16/2024 11:39	4/16/2024 12:39	60	920	White Bear_ME	
9		2559175	4/16/2024 4:10	4/16/2024 19:13	182	799	White Bear_ME	
10		2559383	4/16/2024 17:45	4/16/2024 19:24	99	2411	White Bear_ME	
11		2559386	4/16/2024 17:46	4/16/2024 19:05	79	2,166	White Bear_ME	X
12		2559888	4/16/2024 4:10	4/16/2024 19:13	182	799	White Bear_ME	
13		2560759	4/17/2024 10:43	4/18/2024 1:59	195	600	Minnetonka_MW	
14		2565394	4/26/2024 9:34	4/26/2024 9:59	24-94	708	Maple Grove_MW	X
15		2566829	4/29/2024 20:29	4/29/2024 22:19	110	5,596	Maple Grove_MW	X
16		2567016	4/30/2024 4:03	4/30/2024 5:06	63	1398	St Paul_ME	X
17		2567445	4/30/2024 6:36	4/30/2024 19:44	68-138	1,086	Faribault_Mankato_SE	
MAY = 41 total qualifying events, 20 events with no email								
1		2567807	5/1/2024 9:47	5/1/2024 13:33	226	1,311	Northwest-St Cloud_NT	
2		2567808	5/1/2024 9:47	5/1/2024 12:55	188	1,988	Northwest-St Cloud_NT	X
3		2567809	5/1/2024 9:47	5/1/2024 11:55	129	890	Minnetonka_MW	X
4		2567810	5/1/2024 9:47	5/1/2024 12:10	143	1,564	Minnetonka_MW	X
5		2570106	5/4/2024 6:10	5/4/2024 7:24	74	1,599	Faribault_Mankato_SE	X
6		2570590	5/5/2024 10:27	5/5/2024 12:34	127	621	Faribault_Mankato_SE	X
7		2571625	5/7/2024 3:08	5/7/2024 6:05	177	1,306	Maple Grove_MW	X
8		2572348	5/7/2024 4:24	5/7/2024 17:32	67	847	Northwest-St Cloud_NT	
9		2574993	5/11/2024 11:37	5/11/2024 13:33	115	1,206	Northwest-St Cloud_NT	
10		2575239	5/11/2024 10:18	5/11/2024 23:32	73	551	Edina_MW	
11		2575426	5/12/2024 12:34	5/12/2024 15:18	163	882	St Paul_ME	X
12		2577587	5/14/2024 12:30	5/14/2024 15:22	172	2535	Newport_ME	
13		2579224	5/16/2024 3:27	5/16/2024 17:42	135	2,624	St Paul_ME	
14		2579918	5/17/2024 20:34	5/17/2024 21:58	84	953	White Bear_ME	
15		2580090	5/18/2024 6:07	5/18/2024 11:48	340	902	White Bear_ME	
16		2580269	5/18/2024 16:36	5/18/2024 18:09	92	4,116	Mpls_Mtka_Plymouth_MW	
17		2581365	5/21/2024 1:25	5/21/2024 2:49	84	2,565	White Bear_ME	X
18		2581373	5/21/2024 1:40	5/21/2024 3:38	117	1,863	Mpls_Mtka_Plymouth_MW	X
19		2581404	5/21/2024 3:10	5/21/2024 4:11	61	2,565	White Bear_ME	X
20		2581511	5/21/2024 6:45	5/21/2024 11:27	282	2,692	St Paul_ME	X

21		2582162	5/21/2024 11:48	5/21/2024 12:58	70	2,575	White Bear_ME	X
22		2582571	5/21/2024 16:51	5/21/2024 18:01	70	3,760	Edina_MW	X
23		2583202	05/21/24 06:07	05/18/24 11:48	329	916	White Bear_ME	X
24		2583211	5/21/2024 18:08	5/21/2024 19:34	86	1,007	Winona_SE	X
25		2583223	05/21/24 06:12	5/21/2024 19:08	55-119	2,768	Winona_SE	X
26		2584366	05/21/24 09:38	5/22/2024 0:03	144	1,956	Northwest-St Cloud_NT	X
27		2584397	5/21/2024 21:41	5/21/2024 23:38	117	610	Minnetonka_MW	X
28		2584729	5/22/2024 0:30	5/22/2024 2:12	102	2,154	St Paul_ME	X
29		2585041	5/22/2024 5:17	5/22/2024 6:03	46	597	St Paul_ME	X
30		2587168	5/24/2024 8:13	5/24/2024 9:50	97	2,061	Mpls_Mtka_Plymouth_MW	
31		2587974	5/24/2024 22:00	5/24/2024 23:23	83	1,613	Minnetonka_MW	
32		2589035	5/27/2024 16:37	5/27/2024 21:56	320	666	Northwest-St Cloud_NT	
33		2589705	5/28/2024 6:10	5/28/2024 7:11	61	2,114	Newport_ME	
34		2589711	5/28/2024 6:27	5/28/2024 7:32	65	7,641	Mpls_Mtka_Plymouth_MW	
35		2590216	5/28/2024 15:24	5/28/2024 18:25	181	2,298	St Paul_ME	
36		2591766	5/30/2024 11:08	5/30/2024 12:24	75	774	White Bear_ME	
37		2592380	05/31/24 09:02	5/31/2024 10:20	77	650	Newport_ME	
38		2592422	05/31/24 09:37	5/31/2024 10:38	61	596	White Bear_ME	
39		2592994	5/31/2024 19:28	5/31/2024 21:26	118	2,941	White Bear_ME	
40		2593077	05/31/24 09:28	5/31/2024 22:43	165-169	996	Newport_ME	
41		2593231	5/31/2024 21:28	5/31/2024 22:43	75	1,952	Minnetonka_MW	X

JUNE = 63 total qualifying events, 40 events with no email								
1		2595152	6/3/2024 5:49	6/3/2024 6:50	60	2,042	Winona_SE	X
2		2595179	6/3/2024 6:28	6/3/2024 11:05	277	1743	St Paul_ME	X
3		2595622	6/3/2024 10:27	6/3/2024 12:25	117	649	Newport_ME	X
4		2596237	6/3/2024 20:22	6/4/2024 10:48	865	951	Minnetonka_MW	
5		2596495	6/4/2024 1:47	6/4/2024 10:14	506	951	Minnetonka_MW	
6		2597410	6/4/2024 5:55	6/5/2024 14:15	178-1367	1,074	Mpls_Mtka_Plymouth_MW	
7		2597622	6/4/2024 19:04	6/4/2024 20:26	82	1,113	Edina_MW	X
8		2598494	6/5/2024 13:31	6/5/2024 14:42	70	929	Chestnut_MW	
9		2598577	6/5/2024 13:49	6/5/2024 16:21	151	725	St Paul_ME	
10		2598974	6/5/2024 14:20	6/5/2024 18:44	263	2976	St Paul_ME	X
11		2599038	6/5/2024 15:01	6/5/2024 16:42	101	2,943	White Bear_ME	X
12		2599564	6/5/2024 16:47	6/5/2024 19:35	168	2,535	White Bear_ME	
13		2599847	6/5/2024 18:05	6/5/2024 20:09	123	552	Maple_Grove_MW	
14		2599944	6/5/2024 18:26	6/5/2024 19:43	76	1171	Faribault_Mankato_SE	X
15		2599986	6/5/2024 18:32	6/5/2024 19:44	72	3079	White Bear_ME	X
16		2600551	6/5/2024 20:36	6/5/2024 21:45	68	1,934	Winona_SE	X
17		2600804	6/5/2024 20:36	6/5/2024 22:30	114	831	Winona_SE	X
18		2601067	6/6/2024 3:52	6/6/2024 13:19	567	1323	Winona_SE	X
19		2601720	6/6/2024 14:37	6/6/2024 17:01	144	620	White Bear_ME	X
20		2603556	6/7/2024 21:09	6/7/2024 22:21	72	1,717	White Bear_ME	X
21		2603711	6/8/2024 6:47	6/8/2024 8:03	76	1596	Maple Grove_MW	X
22		2605310	6/22/2024 17:20	6/22/2024 18:18	61	2792	Edina_MW	
23		2605896	6/12/2024 10:27	6/12/2024 11:44	76	948	Waconia_MW	X
24		2606288	6/12/2024 19:25	6/12/2024 22:19	174	1370	Northwest-St Cloud_NT	
25		2606295	6/12/2024 19:29	6/12/2024 22:33	183	2804	Northwest-St Cloud_NT	
26		2606439	6/12/2024 20:21	6/12/2024 23:07	165	534	Northwest-St Cloud_NT	
27		2606457	6/12/2024 20:42	6/12/2024 21:56	73	1653	Mpls_Mtka_Plymouth_MW	
28		2607774	6/14/2024 7:07	6/14/2024 8:11	64	2161	Mpls_Mtka_Plymouth_MW	
29		2608860	6/15/2024 16:44	6/15/2024 19:10	145-501	793	Newport_ME	
30		2609024	6/15/2024 22:17	6/16/2024 6:59	521	688	Chestnut_MW	
31		2609079	6/15/2024 23:47	6/16/2024 1:05	77	2090	Minnetonka_MW	
32		2609167	6/16/2024 1:25	6/16/2024 2:47	82	514	Mpls_Mtka_Plymouth_MW	
33		2609207	6/16/2024 2:03	6/16/2024 8:59	415	585	St Paul_ME	
34		2610370	6/17/2024 4:35	6/17/2024 7:00	145	3672	Maple Grove_MW	X
35		2610412	6/17/2024 5:00	6/17/2024 8:42	221	2478	White Bear_ME	X

36		2610429	6/17/2024 5:08	6/17/2024 7:02	113	1149	Faribault_Mankato_SE	X
37		2610438	6/17/2024 5:12	6/17/2024 9:21	249	1241	Faribault_Mankato_SE	X
38		2610450	6/17/2024 5:16	6/17/2024 6:46	89	2443	Maple Grove_MW	X
39		2610898	6/17/2024 7:57	6/17/2024 9:33	36-95	931	White Bear_ME	X
40		2611798	6/17/2024 16:58	6/17/2024 18:29	91	727	Winona_SE	X
41		2611913	6/17/2024 17:59	6/17/2024 19:08	68	1592	St Paul_ME	X
42		2612493	6/18/2024 8:11	6/18/2024 10:11	60-120	3354	Minnetonka_MW	
43		2612669	6/18/2024 9:08	6/18/2024 10:13	64	2688	St Paul_ME	
44		2612837	6/18/2024 9:54	6/18/2024 15:14	132-320	530	Jordan_SE	
45		2613010	6/18/2024 11:56	6/18/2024 13:19	83	1695	Minnetonka_MW	
46		2613594	6/18/2024 18:23	6/18/2024 20:00	97	2653	Mpls_Mtka_Plymouth_MW	
47		2613811	6/18/2024 20:58	6/18/2024 22:49	110	1712	St Cloud_NT	
48		2613812	6/18/2024 20:58	6/19/2024 0:11	192	4743	St Cloud_NT	
49		2614011	6/18/2024 22:30	6/19/2024 5:20	410	849	White Bear_ME	
50		2614041	6/18/2024 23:03	6/19/2024 13:56	893	2140	White Bear_ME	
51		2616924	6/21/2024 20:37	6/21/2024 23:37	180	727	Winona_SE	
52		2617065	6/22/2024 1:17	6/22/2024 4:53	216	1090	Faribault_Mankato_SE	
53		2617066	6/22/2024 1:17	6/22/2024 4:53	216	1046	Faribault_Mankato_SE	
54		2617248	6/22/2024 7:36	6/22/2024 8:53	76	1227	Mpls_Mtka_Plymouth_MW	
55		2617645	6/22/2024 15:57	6/22/2024 8:53	77	1,227	Mpls_Mtka_Plymouth_MW	
56		2618609	6/24/2024 1:48	6/24/2024 21:30	1,182	570	Faribault_Mankato_SE	
57		2618663	6/24/2024 6:52	6/24/2024 8:47	115	823	Faribault_Mankato_SE	
58		2619074	6/24/2024 12:55	6/24/2024 14:52	116	518	Edina_MW	
59		2619546	6/24/2024 23:43	6/25/2024 1:32	54-108	3636	Edina_MW	
60		2619734	6/25/2024 2:31	6/25/2024 4:08	96	496	Northwest-St Cloud_NT	
61		2622956	6/28/2024 4:55	6/28/2024 5:57	62	8677	Northwest-St Cloud_NT	
62		2623261	6/28/2024 7:27	6/28/2024 8:32	65	2,597	White Bear_ME	
63		2625069	6/30/2024 23:48	7/1/2024 1:08	79	935	Chestnut_MW	
JULY = 88 total qualifying events, 15 event with no email								
1		2625154	7/1/2024 7:45	7/1/2024 9:30	105	1,021	Faribault_Mankato_SE	
2		2625384	7/1/2024 10:48	7/1/2024 12:09	81	1406	White Bear_ME	
3		2625982	7/2/2024 3:23	7/2/2024 5:28	125	2,531	Mpls_Mtka_Plymouth_MW	
4		2626038	7/2/2024 5:28	7/2/2024 6:40	71	530	Edina_MW	
5		2626405	7/2/2024 12:46	7/2/2024 13:58	71	521	Edina_MW	
6		2627473	7/4/2024 0:29	7/4/2024 1:46	76	563	Chestnut_MW	
7		2627759	7/4/2024 14:59	7/4/2024 16:32	92	849	Minnetonka_MW	X
8		2632567	7/10/2024 15:17	7/10/2024 19:41	48-263	2904	Mpls_Mtka_Plymouth_MW	X

9		2635255	7/13/2024 15:53	7/13/2024 16:57	61-64	2426	Minnetonka_MW	X
10		2635560	7/13/2024 18:10	7/13/2024 20:24	133	512	Minnetonka_MW	X
11		2635798	7/13/2024 20:09	7/14/2024 0:34	264	637	Minnetonka_MW	X
12		2635932	7/13/2024 23:10	7/14/2024 3:58	234-288	1825	Faribault_Mankato_SE	X
13		2636123	7/14/2024 0:33	7/14/2024 4:57	264	1,956	Northwest-St Cloud_NT	X
14		2636173	7/14/2024 0:42	7/14/2024 18:16	1053	667	Minnetonka_MW	X
15		2636186	7/14/2024 0:42	7/14/2024 3:51	189	4,173	Northwest-St Cloud_NT	X
16		2636302	7/14/2024 0:52	7/14/2024 14:33	854	678	Minnetonka_MW	X
17		2636313	7/14/2024 0:52	7/14/2024 5:24	271	1769	Maple Grove_MW	X
18		2636341	7/14/2024 0:54	7/17/2024 9:49	534	2122	Mpls_Mtka_Plymouth_MW	X
19		2636378	7/14/2024 0:56	7/14/2024 13:20	744	788	Mpls_Mtka_Plymouth_MW	X
20		2636402	7/14/2024 3:10	7/14/2024 3:41	163	2772	Maple Grove_MW	X
21		2636408	7/14/2024 0:54	7/14/2024 9:49	1199	857	Mpls_Mtka_Plymouth_MW	X
22		2636445	7/14/2024 0:59	7/14/2024 9:03	483	3159	Mpls_Mtka_Plymouth_MW	X
23		2636475	7/14/2024 1:00	7/14/2024 12:22	680-681	1180	Mpls_Mtka_Plymouth_MW	X
24		2636501	7/14/2024 1:01	7/14/2024 10:14	553	1,612	Mpls_Mtka_Plymouth_MW	X
25		2636505	7/14/2024 1:01	7/14/2024 10:14	818	933	Mpls_Mtka_Plymouth_MW	X
26		2636535	7/14/2024 1:02	7/15/2024 4:44	1,662	1,710	Edina_MW	X

27		2636536	7/14/2024 1:02	7/14/2024 4:52	230	850	Minnetonka_MW	X
28		2636585	7/14/2024 1:03	7/14/2024 7:37	292	1476	Mpls_Mtka_Plymouth_MW	X
29		2636587	7/14/2024 1:04	7/14/2024 11:38	634-671	1451	Mpls_Mtka_Plymouth_MW	X
30		2636604	7/14/2024 1:03	7/14/2024 15:33	869	2545	Mpls_Mtka_Plymouth_MW	X
31		2636636	7/14/2024 1:05	7/14/2024 11:04	598	801	Mpls_Mtka_Plymouth_MW	X
32		2636641	7/14/2024 1:04	7/14/2024 14:49	824	1635	Mpls_Mtka_Plymouth_MW	X
33		2636645	7/14/2024 1:07	7/14/2024 10:26	521	2020	Edina_MW	X
34		2636779	7/14/2024 0:57	7/14/2024 8:58	481	869	Maple Grove_MW	X
35		2636793	7/14/2024 1:07	7/14/2024 6:59	352	965	Minnetonka_MW	X
36		2636804	7/14/2024 1:07	7/14/2024 10:26	558	1926	Mpls_Mtka_Plymouth_MW	X
37		2636808	7/14/2024 1:07	7/14/2024 8:32	444	3006	Edina_MW	X
38		2636840	7/14/2024 1:08	7/14/2024 6:17	309	1712	Mpls_Mtka_Plymouth_MW	X
39		2636878	7/14/2024 1:09	7/14/2024 5:10	241	2101	Mpls_Mtka_Plymouth_MW	X
40		2636892	7/14/2024 1:09	7/14/2024 5:10	775	531	Mpls_Mtka_Plymouth_MW	X
41		2636898	7/14/2024 1:06	7/14/2024 14:33	806	678	Minnetonka_MW	X
42		2636994	7/14/2024 1:10	7/14/2024 3:25	134	1968	Minnetonka_MW	X
43		2637002	7/14/2024 1:08	7/14/2024 6:17	617	559	Mpls_Mtka_Plymouth_MW	X
44		2637073	7/14/2024 1:12		872-2059	531	Edina_MW	X
45		2637097	7/14/2024 1:12	7/14/2024 6:33	320	2204	Mpls_Mtka_Plymouth_MW	X
46		2637154	7/14/2024 1:13	7/14/2024 15:20	483-846	1849	Edina_MW	X
47		2637338	7/14/2024 1:18	7/15/2024 17:57	2439	1576	Mpls_Mtka_Plymouth_MW	X
48		2637469	7/14/2024 1:20	7/14/2024 3:55	154	2309	Newport_ME	X
49		2637750	7/14/2024 1:30	7/14/2024 2:54	84	2269	St Paul_ME	X
50		2637910	7/14/2024 1:40	7/14/2024 4:11	150	2010	White Bear_ME	X
51		2638097	7/14/2024 1:01	7/14/2024 13:11	200-730	1076	Edina_MW	X
52		2640020	7/14/2024 1:13	7/14/2024 15:20	487	856	Edina_MW	X
53		2640635	7/14/2024 0:54	7/14/2024 9:49	535	2,122	Mpls_Mtka_Plymouth_MW	X
54		2641113	7/14/2024 1:27	7/14/2024 10:24	536	617	White Bear_ME	X
55		2642079	7/14/2024 12:28	7/14/2024 17:22	294	2,419	Minnetonka_MW	X
56		2642199	7/14/2024 12:40	7/14/2024 16:37	236	528	Mpls_Mtka_Plymouth_MW	X
57		2642655	7/14/2024 14:03	7/14/2024 15:08	64	1942	St Paul_ME	X
58		2643702	7/14/2024 1:03	7/14/2024 15:33	869	2,545	Mpls_Mtka_Plymouth_MW	X
59		2644790	7/15/2024 5:39	7/14/2024 7:02	53-83	920	White Bear_ME	X
60		2645049	7/15/2024 8:35	7/15/2024 9:42	66	2622	Minnetonka_MW	X

61		2645151	7/14/2024 1:37	7/14/2024 19:32	1074	632	Minnetonka_MW	X
62		2645758	7/15/2024 10:44	7/15/2024 12:01	77	2,606	Edina_MW	X
63		2645952	7/15/2024 12:25	7/15/2024 14:57	152	610		X
64		2646382	7/15/2024 15:49	7/15/2024 17:24	95-188	4627	St Paul_ME	X
65		2649166	7/18/2024 2:59	7/18/2024 5:41	98	1332	Mpls_Mtka_Plymouth_MW	X
66		2649302	7/18/2024 4:26	7/18/2024 6:01	96	1,583	Mpls_Mtka_Plymouth_MW	
67		2649540	7/18/2024 11:03	7/18/2024 12:18	75	1234	Mpls_Mtka_Plymouth_MW	X
68		2649671	7/18/2024 2:57	7/18/2024 5:41	164	1615	Mpls_Mtka_Plymouth_MW	X
69		2651245	7/21/2024 9:43	7/21/2024 11:37	114	1071	Mpls_Mtka_Plymouth_MW	X
70		2652079	7/22/2024 13:42	7/22/2024 15:21	85-99	622	Maple Grove_MW	X
71		2652357	7/22/2024 17:51	7/22/2024 19:56	125	867	White Bear_ME	
72		2652374	7/22/2024 17:52	7/22/2024 19:43	47-111	2922	White Bear_ME	X
73		2652800	7/22/2024 23:48	7/23/2024 0:55	48-67	912	Minnetonka_MW	X
74		2653549	7/23/2024 15:35	7/23/2024 17:24	57-109	2175	Newport_ME	X
75		2654993	7/25/2024 15:13	7/25/2024 17:49	155	1328	Mankato_SE	
76		2656370	7/27/2024 14:06	7/27/2024 15:47	100	1329	White Bear_ME	
77		2656491	7/27/2024 17:32	7/27/2024 20:18	165-166	2124	White Bear_ME	X
78		2656500	7/27/2024 17:06	7/27/2024 18:42	95	524	Howard_Lake_NT	
79		2657296	7/28/2024 18:08	7/28/2024 21:08	179	1329	Mankato_SE	
80		2657353	7/28/2024 19:08	7/28/2024 20:40	92	1020	Minnetonka_MW	X
81		2657589	7/28/2024 23:49	7/29/2024 4:21	272	2528	Minnetonka_MW	X
82		2657680	7/28/2024 23:49	7/29/2024 4:21	289	950	Minnetonka_MW	X
83		2657716	7/29/2024 2:40	7/29/2024 5:47	187	883	Minnetonka_MW	X
84		2660235	7/31/2024 16:42	7/31/2024 21:17	272	177	Minnetonka_MW	
85		2660261	7/31/2024 16:56	7/31/2024 17:58	62	2,103	Mpls_Mtka_Plymouth_MW	
86		2660408	7/31/2024 17:40	7/31/2024 19:44	123	1,629	Minnetonka_MW	
87		2661166	7/31/2024 23:15	8/1/2024 1:32	225	950	Minnetonka_MW	X
88		2661170	7/31/2024 23:15	8/1/2024 1:32	137	1,579	Minnetonka_MW	X
AUGUST = 156 total qualifying events, 6 event with no email								
1		2661472	8/1/2024 2:29	8/1/2024 3:39	70	764	Newport_ME	X
2		2661534	8/1/2024 2:53	8/1/2024 4:11	77	2163	Mpls_Mtka_Plymouth_MW	X

3		2661901	8/1/2024 7:50	8/1/2024 9:28	97	1653	St Paul_ME	X
4		2661956	8/1/2024 8:25	8/1/2024 9:38	73	1267	Faribault_Mankato_SE	X
5		2663195	8/1/2024 0:22	8/2/2024 2:34	96-132	2251	Edina_MW	X
6		2663257	8/2/2024 3:27	8/2/2024 2:34	117	504	Edina_MW	X
7		2664130	8/2/2024 23:46	8/4/2024 1:15	288	1964	Minnetonka_MW	X
8		2664135	8/2/2024 23:47	8/4/2024 1:15	88	2374	Minnetonka_MW	X
9		2665197	8/3/2024 20:42	8/4/2024 0:20	217	733	White Bear_ME	
10		2665312	8/3/2024 21:41	8/3/2024 23:12	52-91	2486	White Bear_ME	X
11		2665406	8/3/2024 22:22	8/4/2024 0:26	124	3178	Edina_MW	X
12		2665522	8/4/2024 0:39	8/4/2024 2:03	83	538	Faribault_Mankato_SE	X
13		2666045	8/5/2024 4:22	8/5/2024 5:49	87	2393	Maple Grove_MW	
14		2666700	8/5/2024 16:58	8/5/2024 19:45	166	2216	Mpls_Mtka_Plymouth_MW	X
15		2666703	8/5/2024 16:59	8/5/2024 18:24	85	2334	Edina_MW	X
16		2666705	8/5/2024 16:54	8/5/2024 18:13	79	614	Minnetonka_MW	
17		2666791	8/5/2024 17:13	8/5/2024 20:05	171	850	Minnetonka_MW	X
18		2666947	8/5/2024 17:42	8/5/2024 18:43	60	2415	White Bear_ME	X
19		2667061	8/5/2024 18:02	8/5/2024 20:43	160	563	Chestnut_MW	
20		2667096	8/5/2024 18:09	8/5/2024 19:40	91	786	Faribault_Mankato_SE	X
21		2667100	8/5/2024 18:09	8/5/2024 19:40	91	597	Faribault_Mankato_SE	X
22		2667179	8/5/2024 18:25	8/5/2024 19:49	83	2124	Mpls_Mtka_Plymouth_MW	X
23		2667391	8/5/2024 18:57	8/5/2024 20:26	89	655	Mpls_Mtka_Plymouth_MW	X
24		2667638	8/5/2024 19:44	8/5/2024 21:38	55-114	2139	Winona_SE	X
25		2667661	8/5/2024 19:45	8/5/2024 21:10	84	1181	St Paul_ME	X
26		2668291	8/6/2024 2:31	8/6/2024 3:30	19-844	752	Edina_MW	X
27		2669472	8/6/2024 12:54	8/6/2024 17:15	89-261	4747	Northwest-St Cloud_NT	X
28		2672397	8/10/2024 23:57	8/11/2024 1:22	85	3818	Northwest-St Cloud_NT	X
29		2672398	8/10/2024 23:57	8/11/2024 1:25	88	541	Northwest-St Cloud_NT	X
30		2672400	8/10/2024 23:57	8/11/2024 1:25	88	564	Northwest-St Cloud_NT	X
31		2672401	8/10/2024 23:57	8/11/2024 1:25	88	895	Northwest-St Cloud_NT	X
32		2673987	8/14/2024 0:00	8/14/2024 11:24	42-684	654	Mpls_Mtka_Plymouth_MW	X
33		2674590	8/14/2024 17:41	8/14/2024 19:41	38-120	667	White Bear_ME	X
34		2675888	8/16/2024 17:29	8/16/2024 19:23	113	1934	Newport_ME	X
35		2676547	8/17/2024 21:09	8/17/2024 22:12	63-1211	2279	Edina_MW	X
36		2678601	8/21/2024 11:30	8/21/2024 12:37	66	1191	White Bear_ME	
37		2678923	8/21/2024 22:27	8/21/2024 23:56	88-212	1149	Faribault_Mankato_SE	X
38		2680330	8/24/2024 21:27	8/24/2024 22:31	63-682	3565	Mpls_Mtka_Plymouth_MW	X

39		2681409	8/26/2024 13:25	8/26/2024 14:56	90	1840	Faribault_Mankato_SE	X
40		2681594	8/26/2024 15:29	8/26/2024 17:49	140	3665	Mpls_Mtka_Plymouth_MW	X
41		2682037	8/26/2024 18:40	8/26/2024 20:32	111	596	St Cloud_NT	X
42		2682078	8/26/2024 18:51	8/26/2024 20:25	94	1403	Minnetonka_MW	X
43		2682082	8/26/2024 18:52	8/27/2024 4:47	186	821	Minnetonka_MW	X
44		2682087	8/26/2024 18:55	8/27/2024 2:12	437	949	Minnetonka_MW	X
45		2682089	8/26/2024 18:55	8/27/2024 0:32	336	1567	Minnetonka_MW	X
46		2682103	8/26/2024 18:57	8/26/2024 21:20	142	1959	Monticello_NT	X
47		2682166	8/26/2024 19:01	8/27/2024 2:59	476	1638	Minnetonka_MW	X
48		2682167	8/26/2024 19:01	8/27/2024 2:59	377	1533	Minnetonka_MW	X
49		2682168	8/26/2024 19:02	8/27/2024 0:57	352	1713	Edina_MW	X
50		2682216	8/26/2024 19:05	8/27/2024 2:33	500	2420	Minnetonka_MW	X
51		2682231	8/26/2024 19:05	8/27/2024 3:26	314	2336	Minnetonka_MW	X
52		2682242	8/26/2024 19:06	8/26/2024 22:43	217	1114	Minnetonka_MW	X
53		2682256	8/26/2024 19:06	8/27/2024 0:52	345	2375	Minnetonka_MW	X
54		2682260	8/26/2024 19:06	8/27/2024 0:52	346	1926	Minnetonka_MW	X
55		2682264	8/26/2024 19:06	8/27/2024 0:38	332	1179	Edina_MW	X
56		2682306	8/26/2024 19:08	8/27/2024 0:01	292	2123	Mpls_Mtka_Plymouth_MW	X
57		2682328	8/27/2024 5:31	8/27/2024 12:29	372	806	Edina_MW	X
58		2682514	8/26/2024 19:14	8/26/2024 23:54	218-280	2607	Edina_MW	X
59		2682573	8/26/2024 19:16	8/26/2024 21:55	159	2707	Edina_MW	X
60		2682586	8/26/2024 19:16	8/26/2024 22:34	197	2697	Edina_MW	X
61		2682604	8/26/2024 19:16	8/27/2024 6:37	680	1703	Minnetonka_MW	X
62		2682673	8/26/2024 19:14	8/27/2024 11:51	996	690	Mpls_Mtka_Plymouth_MW	X
63		2682694	8/26/2024 19:17	8/27/2024 16:15	310-1257	1629	Mpls_Mtka_Plymouth_MW	X
64		2682738	8/26/2024 19:18	8/26/2024 21:27	128	3486	Mpls_Mtka_Plymouth_MW	X
65		2682743	8/26/2024 19:19	8/26/2024 21:27	367	1146	Mpls_Mtka_Plymouth_MW	X
66		2682776	8/26/2024 19:19	8/27/2024 1:47	387	683	Edina_MW	X
67		2682878	8/26/2024 19:21	8/26/2024 21:25	123	3436	Mpls_Mtka_Plymouth_MW	X
68		2682879	8/26/2024 19:15	8/26/2024 0:59	344	775	Edina_MW	X
69		2683020	8/26/2024 19:27	8/27/2024 17:41	650-1334	1705	Minnetonka_MW	X
70		2683162	8/26/2024 19:30	8/26/2024 22:37	141-187	1817	St Paul_ME	X
71		2683167	8/26/2024 19:31	8/27/2024 17:41	904	763	St Paul_ME	X
72		2683171	8/29/2024 17:31	8/30/2024 15:37	1,326	1937	Newport_ME	X
73		2683326	8/26/2024 19:35	8/27/2024 17:41	382	531	Mpls_Mtka_Plymouth_MW	X

74		2683400	8/27/2024 5:38	8/27/2024 17:20	702	2159	St Paul_ME	X
75		2683497	8/26/2024 19:37	8/27/2024 17:41	610	558	White Bear_ME	X
76		2683564	8/26/2024 19:40	8/27/2024 0:08	128	2180	Newport_ME	X
77		2683565	8/26/2024 19:40	8/26/2024 21:33	112	1477	Mpls_Mtka_Plymouth_MW	X
78		2683568	8/26/2024 19:40	8/27/2024 17:41	407	502	White Bear_ME	X
79		2683616	8/27/2024 5:51	8/27/2024 17:41	252	558	White Bear_ME	X
80		2683652	8/27/2024 10:01	8/27/2024 17:41	447	715		X
81		2683668	8/26/2024 19:43	8/27/2024 17:41	861	2544	White Bear_ME	X
82		2683688	8/26/2024 19:42	8/27/2024 17:41	614	715		X
83		2683697	8/27/2024 5:56	8/27/2024 11:34	338	857	White Bear_ME	X
84		2683763	8/26/2024 19:46	8/26/2024 22:07	140	2069	White Bear_ME	X
85		2683894	8/26/2024 19:53	8/27/2024 0:05	252	620	White Bear_ME	X
86		2683920	8/26/2024 19:51	8/29/2024 17:40	516	1041	White Bear_ME	X
87		2683960	8/26/2024 20:07	8/26/2024 23:15	188	851	White Bear_ME	X
88		2684082	8/26/2024 20:06	8/27/2024 17:41	876	613	St Paul_ME	X
89		2684894	8/26/2024 21:57	8/27/2024 0:08	131	2,180	Newport_ME	X
90		2685012	8/26/2024 22:16	8/27/2024 0:47	151	2,066	Mpls_Mtka_Plymouth_MW	X
91		2685178	8/26/2024 22:52	8/27/2024 17:41	32-1248	2496	Edina_MW	X
92		2685677	8/27/2024 5:05	8/27/2024 8:12	186	1639	Minnetonka_MW	X
93		2685857	8/27/2024 5:14	8/27/2024 8:27	193	2492	Minnetonka_MW	X
94		2685865	8/27/2024 5:14	8/27/2024 10:55	340	884	Minnetonka_MW	X
95		2685889	8/27/2024 5:17	8/27/2024 9:26	248	1753	Minnetonka_MW	X
96		2685894	8/27/2024 5:17	8/27/2024 11:03	345	1713	Edina_MW	X
97		2685913	8/27/2024 5:19	8/27/2024 12:01	401	1312	Edina_MW	X
98		2685977	8/27/2024 5:22	8/27/2024 8:13	170	2697	Mpls_Mtka_Plymouth_MW	X
99		2686000	8/27/2024 5:23	8/27/2024 11:07	344	2020	Edina_MW	X
100		2686031	8/27/2024 5:24	8/27/2024 9:33	248	1738	Mpls_Mtka_Plymouth_MW	X
101		2686050	8/27/2024 5:24	8/27/2024 9:51	266	1980	Mpls_Mtka_Plymouth_MW	X
102		2686072	8/27/2024 5:25	8/27/2024 11:33	367	629	Edina_MW	X
103		2686122	8/27/2024 5:26	8/27/2024 15:13	203-586	1879	Edina_MW	X
104		2686194	8/27/2024 5:28	8/27/2024 9:23	232-234	2066	Mpls_Mtka_Plymouth_MW	X
105		2686215	8/27/2024 5:25	8/27/2024 11:33	251	2785	Edina_MW	X
106		2686235	8/27/2024 5:29	8/27/2024 7:33	124	1466	Mpls_Mtka_Plymouth_MW	X
107		2686261	8/27/2024 5:29	8/27/2024 10:22	292	1635	Mpls_Mtka_Plymouth_MW	X
108		2686268	8/27/2024 5:30	8/27/2024 12:29	680	697	Mpls_Mtka_Plymouth_MW	X
109		2686330	8/27/2024 5:31	8/27/2024 12:29	417	1449	Mpls_Mtka_Plymouth_MW	X
110		2686345	8/27/2024 5:32	8/27/2024 16:17	644	531	Chestnut_MW	X
111		2686452	8/27/2024 5:34	8/27/2024 7:16	101	1958	Mpls_Mtka_Plymouth_MW	X
112		2686567	8/27/2024 5:36	8/27/2024 13:56	397-509	2193	St Paul_ME	X

113		2686568	8/27/2024 5:37	8/27/2024 13:56	432-2342	1180	St Paul_ME	X
114		2686618	8/27/2024 5:38	8/27/2024 18:09	750	722	St Paul_ME	X
115		2686636	8/27/2024 5:38	8/27/2024 9:26	227	1818	St Paul_ME	X
116		2686649	8/27/2024 5:39	8/27/2024 9:03	203	2816	St Paul_ME	X
117		2686652	8/27/2024 5:39	8/27/2024 8:50	190	3125	Newport_ME	X
118		2686782	8/27/2024 5:42	8/27/2024 20:07	218-865	2126	White Bear_ME	X
119		2686790	8/27/2024 5:43	8/28/2024 16:40	124-2131	2937	St Paul_ME	X
120		2686864	8/27/2024 5:44	8/27/2024 9:19	214	2426	St Paul_ME	X
121		2686890	8/27/2024 5:44	8/27/2024 13:24	460	674	White Bear_ME	X
122		2687016	8/27/2024 5:48	8/28/2024 9:36	120-1668	5880	White Bear_ME	X
123		2687017	8/27/2024 5:47	8/28/2024 10:29	493-1722	1211	White Bear_ME	X
124		2687169	8/27/2024 5:50	8/27/2024 10:05	191-254	2046	White Bear_ME	X
125		2687349	8/27/2024 5:56	8/27/2024 12:18	382	598	White Bear_ME	X
126		2687386	8/27/2024 5:57	8/27/2024 10:47	289	919	White Bear_ME	X
127		2687500	8/27/2024 6:01	8/27/2024 9:26	204	2599	White Bear_ME	X
128		2687501	8/27/2024 6:01	8/27/2024 10:24	263	3424	Mpls_Mtka_Plymouth_MW	X
129		2687870	8/27/2024 6:39	8/27/2024 9:39	179	1714	Edina_MW	X
130		2689247	8/27/2024 8:42	8/27/2024 11:34	171	2697	Mpls_Mtka_Plymouth_MW	X
131		2690750	8/27/2024 9:59	8/27/2024 11:10	71	1092	St Paul_ME	X
132		2692364	8/27/2024 12:12	8/27/2024 13:22	69	627	Mpls_Mtka_Plymouth_MW	X
133		2693922	8/27/2024 5:39	8/27/2024 18:33	774	575	St Paul_ME	X
134		2698518	8/29/2024 11:55	8/29/2024 13:33	98	5845	Mpls_Mtka_Plymouth_MW	X
135		2698935	8/29/2024 15:57	8/29/2024 19:06	111-189	2382	Minnetonka_MW	X
136		2699044	8/29/2024 16:12	8/29/2024 18:17	204	1456	Northwest-St Cloud_NT	X
137		2699159	8/29/2024 16:22	8/29/2024 17:43	80	1492	Maple Grove_MW	X
138		2699246	8/29/2024 16:28	8/29/2024 18:16	103-108	1657	Mpls_Mtka_Plymouth_MW	X
139		2699280	8/29/2024 16:31	8/29/2024 17:37	64-1505	2170	Mpls_Mtka_Plymouth_MW	X
140		2699402	8/29/2024 16:46	8/29/2024 17:54	67	1367	Mpls_Mtka_Plymouth_MW	X
141		2699636	8/29/2024 17:10	8/29/2024 20:51	220	708	Faribault_Mankato_SE	X
142		2699665	8/29/2024 17:11	8/29/2024 18:25	73	1591	Newport_ME	X
143		2699709	8/29/2024 16:41	8/29/2024 19:43	182	707	St Paul_ME	
144		2699799	8/29/2024 17:07	8/29/2024 19:05	118	2000	Faribault_Mankato_SE	X
145		2699816	8/29/2024 17:31	8/29/2024 22:47	186-1326	1937	Newport_ME	X
146		2699833	8/29/2024 17:33	8/30/2024 11:05	246-1052	2779	Newport_ME	X
147		2699848	8/29/2024 17:34	8/30/2024 1:11	59-457	1222	Newport_ME	X
148		2699899	8/29/2024 17:39	8/29/2024 18:44	64	1202	St Paul_ME	X
149		2700050	8/29/2024 17:56	8/29/2024 19:27	90	1707	Minnetonka_MW	X
150		2700056	8/29/2024 17:35	8/29/2024 20:22	167	3090	Newport_ME	X
151		2700488	8/29/2024 19:20	8/29/2024 20:28	68-82	2108	Newport_ME	X
152		2702558	8/30/2024 19:02	8/30/2024 21:00	118	725	Minnetonka_MW	X

153		2703062	8/31/2024 12:27	8/31/2024 15:19	99-172	1988	Mpls_Mtka_Plymouth_MW	X
154		2705232	8/27/2024 5:39	8/27/2024 14:20	188-521	2289	St Paul_ME	X
155		2705441	8/29/2024 16:19	8/29/2024 18:17	118	1226	Northwest-St Cloud_NT	X
156		2709133	8/27/2024 14:00	8/28/2024 12:12	1332	559	White Bear_ME	X
SEPTEMBER = 24 total qualifying events, 7 event with no email								
1		2706688	9/5/2024 12:59	9/5/2024 15:56	177-241	804	Chestnut_MW	
2		2707658	9/6/2024 21:36	9/7/2024 0:00	144	1,268	Newport_ME	X
3		2709276	9/10/2024 14:41	9/10/2024 16:06	70-85	597	Minnetonka_MW	X
4		2709487	9/10/2024 17:48	9/10/2024 19:02	51-74	525	Mpls_Mtka_Plymouth_MW	X
5		2710652	9/13/2024 0:00	9/13/2024 2:36	156	1193	Chestnut_MW	
6		2710912	9/13/2024 13:14	9/13/2024 14:45	91	1988	Mpls_Mtka_Plymouth_MW	X
7		2711170	9/13/2024 19:27	9/14/2024 3:06	87-458	1046	Maple Grove_MW	
8		2712788	9/17/2024 16:52	9/17/2024 19:41	169	1234	St Paul_ME	
9		2712942	9/17/2024 17:48	9/17/2024 17:54	6-63	3885	St Paul_ME	
10		2713716	9/18/2024 18:34	9/18/2024 20:03	88	1279	Faribault_Mankato_SE	X
11		2714341	9/19/2024 17:09	9/19/2024 18:10	60	2445	Newport_ME	X
12		2715441	9/21/2024 8:59	9/21/2024 10:29	99	618	White Bear_ME	X

13		2715820	9/21/2024 15:47	9/21/2024 18:30	163	2445	Northwest-St Cloud_NT	X
14		2716288	9/22/2024 1:55	9/22/2024 3:52	116	2742	Northwest-St Cloud_NT	X
15		2716290	9/22/2024 1:55	9/22/2024 3:52	209-291	2371	Northwest-St Cloud_NT	X
16		2716545	9/22/2024 9:36	9/22/2024 11:05	88	2020	Mpls_Mtka_Plymouth_MW	X
17		2716816	9/23/2024 4:08	9/23/2023 5:16	67	1815	Mpls_Mtka_Plymouth_MW	X
18		2717518	9/24/2024 1:59	9/24/2024 3:00	50-61	2291	Mpls_Mtka_Plymouth_MW	X
19		2719979	9/29/2024 2:16	9/29/2024 5:52	215	772	Maple Grove_MW	
20		2720660	9/30/2024 16:32	9/30/2024 17:45	54-73	1305	Newport_ME	X
21		2720728	9/30/2024 18:02	9/30/2024 20:36	153	1336	Jordan_SE	
22		2726203	9/5/2024 11:27	9/5/2024 13:02	95	3096	White Bear_ME	X
23		2726204	9/5/2024 11:27	9/5/2024 13:02	95	2252	White Bear_ME	X
24		2726205	9/5/2024 11:27	9/5/2024 13:02	95	2058	White Bear_ME	X
OCTOBER = 42 total qualifying events, 8 events with no email								
1		2722229	10/2/2024 15:52	10/2/2024 18:50	68-178	1201	St Paul_ME	X
2		2723813	10/6/2024 2:22	10/6/2024 5:47	204	2263	Northwest-St Cloud_NT	X
3		2724005	10/6/2024 9:07	10/6/2024 11:07	66-120	3124	Newport_ME	X
4		2724212	10/6/2024 19:08		79	1544		
5		2724237	10/6/2024 22:35	10/7/2024 5:03	100-388	1833	White Bear_ME	X
6		2724386	10/6/2024 22:35	10/7/2024 5:03	355	553	White Bear_ME	X
7		2724831	10/7/2024 14:45	10/7/2024 16:02	63-77	1285	Maple Grove_MW	X
8		2726596	10/12/2024 10:03	10/12/2024 13:07	184	604	Northwest-St Cloud_NT	X
9		2727259	10/13/2024 21:02	10/13/2024 23:11	71-128	1396	Winona_SE	X
10		2728885	10/17/2024 13:25	10/17/2024 14:41	75	1553	Minnetonka_MW	X
11		2729146	10/17/2024 18:09	10/17/2024 20:26	137	884	Minnetonka_MW	X
12		2729573	10/18/2024 11:33	10/18/2024 15:57	65	2774	Maple Grove_MW	X
13		2729576	10/18/2024 11:33	10/18/2024 15:57	254	869	Maple Grove_MW	X
14		2729585	10/18/2024 11:33	10/18/2024 15:57	86	759	Maple Grove_MW	X
15		2729594	10/18/2024 11:33	10/18/2024 15:57	64	688	Maple Grove_MW	X
16		2729596	10/18/2024 11:33	10/18/2024 15:57	98	1291	Edina_MW	X
17		2729599	10/18/2024 11:33	10/18/2024 15:57	65	690	Minnetonka_MW	X
18		2729603	10/18/2024 11:33	10/18/2024 15:57	86	906	Minnetonka_MW	X
19		2729656	10/18/2024 11:33	10/18/2024 15:57	85	993	Edina_MW	X
20		2732499	10/23/2024 12:08	10/23/2024 13:15	66	884	Maple Grove_MW	
21		2733004	10/11/2024 9:40	10/11/2024 10:53	47-73	1477	Chestnut_MW	X
22		2733185	10/24/2024 18:04	10/24/2024 19:06	58-61	1258	Mpls_Mtka_Plymouth_MW	X
23		2733198	10/24/2024 18:17	10/24/2024 21:06	106-169	1135	White Bear_ME	X

24		2733218	10/24/2024 18:26	10/24/2024 22:44	244-258	618	White Bear_ME	X
25		2733297	10/24/2024 18:52	10/24/2024 21:25	152	1822	Faribault_Mankato_SE	X
26		2733563	10/25/2024 1:52	10/25/2024 5:44	214	2262	Northwest-St Cloud_NT	X
27		2733622	10/25/2024 7:01	10/25/2024 7:57	42-89	3310	Mpls_Mtka_Plymouth_MW	X
28		2734800	10/28/2024 8:39	10/29/2024 4:23	31-1183	937	Newport_ME	
29		2734965	10/28/2024 11:31	10/19/2024 19:06	95	510	Newport_ME	X
30		2735084	10/28/2024 15:24	10/28/2024 16:35	70-702	921	White Bear_ME	X
31		2735121	10/28/2024 16:07	10/29/2024 1:35	568	552	Minnetonka_MW	
32		2736588	10/31/2024 6:58	10/31/2024 7:53	54-186	501	Faribault_Mankato_SE	X
33		2736651	10/31/2024 8:47	10/31/2024 11:33	165	582	Minnetonka_MW	
34		2736799	10/31/2024 10:35	10/31/2024 12:22	106	706	Northwest-St Cloud_NT	
35		2736816	10/31/2024 10:44	10/31/2024 12:22	97	1608	Northwest-St Cloud_NT	
36		2737007	10/31/2024 12:01	10/31/2024 14:36	107-155	3829	Maple Grove_MW	X
37		2737146	10/31/2024 12:09	10/31/2024 13:52	102	2107	Maple Grove_MW	X
38		2737147	10/31/2024 12:10	10/31/2024 14:46	155	1459	Maple Grove_MW	X
39		2737148	10/31/2024 12:10	10/31/2024 14:46	156	1556	Maple Grove_MW	X
40		2737242	10/31/2024 12:35	10/31/2024 13:55	79	899	Monticello_NT	
41		2737338	10/31/2024 12:50	10/31/2024 13:56	65	900	Northwest-St Cloud_NT	X
42		2737446	10/31/2024 13:06	10/31/2024 16:04	177	1374	Mpls_Mtka_Plymouth_MW	X
NOVEMBER = 16 total qualifying events, 4 events with no email								
1		2738328	11/1/2024 8:53	11/1/2024 10:21	88	504	Newport_ME	
2		2742565	11/10/2024 14:02	11/10/2024 15:49	106	3827	Maple Grove_MW	X
3		2742566	11/10/2024 14:02	11/10/2024 15:49	72	636	Minnetonka_MW	X
4		2743499	11/12/2024 0:32	11/12/2024 3:43	190	662	Minnetonka_MW	
5		2744438	11/14/2024 2:50	11/14/2024 4:59	129-481	1141	Minnetonka_MW	X
6		2745105	11/15/2024 8:58	11/15/2024 10:19	80	515	Edina_MW	
7		2745330	11/15/2024 15:26	11/15/2024 16:22	75	1617	Minnetonka_MW	X
8		2745463	11/16/2024 8:52	11/1624 10:06	41-73	1661	Edina_MW	X
9		2745753	11/17/2024 7:04	11/17/2024 8:46	93-101	2174	St Paul_ME	X
10		2746577	11/18/2024 23:47	11/18/2024 4:07	103-260	4171	White Bear_ME	X
11		2750187	11/26/2024 16:17	11/27/2024 4:30	51-732	632	Maple Grove_MW	
12		2750916	11/29/2024 23:40	11/30/2024 1:11	91	3311	St Paul_ME	X
13		2750917	11/29/2024 23:40	11/30/2024 1:11	90	2646	St Paul_ME	X
14		2750919	11/29/2024 23:40	11/30/2024 1:11	97	801	St Paul_ME	X
15		2750921	11/29/2024 23:40	11/30/2024 1:11	159-2351	1186	St Paul_ME	X
16		2750926	11/29/2024 23:40	11/30/2024 1:11	89	1996	St Paul_ME	X

DECEMBER = 18 total qualifying events, 5 events with no email								
1		2752140	12/2/2024 9:30	12/2/2024 10:37	66-67	3733	Northwest-St Cloud_NT	X
2		2753988	12/4/2024 15:03	12/4/2024 16:20	76	594	Maple Grove_MW	
3		2756469	12/10/2024 11:24	12/10/2024 12:43	78	3567	Faribault_Mankato_SE	X
4		2756662	12/10/2024 21:51	12/10/2024 0:18	261	832	Northwest-St Cloud_NT	X
5		2757195	12/12/2024 1:59	12/12/2024 3:28	43-70	2779	White Bear_ME	X
6		2757907	12/13/2024 12:13	12/13/2024 19:22	111-428	665	St Paul_ME	
7		2754657	12/15/2024 18:53	12/15/2024 20:35	102	2884	Mpls_Mtka_Plymouth_MW	X
8		2751980	12/15/2024 18:53	12/15/2024 20:37	104	1192	Mpls_Mtka_Plymouth_MW	X
9		2758915	12/16/2024 17:25	12/16/2024 18:42	76	531	Minnetonka_MW	X
10		2758955	12/16/2024 19:50	12/17/2024 4:40	14-530	531	Edina_MW	X
11		2760335	12/20/2024 9:50	12/20/2024 10:51	61	629	Edina_MW	
12		2760505	12/20/2024 14:42	12/20/2024 15:17	32-35	1440	Edina_MW	X
13		2761374	12/24/2024 12:22	12/24/2024 13:17	52-55	1830	Mpls_Mtka_Plymouth_MW	
14		2761574	12/25/2024 18:43	12/26/2024 4:14	108-571	2795	White Bear_ME	
15		2762174	12/27/2024 16:12	12/27/2024 23:51	20-459	2156	White Bear_ME	X
16		2762726	12/29/2024 8:23	12/29/2024 9:54	65	1041	Minnetonka_MW	X
17		2762723	12/29/2024 8:23	12/29/2024 9:54	91	1490	Minnetonka_MW	X
18		2763000	12/30/2024 0:24	12/30/2024 2:29	58-170	1973	White Bear_ME	X

Minnesota - MAIFI	January	February	March	April	May	June	July	August	September	October	November	December	YTD
2024 All Days, All Levels, All Causes	0.03	0.02	0.02	0.07	0.09	0.14	0.17	0.17	0.05	0.07	0.03	0.05	0.91
Tariff Normalized, IEEE Region No Trans Line, All Ca	0.01	0.02	0.02	0.06	0.06	0.10	0.10	0.08	0.04	0.06	0.02	0.04	0.62
Annual Normalized, IEEE Region All Levels, All Caus	0.03	0.02	0.02	0.07	0.07	0.14	0.11	0.10	0.05	0.06	0.03	0.05	0.74
2023 All Days, All Levels, All Causes	0.02	0.04	0.03	0.14	0.05	0.07	0.09	0.07	0.08	0.05	0.03	0.03	0.69
Tariff Normalized, IEEE Region No Trans Line, All Ca	0.01	0.03	0.02	0.08	0.04	0.04	0.07	0.06	0.06	0.05	0.03	0.03	0.53
Annual Normalized, IEEE Region All Levels, All Caus	0.02	0.04	0.03	0.11	0.05	0.06	0.07	0.07	0.08	0.05	0.03	0.03	0.63
2022 All Days, All Levels, All Causes	0.03	0.02	0.03	0.07	0.18	0.12	0.07	0.08	0.04	0.05	0.05	0.03	0.76
Tariff Normalized, IEEE Region No Trans Line, All Ca	0.02	0.02	0.02	0.05	0.10	0.11	0.07	0.05	0.03	0.05	0.04	0.03	0.57
Annual Normalized, IEEE Region All Levels, All Caus	0.03	0.02	0.03	0.07	0.10	0.12	0.07	0.05	0.04	0.05	0.05	0.03	0.65
2021 All Days, All Levels, All Causes	0.02	0.03	0.04	0.06	0.06	0.11	0.08	0.11	0.10	0.05	0.03	0.05	0.72
Tariff Normalized, IEEE Region No Trans Line, All Ca	0.02	0.03	0.04	0.05	0.06	0.11	0.06	0.09	0.06	0.04	0.03	0.03	0.60
Annual Normalized, IEEE Region All Levels, All Caus	0.02	0.03	0.04	0.06	0.06	0.11	0.08	0.09	0.08	0.05	0.03	0.04	0.69
2020 All Days, All Levels, All Causes	0.01	0.03	0.03	0.06	0.07	0.17	0.12	0.15	0.07	0.07	0.03	0.06	0.88
Tariff Normalized, IEEE Region No Trans Line, All Ca	0.01	0.03	0.03	0.04	0.07	0.15	0.09	0.10	0.06	0.06	0.02	0.05	0.70
Annual Normalized, IEEE Region All Levels, All Caus	0.01	0.03	0.03	0.06	0.07	0.17	0.11	0.11	0.07	0.06	0.03	0.06	0.82

MAIFI - <= 5 Minutes Duration

Metro East - MAIFI	January	February	March	April	May	June	July	August	September	October	November	December	YTD
2024 All Days, All Levels, All Causes	0.07	0.02	0.03	0.04	0.07	0.12	0.14	0.13	0.03	0.06	0.02	0.08	0.82
Tariff Normalized, IEEE Region No Trans Line, All Ca	0.00	0.02	0.03	0.04	0.04	0.08	0.11	0.07	0.03	0.06	0.02	0.05	0.57
Annual Normalized, IEEE Region All Levels, All Caus	0.07	0.02	0.03	0.04	0.04	0.12	0.11	0.07	0.03	0.06	0.02	0.08	0.71
2023 All Days, All Levels, All Causes	0.04	0.05	0.03	0.09	0.04	0.03	0.11	0.06	0.05	0.05	0.02	0.04	0.60
Tariff Normalized, IEEE Region No Trans Line, All Ca	0.03	0.04	0.03	0.01	0.03	0.03	0.07	0.06	0.05	0.04	0.02	0.04	0.45
Annual Normalized, IEEE Region All Levels, All Caus	0.04	0.05	0.03	0.01	0.04	0.03	0.07	0.06	0.05	0.05	0.02	0.04	0.49
2022 All Days, All Levels, All Causes	0.05	0.01	0.02	0.09	0.16	0.16	0.09	0.08	0.03	0.04	0.05	0.04	0.82
Tariff Normalized, IEEE Region No Trans Line, All Ca	0.02	0.01	0.02	0.06	0.06	0.16	0.09	0.04	0.03	0.04	0.05	0.02	0.61
Annual Normalized, IEEE Region All Levels, All Caus	0.05	0.01	0.02	0.09	0.06	0.16	0.09	0.04	0.03	0.04	0.05	0.02	0.67
2021 All Days, All Levels, All Causes	0.01	0.04	0.05	0.06	0.11	0.11	0.05	0.07	0.08	0.05	0.05	0.07	0.77
Tariff Normalized, IEEE Region No Trans Line, All Ca	0.01	0.04	0.05	0.05	0.11	0.11	0.05	0.05	0.06	0.05	0.05	0.04	0.69
Annual Normalized, IEEE Region All Levels, All Caus	0.01	0.04	0.05	0.06	0.11	0.11	0.05	0.05	0.06	0.05	0.05	0.07	0.73
2020 All Days, All Levels, All Causes	0.00	0.05	0.05	0.08	0.07	0.20	0.15	0.15	0.05	0.05	0.02	0.09	0.97
Tariff Normalized, IEEE Region No Trans Line, All Ca	0.00	0.05	0.05	0.08	0.07	0.18	0.12	0.10	0.04	0.05	0.02	0.08	0.85
Annual Normalized, IEEE Region All Levels, All Caus	0.00	0.05	0.05	0.08	0.07	0.20	0.15	0.13	0.05	0.05	0.02	0.09	0.95

MAIFI - <= 5 Minutes Duration

Metro West - MAIFI	January	February	March	April	May	June	July	August	September	October	November	December	YTD
2024 All Days, All Levels, All Causes	0.02	0.02	0.02	0.08	0.08	0.12	0.17	0.21	0.02	0.08	0.03	0.04	0.88
Tariff Normalized, IEEE Region No Trans Line, All Ca	0.02	0.02	0.02	0.08	0.08	0.12	0.09	0.08	0.02	0.05	0.03	0.04	0.63
Annual Normalized, IEEE Region All Levels, All Caus	0.02	0.02	0.02	0.08	0.08	0.12	0.09	0.09	0.02	0.05	0.03	0.04	0.65
2023 All Days, All Levels, All Causes	0.01	0.03	0.02	0.16	0.06	0.06	0.05	0.07	0.06	0.05	0.03	0.02	0.62
Tariff Normalized, IEEE Region No Trans Line, All Ca	0.01	0.03	0.01	0.14	0.06	0.02	0.05	0.06	0.06	0.05	0.03	0.02	0.55
Annual Normalized, IEEE Region All Levels, All Caus	0.01	0.03	0.01	0.15	0.06	0.03	0.05	0.07	0.06	0.05	0.03	0.02	0.57
2022 All Days, All Levels, All Causes	0.01	0.02	0.04	0.06	0.18	0.07	0.07	0.09	0.06	0.06	0.03	0.02	0.70
Tariff Normalized, IEEE Region No Trans Line, All Ca	0.01	0.02	0.02	0.05	0.12	0.07	0.07	0.05	0.04	0.06	0.03	0.02	0.56
Annual Normalized, IEEE Region All Levels, All Caus	0.01	0.02	0.04	0.06	0.12	0.07	0.07	0.05	0.06	0.06	0.03	0.02	0.60
2021 All Days, All Levels, All Causes	0.03	0.02	0.02	0.05	0.03	0.07	0.05	0.11	0.08	0.04	0.01	0.03	0.53
Tariff Normalized, IEEE Region No Trans Line, All Ca	0.03	0.02	0.02	0.05	0.03	0.07	0.05	0.10	0.06	0.04	0.01	0.03	0.50
Annual Normalized, IEEE Region All Levels, All Caus	0.03	0.02	0.02	0.05	0.03	0.07	0.05	0.10	0.07	0.04	0.01	0.03	0.51
2020 All Days, All Levels, All Causes	0.01	0.01	0.02	0.02	0.07	0.15	0.09	0.12	0.08	0.08	0.03	0.04	0.72
Tariff Normalized, IEEE Region No Trans Line, All Ca	0.01	0.01	0.02	0.02	0.07	0.15	0.06	0.06	0.08	0.08	0.03	0.04	0.62
Annual Normalized, IEEE Region All Levels, All Caus	0.01	0.01	0.02	0.02	0.07	0.15	0.09	0.06	0.08	0.06	0.03	0.04	0.63

MAIFI - <= 5 Minutes Duration

Northwest - MAIFI	January	February	March	April	May	June	July	August	September	October	November	December	YTD
2024 All Days, All Levels, All Causes	0.01	0.01	0.00	0.09	0.21	0.16	0.32	0.17	0.10	0.02	0.03	0.01	1.12
Tariff Normalized, IEEE Region No Trans Line, All Ca	0.01	0.01	0.00	0.08	0.14	0.08	0.08	0.14	0.07	0.02	0.02	0.01	0.65
Annual Normalized, IEEE Region All Levels, All Caus	0.01	0.01	0.00	0.09	0.21	0.12	0.16	0.17	0.10	0.02	0.03	0.01	0.92
2023 All Days, All Levels, All Causes	0.02	0.02	0.10	0.25	0.03	0.21	0.20	0.12	0.23	0.05	0.04	0.01	1.27
Tariff Normalized, IEEE Region No Trans Line, All Ca	0.02	0.02	0.10	0.08	0.02	0.18	0.12	0.09	0.14	0.05	0.04	0.01	0.86
Annual Normalized, IEEE Region All Levels, All Caus	0.02	0.02	0.10	0.25	0.03	0.21	0.17	0.12	0.23	0.05	0.04	0.01	1.25
2022 All Days, All Levels, All Causes	0.01	0.03	0.01	0.02	0.27	0.15	0.01	0.06	0.03	0.09	0.09	0.07	0.85
Tariff Normalized, IEEE Region No Trans Line, All Ca	0.00	0.03	0.01	0.02	0.18	0.11	0.01	0.06	0.00	0.06	0.07	0.07	0.62
Annual Normalized, IEEE Region All Levels, All Caus	0.01	0.03	0.01	0.02	0.20	0.13	0.01	0.06	0.03	0.09	0.09	0.07	0.76
2021 All Days, All Levels, All Causes	0.00	0.02	0.10	0.19	0.05	0.34	0.21	0.22	0.13	0.09	0.00	0.06	1.41
Tariff Normalized, IEEE Region No Trans Line, All Ca	0.00	0.02	0.10	0.10	0.05	0.27	0.15	0.14	0.03	0.04	0.00	0.05	0.95
Annual Normalized, IEEE Region All Levels, All Caus	0.00	0.02	0.10	0.19	0.05	0.34	0.21	0.18	0.13	0.09	0.00	0.06	1.37
2020 All Days, All Levels, All Causes	0.01	0.10	0.06	0.10	0.16	0.20	0.14	0.23	0.07	0.13	0.01	0.06	1.27
Tariff Normalized, IEEE Region No Trans Line, All Ca	0.01	0.10	0.02	0.04	0.13	0.13	0.08	0.18	0.01	0.05	0.01	0.00	0.75
Annual Normalized, IEEE Region All Levels, All Caus	0.01	0.10	0.06	0.10	0.16	0.20	0.09	0.23	0.07	0.13	0.01	0.06	1.22

MAIFI - <= 5 Minutes Duration

Southeast - MAIFI	January	February	March	April	May	June	July	August	September	October	November	December	YTD
2024 All Days, All Levels, All Causes	0.01	0.01	0.00	0.08	0.09	0.33	0.18	0.15	0.17	0.11	0.01	0.02	1.16
Tariff Normalized, IEEE Region No Trans Line, All Ca	0.01	0.01	0.00	0.05	0.02	0.14	0.11	0.07	0.10	0.11	0.00	0.02	0.65
Annual Normalized, IEEE Region All Levels, All Caus	0.01	0.01	0.00	0.08	0.04	0.33	0.18	0.15	0.17	0.11	0.01	0.02	1.12
2023 All Days, All Levels, All Causes	0.03	0.04	0.03	0.13	0.06	0.11	0.06	0.06	0.16	0.04	0.05	0.04	0.79
Tariff Normalized, IEEE Region No Trans Line, All Ca	0.00	0.00	0.01	0.02	0.05	0.04	0.04	0.06	0.03	0.04	0.04	0.03	0.36
Annual Normalized, IEEE Region All Levels, All Caus	0.03	0.04	0.03	0.13	0.06	0.11	0.04	0.06	0.16	0.04	0.05	0.04	0.78
2022 All Days, All Levels, All Causes	0.05	0.00	0.03	0.08	0.12	0.19	0.10	0.07	0.02	0.03	0.07	0.02	0.78
Tariff Normalized, IEEE Region No Trans Line, All Ca	0.02	0.00	0.00	0.03	0.05	0.12	0.05	0.06	0.02	0.03	0.02	0.02	0.42
Annual Normalized, IEEE Region All Levels, All Caus	0.05	0.00	0.03	0.08	0.08	0.19	0.10	0.07	0.02	0.03	0.07	0.02	0.74
2021 All Days, All Levels, All Causes	0.03	0.09	0.04	0.01	0.01	0.09	0.14	0.11	0.21	0.04	0.02	0.04	0.83
Tariff Normalized, IEEE Region No Trans Line, All Ca	0.02	0.08	0.01	0.01	0.01	0.09	0.07	0.09	0.09	0.03	0.02	0.00	0.52
Annual Normalized, IEEE Region All Levels, All Caus	0.03	0.09	0.04	0.01	0.01	0.09	0.14	0.11	0.21	0.04	0.02	0.00	0.79
2020 All Days, All Levels, All Causes	0.03	0.00	0.00	0.14	0.01	0.15	0.14	0.22	0.08	0.05	0.09	0.03	0.96
Tariff Normalized, IEEE Region No Trans Line, All Ca	0.03	0.00	0.00	0.04	0.01	0.10	0.11	0.15	0.07	0.04	0.02	0.00	0.56
Annual Normalized, IEEE Region All Levels, All Caus	0.03	0.00	0.00	0.14	0.01	0.15	0.14	0.17	0.08	0.05	0.09	0.03	0.90

MAIFI - <= 5 Minutes Duration

Minnesota - Customer Interruptions	January	February	March	April	May	June	July	August	September	October	November	December	YTD
2024 All Days, All Levels, All Causes	46,854	24,606	28,562	91,345	116,493	196,428	235,430	237,140	62,397	98,353	34,577	64,959	1,237,144
Tariff Normalized, IEEE Region No Trans Line, All Ca	13,101	24,606	28,271	85,966	87,773	142,222	136,664	109,986	48,563	77,655	33,286	51,296	839,389
Annual Normalized, IEEE Region All Levels, All Caus	46,854	24,606	28,562	91,345	99,730	191,586	154,806	131,497	62,397	78,367	34,577	64,959	1,009,286
CES Cust Served	1,353,455	1,354,646	1,356,262	1,357,000	1,359,424	1,359,858	1,360,472	1,363,999	1,365,987	1,366,497	1,367,312	1,369,108	
2023 All Days, All Levels, All Causes	26,994	51,613	45,416	188,937	65,423	90,955	116,105	92,784	106,510	66,333	42,505	36,526	930,101
Tariff Normalized, IEEE Region No Trans Line, All Ca	17,355	42,507	33,122	108,202	58,131	55,499	87,308	86,138	77,770	63,478	41,901	35,267	706,678
Annual Normalized, IEEE Region All Levels, All Caus	26,994	51,613	35,244	148,506	65,423	75,681	94,794	92,784	106,510	66,333	42,505	36,526	842,913
CES Cust Served	1,335,873	1,337,466	1,336,133	1,337,430	1,338,535	1,335,607	1,340,270	1,341,849	1,343,816	1,348,124	1,350,046	1,351,959	
2022 All Days, All Levels, All Causes	35,895	21,428	36,985	88,710	235,216	159,774	97,051	108,797	56,247	67,723	62,104	44,075	1,014,005
Tariff Normalized, IEEE Region No Trans Line, All Ca	19,960	21,428	23,016	68,229	130,379	145,521	90,719	67,038	41,482	63,845	51,370	34,045	757,032
Annual Normalized, IEEE Region All Levels, All Caus	35,895	21,428	36,985	88,710	137,974	157,110	97,051	68,474	56,247	67,723	62,104	34,045	863,746
CES Cust Served	1,324,119	1,325,254	1,327,088	1,328,088	1,327,967	1,327,652	1,327,732	1,328,421	1,329,048	1,330,817	1,332,272	1,334,479	
2021 All Days, All Levels, All Causes	24,324	43,648	49,795	79,383	74,122	145,866	101,017	138,048	130,570	65,673	33,770	60,947	947,163
Tariff Normalized, IEEE Region No Trans Line, All Ca	22,911	38,520	46,020	62,452	74,122	137,934	85,098	114,698	74,756	58,274	33,769	42,198	790,752
Annual Normalized, IEEE Region All Levels, All Caus	24,324	43,648	49,795	79,383	74,122	145,866	101,017	122,217	111,392	65,673	33,770	55,599	906,806
CES Cust Served	1,301,933	1,304,654	1,307,442	1,308,019	1,308,083	1,309,157	1,310,749	1,313,826	1,315,994	1,318,851	1,321,135	1,322,302	
2020 All Days, All Levels, All Causes	10,396	39,042	39,986	75,276	94,115	222,654	157,725	197,967	93,098	93,900	35,448	76,966	1,136,573
Tariff Normalized, IEEE Region No Trans Line, All Ca	10,396	39,042	35,813	54,924	88,609	197,434	113,516	123,612	81,003	79,725	25,943	61,441	911,458
Annual Normalized, IEEE Region All Levels, All Caus	10,396	39,042	39,986	75,276	94,115	222,654	147,286	144,530	93,098	80,913	35,448	76,966	1,059,710
CES Cust Served	1,290,479	1,293,848	1,294,877	1,295,113	1,295,757	1,296,076	1,296,089	1,296,619	1,297,076	1,297,132	1,298,128	1,299,397	

Metro East - Customer Interruptions	January	February	March	April	May	June	July	August	September	October	November	December	YTD
2024 All Days, All Levels, All Causes	29,285	10,018	15,363	19,090	29,322	55,353	61,083	60,061	15,217	28,118	8,252	37,099	368,261
Tariff Normalized, IEEE Region No Trans Line, All Ca	912	10,018	15,363	19,090	18,422	36,363	51,366	30,691	15,217	28,118	8,252	23,436	257,248
Annual Normalized, IEEE Region All Levels, All Caus	29,285	10,018	15,363	19,090	18,422	55,353	51,366	30,691	15,217	28,118	8,252	37,099	318,274
CES Cust Served	446,840	447,296	448,206	448,514	449,428	449,918	450,869	451,694	451,875	452,165	452,497	452,866	
2023 All Days, All Levels, All Causes	16,734	23,180	15,131	38,270	17,142	13,549	49,537	26,243	20,447	21,084	10,064	15,874	267,255
Tariff Normalized, IEEE Region No Trans Line, All Ca	11,263	18,905	15,131	3,811	12,965	13,549	32,786	26,243	20,447	18,500	10,064	15,874	199,538
Annual Normalized, IEEE Region All Levels, All Caus	16,734	23,180	15,131	3,811	17,142	13,549	32,786	26,243	20,447	21,084	10,064	15,874	216,045
CES Cust Served	441,761	442,240	442,532	442,883	443,424	443,639	443,861	444,176	444,588	444,987	445,619	446,451	
2022 All Days, All Levels, All Causes	20,394	5,961	8,862	40,773	69,282	70,487	39,289	34,591	13,700	16,134	23,729	17,873	361,075
Tariff Normalized, IEEE Region No Trans Line, All Ca	9,909	5,961	8,862	26,702	26,745	70,487	39,289	17,990	13,700	16,133	23,729	7,843	267,350
Annual Normalized, IEEE Region All Levels, All Caus	20,394	5,961	8,862	40,773	26,986	70,487	39,289	17,990	13,700	16,134	23,729	7,843	292,148
CES Cust Served	437,017	437,393	438,274	438,661	438,831	438,877	438,923	439,239	439,660	440,084	440,685	441,360	
2021 All Days, All Levels, All Causes	3,058	16,639	22,450	25,223	48,489	49,219	23,752	29,321	36,864	22,706	23,137	31,059	331,917
Tariff Normalized, IEEE Region No Trans Line, All Ca	3,058	16,639	22,450	19,493	48,489	49,218	23,752	23,021	24,986	22,706	23,136	19,286	296,234
Annual Normalized, IEEE Region All Levels, All Caus	3,058	16,639	22,450	25,223	48,489	49,219	23,752	23,021	24,986	22,706	23,137	31,059	313,739
CES Cust Served	428,444	429,234	430,346	430,527	430,677	431,454	432,101	433,066	433,949	435,194	435,923	436,222	
2020 All Days, All Levels, All Causes		21,232	22,795	34,095	31,423	87,285	63,157	64,341	22,355	22,675	6,522	37,749	413,629
Tariff Normalized, IEEE Region No Trans Line, All Causes		21,232	22,795	34,095	31,183	78,150	53,017	44,777	18,391	19,787	6,522	34,516	364,465
Annual Normalized, IEEE Region All Levels, All Causes		21,232	22,795	34,095	31,423	87,285	63,157	54,908	22,355	22,675	6,522	37,749	404,196
CES Cust Served	424,660	426,282	426,613	426,479	426,652	426,708	426,462	426,801	426,834	426,885	427,232	427,721	

Metro West - Customer Interruptions	January	February	March	April	May	June	July	August	September	October	November	December	YTD
2024 All Days, All Levels, All Causes	15,523	11,804	12,906	49,989	48,959	76,481	108,920	133,846	10,697	52,652	22,143	24,079	567,999
Tariff Normalized, IEEE Region No Trans Line, All Ca	10,143	11,804	12,906	49,754	48,959	76,246	59,010	51,752	10,697	32,666	22,143	24,079	410,159
Annual Normalized, IEEE Region All Levels, All Caus	15,523	11,804	12,906	49,989	48,959	76,481	59,010	57,573	10,697	32,666	22,143	24,079	421,830
CES Cust Served	643,423	643,821	644,242	644,509	646,219	646,862	645,475	647,777	649,236	649,160	649,503	650,645	
2023 All Days, All Levels, All Causes	3,735	21,158	14,303	102,243	35,852	36,163	34,176	42,810	35,619	33,000	20,618	14,689	394,366
Tariff Normalized, IEEE Region No Trans Line, All Ca	3,735	21,158	4,131	91,847	35,852	13,201	34,176	41,152	35,619	33,000	20,618	14,689	349,178
Annual Normalized, IEEE Region All Levels, All Caus	3,735	21,158	4,131	96,271	35,852	20,889	34,176	42,810	35,619	33,000	20,618	14,689	362,948
CES Cust Served	633,648	634,388	632,669	633,517	633,938	630,668	635,158	635,999	637,405	640,893	641,989	642,604	
2022 All Days, All Levels, All Causes	7,448	11,767	22,607	34,796	115,548	45,106	43,212	57,233	35,763	36,294	17,880	14,569	442,223
Tariff Normalized, IEEE Region No Trans Line, All Ca	7,279	11,767	12,575	34,627	74,938	45,106	43,212	33,511	25,722	36,294	15,922	14,569	355,522
Annual Normalized, IEEE Region All Levels, All Caus	7,448	11,767	22,607	34,796	74,938	45,106	43,212	33,511	35,763	36,294	17,880	14,569	377,891
CES Cust Served	628,724	629,209	629,883	630,342	630,198	629,915	629,739	629,790	629,983	630,923	631,560	632,808	
2021 All Days, All Levels, All Causes	17,511	12,411	10,111	29,718	18,187	42,356	32,865	67,209	48,752	27,008	7,784	16,805	330,717
Tariff Normalized, IEEE Region No Trans Line, All Ca	17,511	9,549	10,111	29,718	18,187	42,356	32,865	62,194	34,821	27,008	7,784	16,805	308,909
Annual Normalized, IEEE Region All Levels, All Caus	17,511	12,411	10,111	29,718	18,187	42,356	32,865	62,194	41,452	27,008	7,784	16,805	318,402
CES Cust Served	618,963	620,426	621,339	621,741	621,752	621,901	622,483	624,083	625,023	626,431	627,511	628,040	
2020 All Days, All Levels, All Causes	5,461	5,585	10,064	10,976	41,059	90,801	58,284	76,417	51,502	48,884	16,127	26,842	442,002
Tariff Normalized, IEEE Region No Trans Line, All Ca	5,461	5,585	10,064	10,976	41,059	90,801	36,345	38,039	51,502	48,884	16,127	26,842	381,685
Annual Normalized, IEEE Region All Levels, All Caus	5,461	5,585	10,064	10,976	41,059	90,801	53,880	39,950	51,502	35,897	16,127	26,842	388,144
CES Cust Served	613,516	614,496	614,923	615,283	616,090	616,224	616,529	616,512	616,878	616,744	617,202	617,724	

Northwest - Customer Interruptions	January	February	March	April	May	June	July	August	September	October	November	December	YTD
2024 All Days, All Levels, All Causes	912	1,314	291	11,308	26,741	20,560	41,779	22,453	13,039	2,507	3,393	685	144,982
Tariff Normalized, IEEE Region No Trans Line, All Ca	912	1,314		9,945	17,558	10,373	10,950	18,433	8,818	2,507	2,682	685	84,177
Annual Normalized, IEEE Region All Levels, All Caus	912	1,314	291	11,308	26,741	15,718	20,782	22,453	13,039	2,507	3,393	685	119,143
CES Cust Served	128,963	129,131	129,304	129,382	129,349	129,457	129,545	129,678	129,837	130,033	130,144	130,320	
2023 All Days, All Levels, All Causes	2,331	2,444	12,205	31,409	3,919	27,080	24,908	15,906	29,096	6,643	5,642	828	162,411
Tariff Normalized, IEEE Region No Trans Line, All Ca	2,331	2,444	12,205	10,257	2,624	23,387	14,695	10,918	17,676	6,643	5,642	828	109,650
Annual Normalized, IEEE Region All Levels, All Caus	2,331	2,444	12,205	31,409	3,919	27,080	22,181	15,906	29,096	6,643	5,642	828	159,684
CES Cust Served	126,994	127,252	127,344	127,405	127,588	127,671	127,666	127,872	128,015	128,321	128,457	128,792	
2022 All Days, All Levels, All Causes	1,305	3,221	1,624	2,751	34,572	19,535	1,064	7,401	4,257	11,397	10,966	9,344	107,437
Tariff Normalized, IEEE Region No Trans Line, All Causes		3,221	1,579	2,751	22,265	14,205	1,063	7,401	10	7,520	9,340	9,344	78,699
Annual Normalized, IEEE Region All Levels, All Caus	1,305	3,221	1,624	2,751	25,255	16,871	1,064	7,401	4,257	11,397	10,966	9,344	95,456
CES Cust Served	125,757	125,950	126,136	126,186	126,178	126,149	126,241	126,382	126,385	126,558	126,667	126,845	
2021 All Days, All Levels, All Causes		2,199	12,577	23,294	6,108	41,911	26,417	26,930	16,733	11,005	15	7,732	174,921
Tariff Normalized, IEEE Region No Trans Line, All Causes		2,199	11,929	12,093	6,108	34,014	18,738	17,655	3,538	5,218	15	6,104	117,611
Annual Normalized, IEEE Region All Levels, All Causes		2,199	12,577	23,294	6,108	41,911	26,417	22,414	16,733	11,005	15	7,732	170,405
CES Cust Served	123,499	123,748	124,141	124,109	124,144	124,193	124,395	124,592	124,797	124,938	125,330	125,526	
2020 All Days, All Levels, All Causes	885	12,198	6,920	11,708	19,925	24,671	17,486	27,932	8,402	16,134	1,298	7,967	155,526
Tariff Normalized, IEEE Region No Trans Line, All Ca	885	12,198	2,748	4,362	15,613	15,912	9,343	21,861	1,485	6,257	1,298	27	91,989
Annual Normalized, IEEE Region All Levels, All Caus	885	12,198	6,920	11,708	19,925	24,671	11,451	27,932	8,402	16,134	1,298	7,967	149,491
CES Cust Served	122,214	122,579	122,794	122,821	122,682	122,715	122,721	122,854	122,872	122,971	123,052	123,224	

Southeast - Customer Interruptions	January	February	March	April	May	June	July	August	September	October	November	December	YTD
2024 All Days, All Levels, All Causes	1,134	1,470	2	10,958	11,471	44,034	23,648	20,780	23,444	15,076	789	3,096	155,902
Tariff Normalized, IEEE Region No Trans Line, All Ca	1,134	1,470	2	7,177	2,834	19,240	15,338	9,110	13,831	14,364	209	3,096	87,805
Annual Normalized, IEEE Region All Levels, All Caus	1,134	1,470	2	10,958	5,608	44,034	23,648	20,780	23,444	15,076	789	3,096	150,039
CES Cust Served	134,229	134,398	134,510	134,595	134,428	133,621	134,583	134,850	135,039	135,139	135,168	135,277	
2023 All Days, All Levels, All Causes	4,194	4,831	3,777	17,015	8,510	14,163	7,484	7,825	21,348	5,606	6,181	5,135	106,069
Tariff Normalized, IEEE Region No Trans Line, All Ca	26		1,655	2,287	6,690	5,362	5,651	7,825	4,028	5,335	5,577	3,876	48,312
Annual Normalized, IEEE Region All Levels, All Caus	4,194	4,831	3,777	17,015	8,510	14,163	5,651	7,825	21,348	5,606	6,181	5,135	104,236
CES Cust Served	133,470	133,586	133,588	133,625	133,585	133,629	133,585	133,802	133,808	133,923	133,981	134,112	
2022 All Days, All Levels, All Causes	6,748	479	3,892	10,390	15,814	24,646	13,486	9,572	2,527	3,898	9,529	2,289	103,270
Tariff Normalized, IEEE Region No Trans Line, All Ca	2,772	479		4,149	6,431	15,723	7,155	8,136	2,050	3,898	2,379	2,289	55,461
Annual Normalized, IEEE Region All Levels, All Caus	6,748	479	3,892	10,390	10,795	24,646	13,486	9,572	2,527	3,898	9,529	2,289	98,251
CES Cust Served	132,621	132,702	132,795	132,899	132,760	132,711	132,829	133,010	133,020	133,252	133,360	133,466	
2021 All Days, All Levels, All Causes	3,755	12,399	4,657	1,148	1,338	12,380	17,983	14,588	28,221	4,954	2,834	5,351	109,608
Tariff Normalized, IEEE Region No Trans Line, All Ca	2,342	10,133	1,530	1,148	1,338	12,346	9,743	11,828	11,411	3,342	2,834	3	67,998
Annual Normalized, IEEE Region All Levels, All Caus	3,755	12,399	4,657	1,148	1,338	12,380	17,983	14,588	28,221	4,954	2,834	3	104,260
CES Cust Served	131,027	131,246	131,616	131,642	131,510	131,609	131,770	132,085	132,225	132,288	132,371	132,514	
2020 All Days, All Levels, All Causes	4,050	27	207	18,497	1,708	19,897	18,798	29,277	10,839	6,207	11,501	4,408	125,416
Tariff Normalized, IEEE Region No Trans Line, All Ca	4,050	27	206	5,491	754	12,571	14,811	18,935	9,625	4,797	1,996	56	73,319
Annual Normalized, IEEE Region All Levels, All Caus	4,050	27	207	18,497	1,708	19,897	18,798	21,740	10,839	6,207	11,501	4,408	117,879
CES Cust Served	130,089	130,491	130,547	130,530	130,333	130,429	130,377	130,452	130,492	130,532	130,642	130,728	