

June 16, 2023

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

RE: **Comments of the Minnesota Department of Commerce, Division of Energy Resources**
Docket No. E017/M-23-76

Dear Mr. Seuffert:

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

Otter Tail Power Company's Annual Safety, Reliability and Service Quality Report and Proposed SAIFI, SAIDI and CAIDI Reliability Standards for 2023.

The Department:

- Recommends that the Commission **accept** Otter Tail Power Company's (OTP or the Company) Annual Safety Report.
- Requests OTP provide a discussion in its reply comments regarding:
 - Why the number of days away from work metric continues to trend higher than the 10-year average;
 - Why normalized and non-normalized CEMI4 and CEMI5 metrics have increased 97 percent and 52 percent over reported 2021 values, respectively;
 - Why and how recent enhancements to the Company's complaint process and training for company representatives materially impacted the volume of complaints received in 2022, which decreased from 2021 levels but remain significantly above the average; and
 - Further information regarding the ongoing and planned remediation projects on the North Feeder leaving Otter Tail City Substation in Fergus Falls.
- Will make final recommendations on the Company's Annual Service Quality Report after reviewing its reply comments.
- Will provide a recommendation on the Company's Annual Service Reliability Report after reviewing the Company's future supplemental filing on IEEE benchmarking data for 2021.

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The Department is available to answer any Commission questions.

Sincerely,

/s/ CHRIS WATKINS
Public Utilities Rates Analyst

CW/ar
Attachment



Before the Minnesota Public Utilities Commission

Comments of the Minnesota Department of Commerce Division of Energy Resources

Docket No. E017/M-23-76

I. BACKGROUND

Minnesota Rules, Chapter 7826 (effective January 28, 2003) were developed as a means for the Minnesota Public Utilities Commission (Commission) to establish safety, reliability, and service quality standards for utilities “engaged in the retail distribution of electric service to the public” and to monitor their performance as measured against those standards. There are three main annual reporting requirements set forth in the rule. These are:

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

In addition to the rule requirements, the Commission has issued five recent Orders that include additional reporting requirements. The Department lists these Orders chronologically.

The Commission’s January 28, 2020, Order in Docket No. E017/M-19-260 required Otter Tail Power Company (Otter Tail, OTP, or the Company) to include the following in its next annual filing:

- a. Non-normalized SAIDI, SAIFI, and CAIDI^[1] values;
- b. SAIDI, SAIFI, and CAIDI values calculated using the IEEE [Institute of Electrical and Electronics Engineers] 2.5 beta method;
- c. MAIFI [Momentary Average Interruption Frequency Index], normalized and non-normalized;
- d. CEMI [Customers Experiencing Multiple Interruptions] – at normalized and non-normalized outage levels of 4, 5, and 6;
- e. The highest number of interruptions experienced by any one customer;
- f. CELI [Customers Experiencing Lengthy Interruptions] – at normalized and non-normalized intervals of greater than 6 hours, 12 hours, and 24 hours;
- g. The longest experienced interruption by any one customer (or feeder);
- h. A breakdown of field versus office staff required;
- i. Estimated restoration times;

¹ SAIDI = System Average Interruption Duration Index, SAIFI = System Average Interruption Frequency Index, CAIDI = Customer Average Interruption Duration Index.

- j. IEEE benchmarking;
- k. Performance by customer class; and
- l. More discussion of leading causes of outages and mitigation strategies.

The Commission's December 18, 2020, Order in Docket No. E017/M-20-401 required the Company to propose a transition to the full benchmarking approach to setting reliability standards, including a discussion of the definition of work centers, benchmarking for individual work centers, and other considerations. The Commission also required the Company to report information on the number of website visits, logins to electronic customer communication platforms, emails from customers, and types of emails from customers. The Commission set service territory-wide and work center-specific reliability standards for OTP based on the IEEE benchmarking second quartile for medium utilities.

In its December 2, 2021, Order in Docket No. E017/M-21-225 the Commission required the Company to provide additional information regarding:

- 1) Electronic utility-customer interaction beginning with the reports filed in April 2023;
- 2) Percentage uptime and error rate percentage information in their annual reports for the next three reporting cycles, to build baselines for web-based services.
- 3) To continue to provide information on electronic utility-customer interaction such that baseline data are collected:
 - a) Yearly total number of website visits;
 - b) Yearly total number of logins via electronic customer communication platforms;
 - c) Yearly total number of emails or other customer service electronic communications received; and
 - d) Categorization of email subject, and electronic customer service communications by subject, including categories for communications related to assistance programs and disconnections as part of reporting under Minn. R. 7826.1700.
- 4) Public facing summaries with their annual Safety, Reliability, and Service Quality reports.

Additionally, the Commission's November 9, 2022 Order in Docket No. E017/M-22-159 required Otter Tail Power 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.²

Lastly, in its January 18, 2023 Order in Docket No. E017/M-22-159 the Commission eliminated the standalone Annual Summary of Customer Complaints docket (YY-13) and required the Company to

² *In the Matter of Otter Tail Power Company's 2021 Annual Safety, Reliability and Service Quality Report and Proposed SAIFI, SAIDI, and CAIDI Reliability Standards for 2022.* ORDER. Docket No. E017/M-22-129. November 9, 2022. Ordering Paragraph 8. Accessed at:
<https://www.edockets.state.mn.us/edockets/searchDocuments.do?method=showPopup&documentId={30405D84-0000-CE35-AD50-41945DD5C85F}&documentTitle=202211-190522-02>

include customer complaint data from Minnesota Rules 7820.0500 in its Annual Service Quality reports with data filed as a part of Minnesota Rules 7826.2000.³

On April 3, 2023, OTP filed its *2022 Annual Safety, Reliability and Service Quality Report and Proposed SAIFI, SAIDI and CAIDI Reliability Standards for 2023* (2022 SRSQ Report or Annual Report) in Docket No. E017/M-23-76 to comply with the Commission's recent Orders referenced above and the requirements of Minnesota Rules Chapter 7826.

On April 26, 2023, the Commission filed a *Notice of Comment Period* requesting that parties respond to the following questions:

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

II. SUMMARY OF REPORT AND DEPARTMENT ANALYSIS

The Minnesota Department of Commerce, Division of Energy Resources (Department) reviewed OTP's Annual Report to assess compliance with Minnesota Rules, Chapter 7826, and the Commission's various Orders. The Department used information from past annual reports to facilitate identification of issues and trends regarding OTP's performance.

The Department provides:

- responses to the Commission's questions;
- a summary of our review of OTP's 2022 Safety, Reliability and Service Quality Reports;
- a discussion of the Company's reliability standards for 2023; and
- a discussion of the Company's compliance with other Commission Orders.

³ *In the Matter of Otter Tail Power Company's 2021 Annual Safety, Reliability and Service Quality Report and Proposed SAIFI, SAIDI, and CAIDI Reliability Standards for 2022*. ORDER. Docket No. E017/M-22-129. January 18, 2023. Order Points 1 and 2. Accessed at: <https://www.edockets.state.mn.us/edockets/searchDocuments.do?method=showPopup&documentId={C055C585-0000-CB28-B48C-0C100F954DD7}&documentTitle=20231-192232-03>

A. RESPONSE TO COMMISSION QUESTIONS

a. Should the Commission Accept OTP's Safety, Reliability and Service Quality Metrics Reports?

The Department recommends that the Commission accept Otter Tail's Annual Safety report. The Department is awaiting additional information regarding the Service Quality and Reliability portions of the Company's 2022 filing before making a recommendation regarding those aspects of the filing. OTP will be supplementing its petition sometime in the fall of 2023. That supplement will include reliability goals developed using the IEEE benchmarking methodology for calendar year 2022. The Department plans to file supplemental comments regarding its review of that information soon after OTP files that information.

b. Is Otter Tail's 2022 Annual Report consistent with recent Orders and Minn. Rules Ch. 7826 on Electric Utility Standards?

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

c. At what level should the Commission set OTP's 2023 Reliability Standards?

The Department recommends the Commission continue the current process of using the IEEE Distribution Reliability Group's annual benchmarks for Otter Tail's 2023 Reliability Standards.

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

The Department does not have any additional concerns with Otter Tail Power's performance in its call centers at this time and will provide recommendations where appropriate in other utility SRSQ dockets.

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

The Department does not have any additional concerns at this time.

B. ANNUAL SAFETY REPORT

The annual safety report consists of two parts:

- A. a summary of all reports filed with the United States Occupational Safety and Health Administration (OSHA) and the Occupational Safety and Health Division of the Minnesota Department of Labor and Industry (OSHD) during the calendar year; and
- B. a description of all incidents during the calendar year in which an injury requiring medical attention or property damage resulting in compensation occurred as a result of downed wires or other electrical system failures and all remedial action taken as a result of any injuries or property damage described.

The following tables are a compilation of OTP’s summaries of the reports the Company filed with OSHA and OSHD for the previous 10 years.

**Table 1: Types and Numbers of Reports Filed with OSHA and OSHD
 (2013 -2022)**

	Number of Deaths	Number of Cases with Days Away from Work	Number of Cases with Job Transfer or Restriction	Other Recordable Cases
2013	0	3	4	6
2014	0	2	2	16
2015	0	3	7	17
2016	0	3	1	8
2017	0	1	1	10
2018	0	1	2	14
2019	0	3	3	4
2020	0	2	6	1
2021	0	1	3	10
2022	0	4	1	7
Average	0	2.3	3	9.3
Variance	0	1.7	-2	-2.3

The above results suggest that there was not a significant increase or decrease in the metrics included in Table 1 for Otter Tail in 2022.

**Table 2: Number of Day of Restricted or Other Service in Reports filed with OSHA and OSHD
 (2013 -2022)**

	Days of Job Transfer or Restriction	Days Away from Work
2013	147	15
2014	48	14
2015	349	90
2016	240	10
2017	41	11
2018	152	6
2019	239	60
2020	451	17
2021	214	33
2022	9	41
Average	189	29.7
Variance	-180	11.3

The Department notes the significant improvement in days of job transfer or restriction compared to the ten-year average with a corresponding higher-than-average total annual days away from work, and requests further information from OTP in reply comments regarding why the number of days away from work metric continues to trend higher than the 10-year average.

**Table 3: Injury & Illness Types in Reports filed with OSHA and OSHD
(2013 -2022)**

	Injuries	Skin Disorders	Respiratory Conditions	Poisonings	All Other Illnesses
2013	13	0	0	0	0
2014	20	0	0	0	0
2015	23	0	0	0	1
2016	12	0	0	0	0
2017	12	0	0	0	0
2018	14	0	0	0	0
2019	10	0	0	0	0
2020	9	0	0	0	0
2021	14	0	0	0	0
2022	12	0	0	0	0
Average	13.9	0	0	0	0.1
Variance	-1.9	0	0	0	-0.1

The information in Table 3 for 2022 is consistent with prior years and the 10-year average. The Department has no additional comments.

The following table summarizes OTP's most recent and past reports regarding property damage claims that occurred because of downed wires or other electrical system failures.

Table 4: Property Damage Claims (2013 – 2022)

	Claims	Cause	Total Amount Paid
2013	1	Downed power lines	\$632.97
2014	5	Bad Connection, wrong voltage, bad cable, power surge	\$9,383.44
2015	2	Bad connection, voltage fluctuations	\$1,552.70
2016	1	Faulty secondary wire	\$277.50
2017	3	Crop and property damage	\$2,882.00
2018	1	UG fault	\$100.00
2019	0		\$0.00
2020	0		\$0.00
2021	0		\$0.00
2022	0		\$0.00
Average	1.3		\$1,482.86
Variance	-1.3		-\$1,482.86

Otter Tail achieved its fourth year in a row without any new property damage claims in 2022. The Department has no additional comments.

The Department acknowledges OTP’s fulfillment of the requirements of Minnesota Rules, part 7826.0400.

C. ANNUAL RELIABILITY REPORT

Minnesota Rules 7826.0500 through 7826.0700 succinctly delineate the

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

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

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

1. Reliability Performance

The Commission adopted a new methodology for benchmarking electric utility reliability for the three investor-owned utilities (IOUs) operating in Minnesota in its Order dated Docket No. E002/M-20-406 dated December 18, 2020.⁴ Specifically, the Commission required “utilities to report reliability based on the traditional five-year rolling average at the work-center level but required utilities to use the [Institute of Electrical and Electronic Engineers] IEEE benchmarking to measure system-wide performance.”⁵

In that same Order the Commission required the utilities to discuss and propose a transition to a full benchmarking approach to setting reliability standards. In advance of the transition, the Commission delegated authority to the Executive Secretary to continue conversations with utilities and other interested parties on the definition of work-centers, the process for benchmarking individual work centers and other considerations for the transition to benchmarking.⁶

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

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

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

- Minnesota Power –
 - Service territory-wide – second quartile for medium utilities.
 - Work-center – second quartile for small utilities.
- Otter Tail Power Company –
 - Service territory-wide – second quartile for medium utilities.
 - Work-center – second quartile for medium utilities.
- Xcel Energy –
 - Service territory-wide – second quartile for large utilities.

⁴ Order Accepting Reports Requiring Additional Filings and Establishing Workshop in Docket Nos. E002/M-20-406 (Xcel), E017/M-20-401 (Otter Tail Power) and E015/M-20-404 (Minnesota Power).

⁵ *Id.* at page 3.

⁶ *Id.* at Order Point 6, p. 7.

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

Given that IEEE does not publish its benchmarking results for the prior year until August of the following year, the three IOUs don’t yet know where they stand relative to those benchmarks for 2022. They make a supplemental filing in September that provides this information. Table 5 below provides this information for OTP for 2021.

Table 5. Otter Tail Power 2021 Reliability Performance vs. IEEE Benchmark Goal

Work Center	Metric	2021 IEEE Benchmarks	2021 OTP Actuals	Met Benchmark?
Bemidji	SAIDI	136	30.32	Yes
	SAIFI	1.08	0.46	Yes
	CAIDI	126	66.03	Yes
Crookston	SAIDI	136	85.67	Yes
	SAIFI	1.08	1.13	No
	CAIDI	126	76.08	Yes
Fergus Falls	SAIDI	136	76.49	Yes
	SAIFI	1.08	1.15	No
	CAIDI	126	66.44	Yes
Morris	SAIDI	136	72.82	Yes
	SAIFI	1.08	1.05	Yes
	CAIDI	126	59.14	Yes
All MN Customers	SAIDI	136	79.03	Yes
	SAIFI	1.08	1.24	No
	CAIDI	126	66.89	Yes

The Company’s 2021 results were good. OTP’s performance was better than the IEEE benchmarks for twelve of the fifteen metrics listed. The metrics where the Company did not meet the benchmark were the SAIFI results for the Crookston, Fergus Falls, and Minnesota territory-wide regions. The Company stated that it believes that these SAIFI values are indicative of OTP’s unique rural service territory and low customer density which requires greater system exposure to service fewer customers per mile of transmission or distribution line relative to the average benchmark survey participant.⁷

For 2022, OTP’s assigned service territory consists of four work centers – Bemidji, Crookston, Fergus Falls and Morris.⁸

⁷ Otter Tail Power Company. IEEE Supplemental Filing. Docket No. E017/M-22-159. August 24, 2022. Accessed at: <https://www.edockets.state.mn.us/edockets/searchDocuments.do?method=showPoup&documentId={A045D582-0000-C514-BF93-31565ADB0E18}&documentTitle=20228-188591-01>

⁸ Minnesota Public Utilities Commission Minutes dated May 2, 2022, at page 3.

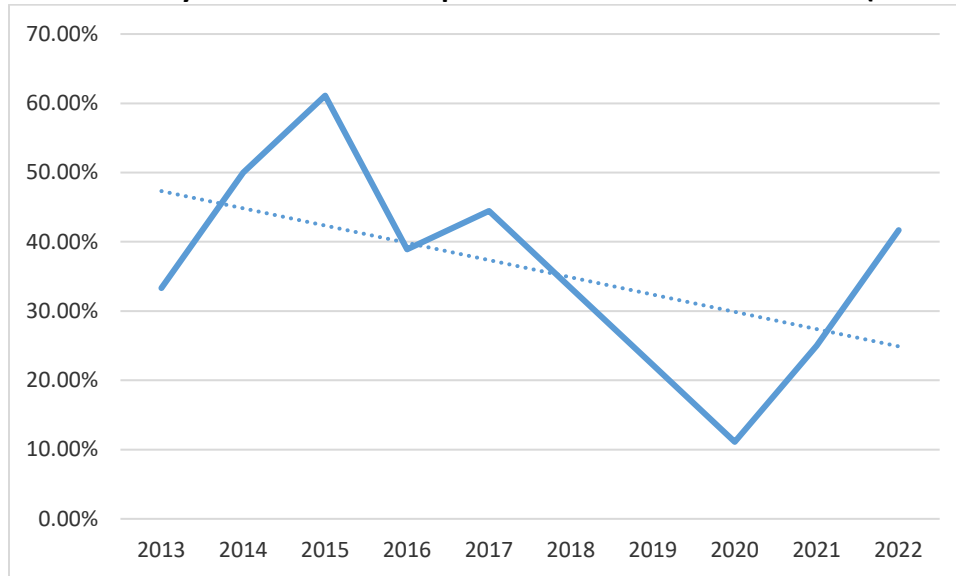
The following table shows the Company’s 2022 reliability performance compared with the 2021 goals set to IEEE second quartile benchmarks for medium utilities.

Table 6: OTP’s 2022 Reliability Performance Compared with 2021 IEEE Goals

Work Center	Metric	2022 Performance	2021 Goals
Bemidji	SAIDI	141.28	136
	SAIFI	1.65	1.08
	CAIDI	85.55	126
Crookston	SAIDI	151.18	136
	SAIFI	1.78	1.08
	CAIDI	84.97	126
Fergus Falls	SAIDI	100.44	136
	SAIFI	1.47	1.08
	CAIDI	68.25	126
Morris	SAIDI	141.09	136
	SAIFI	2.09	1.08
	CAIDI	67.51	126
All MN Customers	SAIDI	119.77	136
	SAIFI	2	1.08
	CAIDI	117.33	126

Text highlighted in red in Table 6 indicate reliability goals that were not met when comparing 2022 actuals to 2021 goals. While the Department notes that this comparison is not required given the new benchmarking approach the Commission adopted in Docket No. E017/M-21-225, it does provide Commission staff, Commissioners, and other interested parties a point of reference for OTP’s actual 2022 reliability results compared to most-recent goals. Perhaps the most interesting comparison the Department’s review identified is Otter Tail’s reliability performance improved in 2022 relative to 2021. Figure 1 summarizes this information.

Figure 1: Reliability Performance Compared with Previous Year Goals (2013 - 2022)



The Department notes the Company’s year-over-year reliability performance relative to meeting previous year goals improved by 16 percent from 2021 to 2022.

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

Based on its review of Otter Tail Power’s 2022 system-wide reliability requirements reporting, the Department concludes the Company appears to have fulfilled the requirements of Minnesota Rules, part 7826.0500, subp. 1A, B, and C.

2. Storm-Normalization Method

OTP calculated its 2022 SAIDI, SAIFI, and CAIDI indices using the IEEE 2.5 beta method for storm normalization. OTP reported that, under the IEEE 2.5 beta method, two days met the criteria to be considered a Major Event Day (MED) on its entire system:

- May 12, 2022 – Severe weather caused prolonged interruptions to 24,000 customers and caused extensive equipment damage with over 250 broken poles. The SAIDI/day system accumulation was 91 minutes.
- June 20, 2022 – Severe weather resulted in extensive equipment damage and several broken transmission structures causing prolonged interruptions to Bemidji, Fergus Falls, and Morris customers. The SAIDI/day system accumulation was 16 minutes.

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

3. *Action Plan to Improve Reliability*

OTP provided detailed information regarding its internal process for meeting its 2022 reliability goals, consisting of an update to past and continuing efforts first presented to the Commission in the pendency of its 2011 Annual Safety, Reliability and Service Quality Report.⁹ The Company continued to caution that “overall system improvements will be realized over longer periods of time,” but its proposed action plan signifies continued contribution towards cost-effective improvement of overall system reliability.¹⁰ Of the eight projects presented as a part of OTP’s reliability action plan, the Department highlights the following four activities that included incremental updates beyond those provided in OTP’s 2021 SRSQ Report:¹¹

- **Customer Service and Asset Management Joint Monthly Team Meetings.** Local Customer Service Center (CSC) operations management staff now meets monthly with engineering staff to discuss reliability concerns.
- **Electronic Tracking Process for Transmission Patrol Reports and Maintenance Activities.** The process continued to provide the several benefits noted in the 2021 SRSQ Report throughout 2022.
- **GIS Data Integration and Improvements.** OTP updated the timeline for project completion to improve the quality of GIS data through a data collection effort performed by a third party from 2022 to the second quarter of 2023.
- **Installation of Real-Time Voltage, Current, and Power Quality Monitors.** OTP installed an additional 37 power quality monitors on its system in 2022, increasing the total number deployed to 137.

The Department acknowledges OTP’s fulfillment of the requirements of Minnesota Rules, part 7826.0500, subp. 1E.

4. *Bulk Power Supply Interruptions*

OTP reported that its customers experienced four interruptions to its Minnesota bulk power supply facility in 2022, with three of these events occurring on May 12, 2022 – one of the Company’s two declared Major Event Days.¹²

- On May 12, 2022, derecho winds caused over 250 downed transmission and distribution structures and caused many vegetation strikes on lines. Damage was concentrated to the Bigstone to Marietta 115kV, Burr to Marietta 115kV, and Bigstone to Blair 230kV line sections. This caused significant sustained interruptions to the Morris

⁹ Docket No. E017/M-12-325.

¹⁰ 2022 SRSQ Report, at 16.

¹¹ *Id.*, at 15.

¹² *Id.*, at 16.

and Fergus Falls CSCs, with Morris recording 313 of SAIDI accumulation during this event.

- On May 30, 2022, high winds and possible tornado damaged several structures on the Alexandria to Xcel Douglas County 115kV line section.

In response to a Department Information Request (IR) the Company provided an explanation of the infrastructure hardening or other remedial steps OTP was considering to prevent future interruptions to utility structures and equipment damaged in these two storms. The Company reaffirmed its commitment to learning from past events to improve future system reliability, and explicitly stated that its design team is investing the following actions for possible implementation in the future:¹³

- Increasing pole class on future designs,
- Prioritizing upgrades to historic heavy storm event areas,
- Prioritize patrols and assessments of assets in areas where storm events have occurred, and
- Increasing the frequency of storm guy wire protections in line design to prevent cascade failures.

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

5. Major Service Interruptions

On December 18, 2020, the Commission granted OTP a variance to Minnesota rule 7826.0500 Subpart 1g, which required Otter Tail to provide a copy of each report filed under Minnesota Rules, part 7826.0700. Instead, OTP now provides a summary table that includes the information contained in the reports in Attachment 1 to the 2022 SRSQ Report.

The Company reported 21 major service interruptions in 2022, compared to 13 in 2021. The largest major service interruptions occurred during the severe weather event on May 12, 2022 and affected approximately 7,533 customers. OTP stated that the length of the outage, which began approximately at 5:30 p.m. on May 12 to 9:11 p.m. on May 14, 2021, varied between 1 hour and 9 minutes for some customers and 51 hours and 15 minutes for others.

The Department acknowledges OTP's fulfillment of the requirements of Minnesota Rules, part 7826.0500, subp. 1G as varied by the Commission.

6. Worst Performing Circuit

OTP identified the worst performing feeder in each work center, including its SAIDI, SAIFI, CAIDI, and MAIFI, the major causes of each feeder's outages, and the remedial measures planned or taken by the

¹³ Attachment A. Otter Tail Power Reply to DOC IR-003.

Company to prevent further outages. The Company indicated that it continues to define a circuit as a distribution feeder, and it will be including MAIFI as an identifying condition as the Company believes MAIFI is a predictor of future SAIDI.

The Department uses historical data to identify potential areas of concerns on any feeders that appear multiple times as a worst performing feeder. The Department notes that, according to OTP's annual reports over the years, there is generally no apparent trend in terms of outage causes or continuing poor performance for any particular feeder. One notable exception to this is the North Feeder in Fergus Falls. This feeder, connected to the Otter Tail City Substation and serving 876 customers, has been the worst-performing circuit in the Fergus Falls CSC for the past four years. During this time the feeder's SAIDI, SAIFI, and CAIDI values have increased 325, 21, and 249 percent, respectively. Outages over the years on this feeder have primarily been attributed to severe weather, animal and vegetation strikes, and equipment failure, and the Company noted the feeder is located in a heavily wooded area last trimmed in 2021. OTP indicated that it initiated a project to underground sections of the feeder, but supply chain constraints for distribution transformers delayed completion.

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

7. Compliance with ANSI Voltage Standards

OTP provided a table listing the feeders and number of known occurrences where the voltage fell outside the American National Standards Institute (ANSI) C84.1 service voltage Range B (plus 6 percent to minus 13 percent of nominal) in 2022. In response to Department IR-006 the Company explained that many of the meters experiencing a high frequency of over-voltage conditions (more than 1,000 Range B violations in the year) were located within – or less than 1,000 feet from – a substation, or located near to a customer or facility with large load swings.¹⁴ OTP investigates feeder sections with a high occurrence of instantaneous voltage violations by installing wireless power quality monitors in possible problem areas to identify and prioritize remediation actions on the system.

The Department observes no significant trend regarding this metric.

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

8. Work Center Staffing Levels

OTP provided information on staffing levels by work center as of December 31, 2022. The following table summarizes total staffing levels over the past 10 years.

¹⁴ Attachment B. Otter Tail Power Reply to DOC IR-006.

Table 7: OTP Work Center Staffing Levels (2012 – 2021)

Year	Field	Office	Total
2013	109	33	142
2014	107	33	140
2015	114	29	143
2016	116	32	148
2017	111	43	154
2018	123	39	132
2019	122	43	165
2020	121	45	166
2021	86	45	131
2022	92	45	137

In its 2021 SRSQ Report the Company explained that it refined the calculation for estimating the work center staffing levels. The consolidation of the Minnesota-based facilities in the Milbank and Wahpeton CSCs created a situation in which Otter Tail elected to include only the number of staff that work on Minnesota-jurisdictional projects in the revised Morris and Crookston work centers. The observed decrease in work center staffing between 2020 and 2021 is thus the result of an accounting change, and operationally the number of staff available did not change.

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

9. Other Information

This section of OTP’s Annual Report provided updates on continuing developments from the Company’s efforts to utilize power quality monitors, deploy AMI meters and its new Outage Management System, and realize the reliability benefits of its SIRI Initiative strategic planning process discussed in its Integrated Distribution Plan (IDP).

The Department appreciates OTP’s efforts and additional information and acknowledges OTP’s fulfillment of the requirements of Minnesota Rules, part 7826.0500, subp. 1K.

D. RELIABILITY STANDARDS

The Commission set Otter Tail’s 2021 and subsequent statewide reliability and work-center standards at the IEEE benchmarking second quartile for medium utilities in its Order dated March 2, 2022, in Docket No. E017/M-21-225. This Commission decision represented a departure from the reliability performance standards delineated in Minnesota Rules, part 7826.0600. The Commission adopted the different annual reliability performance benchmarks calculated by the IEEE as its performance goals for the different utilities.

The Commission’s current approach identifies the various IEEE calculated reliability benchmarks as the goals for the Minnesota’s three investor-owned utilities (IOUs). Table 8 compares OTP’s 2022 reliability results with the IEEE 2021 results. The IEEE 2021 results only serve as a proxy in this comparison for the yet to be calculated 2022 IEEE reliability results, which are typically provided in August the following year.

Table 8: Minnesota Jurisdiction 2022 Actual Reliability Compared to 2021 IEEE Results

Reliability Metric	Actual Performance	2021 IEEE Median Normalized Medium Sized Utility Results	Would Goal Have Been Met?
SAIFI	1.62	1.08	no
SAIDI	119.77	136	yes
CAIDI	73.83	126	yes

As the above table illustrates, the Company could meet the Commission’s 2022 reliability goals at the service territory-wide level for SAIDI and CAIDI if the 2021 IEEE benchmark results remain constant or do not improve, but would not have met the SAIFI goal. Given that this comparison is something of a hypothetical, the Department will not provide work-center level information until the Company provides the actual 2022 IEEE results in a supplemental filing sometime in August 2023.

E. ANNUAL SERVICE QUALITY REPORT

Minnesota Rules, part 7826.1300 requires each utility to file information regarding the following:

1. Meter Reading Performance (7826.1400),
2. Involuntary Disconnection (7826.1500),
3. Service Extension Response Time (7826.1600),
4. Call Center Response Time (7826.1700),
5. Emergency Medical Accounts (7826.1800),
6. Customer Deposits (7826.1900), and
7. Customer Complaints (7826.2000).

1. Meter Reading Performance

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

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

OTP provided detailed meter reading information, including information on its monthly meter reading staffing levels. Table 9 summarizes OTP’s meter reading statistics.

Table 9: Meter-Reading Performance 2013 - 2022

	Percent Read by OTP	Percent Read by Customer	Percent Not Read
2013	95.8%	1.9%	2.3%
2014	95.9%	1.8%	2.4%
2015	95.9%	1.7%	2.4%
2016	96.4%	1.5%	2.2%
2017	96.4%	1.5%	2.2%
2018	97.3%	1.5%	1.2%
2019	97.5%	1.3%	1.2%
2020	97.1%	1.3%	1.6%
2021	97.0%	1.4%	1.6%
2022	96.5%	1.1%	2.4%

OTP’s meter-reading performance over the years has remained consistent, and 2022 was no departure from this trend.

Minnesota Rules, part 7826.0900, subp. 1 requires that at least 90 percent of all meters during the months of April through November and at least 80 percent of all meters during the months of December through March are read monthly. The Company’s information reflects that it read at least 94 percent of all meters each month during 2022. According to OTP, there were 10 meters that were not read for a period of 6-12 months in 2022. This compares to 23 meters that were not read over the same period in 2021. Additionally, there were two meters that were not read for a period of greater than 12 months. The Company stated that these meters went unread due to access issues where meters were located in locked buildings or were otherwise inaccessible due to obstructions.

The Company reported that it maintained an average of approximately 52 meter-reading customer service representatives in 2022, the same amount reported in 2021. OTP also uses third parties to read meters in select cities within the Company’s service territory.

The Department acknowledges OTP’s fulfillment of the requirements of Minnesota Rules, part 7826.1400.

2. Involuntary Disconnections

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

- A. the number of customers who received disconnection notices,
- B. the number of customers who sought cold weather rule protection under Minnesota Rules 7820 and the number who were granted cold weather rule protection,

- C. the total number of customers whose service was disconnected involuntarily and the number of these customers restored to service within 24 hours, and
- D. the number of disconnected customers restored to service by entering into a payment plan.

The following table summarizes residential customer disconnection statistics reported by OTP in its annual reports.

Table 10: Residential Customer Involuntary Disconnection Information

	Received Disconnect Notice	Sought CWR Protection	Granted CWR Protection	% Granted	Disconnected Involuntarily	Restored within 24 Hours	Restored by Entering Payment Plan
2013	39,913	1,788	1,776	99.3%	745	644	23
2014	44,894	1,430	1,424	99.6%	794	619	104
2015	49,185	1,130	1,125	99.6%	629	232	69
2016	49,368	932	928	99.6%	924	301	42
2017	48,421	817	814	99.6%	1,044	415	33
2018	67,015	659	658	99.9%	1,088	428	32
2019	56,257	441	398	90.3%	317	146	27
2020	15,677	121	82	68%	59	16	17
2021	31,116	360	292	81%	728	33	78
2022	43,732	444	379	85%	458	395	78

OTP reported that 47,590 disconnection notices were sent to residential, small commercial and large commercial customers in 2022, with 43,732 of these notices being for residential customers. This number is indicative of the general trend back towards the previous annual averages prior to the moratorium on disconnections during the COVID-19 pandemic.

While the increases in the number of customers seeking Cold Weather Rule protections and receiving disconnection notices in 2022 are concerning, the Department notes the annual number of customers in these reporting categories has been declining over the past 10 years as shown in Figures 2 and 3.

Figure 2: Number of Customers Seeking Cold-Weather Rule Protection (2013 - 2022)

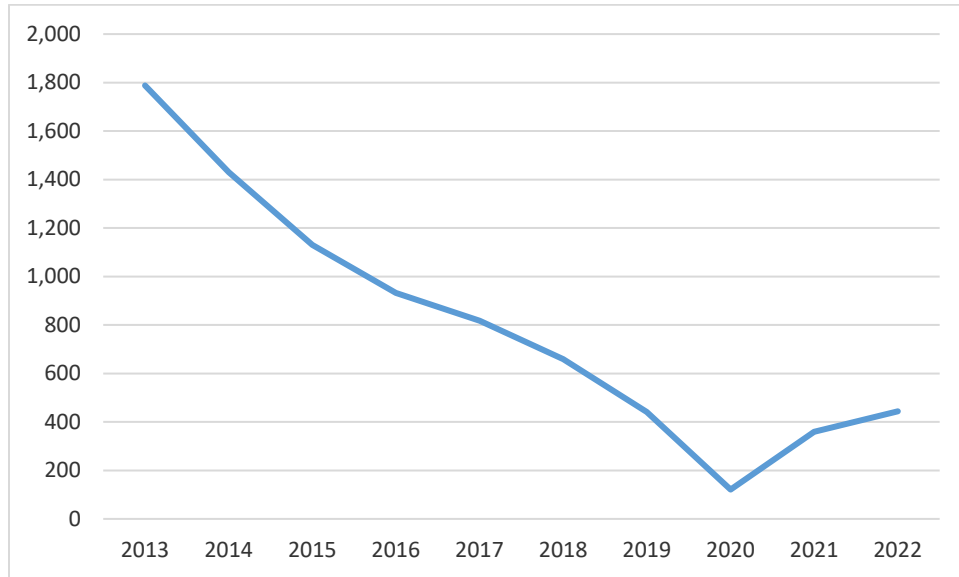
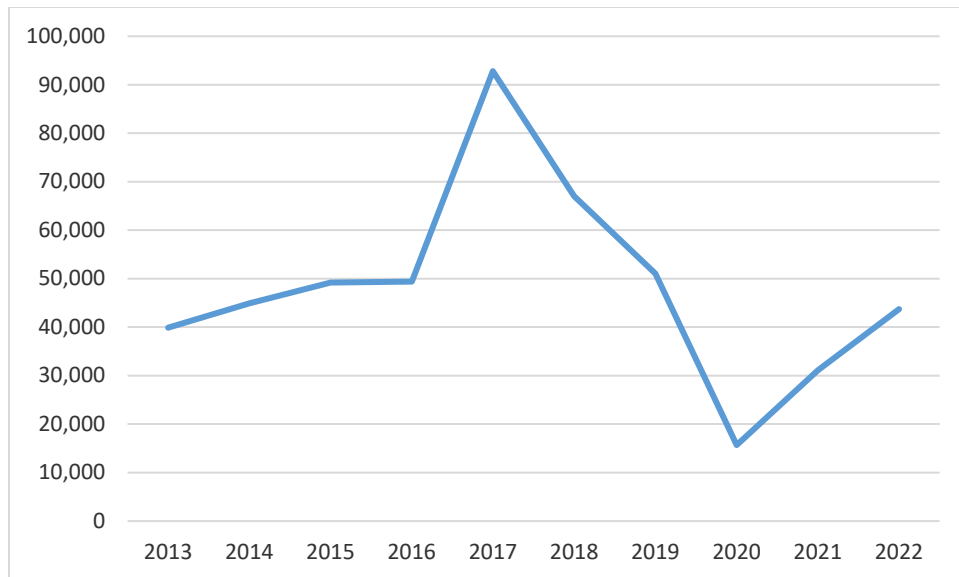


Figure 3: Number of Customers Receiving Disconnection Notices (2013 - 2022)



The Department acknowledges OTP’s fulfillment of the requirements of Minnesota Rules, part 7826.1500.

3. Service Extension Requests

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

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

OTP reported the number of service extension requests received each month by customer class. In 2022, 530 customers requested service to a location not previously served with 58 percent of these requests installed within zero to two days of the requested in-service date. As for locations previously served, OTP reported that 1,502 of these requests were made in 2022 with 88 percent of these requests were installed within zero to two days of the requested in-service date.

The Department acknowledges that OTP has fulfilled the requirements of Minnesota Rules, part 7826.1600.

4. Call Center Response Time

The annual service quality report must include a detailed report on monthly call center response times, including calls to the business office and calls regarding service interruptions. Further, Minnesota Rules, part 7826.1200 requires that 80 percent of calls be answered within 20 seconds.

OTP provided monthly data regarding the number of incoming calls and those calls that were answered and abandoned. The Company's data indicate that an annual average of 89.26 percent of calls were answered within 20 seconds in 2022. Therefore, the Department concludes that OTP is in compliance with Minnesota Rules, part 7826.1200.

5. Emergency Medical Accounts

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

OTP reported that 6 Minnesota customers requested emergency medical account status in 2022, all of whom were granted that status. This is the same number of customers who requested and were granted emergency medical account status in 2021. The Department acknowledges OTP's fulfillment of the requirements of Minnesota Rules, part 7826.1800.

6. Customer Deposits

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

Table 11 summarizes the number of customer deposits required over the past ten years. The number of customers served by OTP in Minnesota is provided for context.

Table 11: Customer Deposits Required 2013 -2022

	Number of Deposits Required	Total Customers Served
2013	895	59,849
2014	783	61,169
2015	597	60,232
2016	715	61,226
2017	698	61,568
2018	685	61,888
2019	652	62,105 ¹⁵
2020	297	61,748
2021	0	62,465
2022	0	52,862

The Company noted that the decrease in the number of deposits has a direct correlation with the suspension of collections activities due to the COVID-19 pandemic. OTP will continue to assess whether it needs to reinstate collection of deposits but has decided for a second year that they are not needed at this time. The Department acknowledges OTP's fulfillment of the requirements of Minnesota Rules, part 7826.1900.

7. Customer Complaints

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

- A. the number of complaints received;
- B. the number and percentage of complaints alleging billing errors, inaccurate metering, wrongful disconnection, high bills, inadequate service, and the number involving service extension intervals, service restoration intervals, and any other identifiable subject matter involved in five percent or more of customer complaints;

¹⁵ The total customers served for 2019 was taken from the Minnesota Jurisdictional 2018 Report in Docket No. 20-4 rather than the Minnesota Rules Chapter 7610 reports as the data were not yet available at the time for filing.

- C. the number and percentage of complaints resolved upon initial inquiry, within ten days, and longer than ten days;
- D. the number and percentage of all complaints resolved by taking any of the following actions:
 - (1) taking the action, the customer requested;
 - (2) taking an action, the customer and the utility agree is an acceptable compromise;
 - (3) providing the customer with information that demonstrates that the situation complained of is not reasonably within the control of the utility;
 - or
 - (4) refusing to take the action the customer requested; and
- E. the number of complaints forwarded to the utility by the Commission’s Consumer Affairs Office for further investigation and action.

OTP’s report on customer complaints includes the required information. Table 12 contains a limited summary of OTP’s customer complaint history.

Table 12: Customer Complaints Selected Summary 2013 -2022

	Number of Complaints	High Bills	Billing Error	Service Restoration	Resolved Upon Initial Inquiry	Took Action Customer Requested
2013	133	9%	17%	5%	92%	21%
2014	98	12%	11%	4%	83%	31%
2015	86	22%	22%	0%	77%	23%
2016	28	0%	14%	0%	93%	54%
2017	33	6%	16%	0%	91%	24%
2018	34	6%	0%	0%	47%	21%
2019	28	18%	0%	0%	54%	82%
2020	30	30%	0%	0%	80%	47%
2021	113	1%	58%	41%	94%	18%
2022	109	30%	8%	3%	82%	40%

OTP noted it received seven customer complaints that were forwarded to the utility from the Commission’s Consumer Affairs Office (CAO), the same number of such complaints as in 2021.

The number of complaints in 2022 decreased slightly compared to 2021 but remains significantly above the ten-year average of 69. The Company noted that it had recently enhanced its complaint process and training for company representatives as a part of its updates to its customer information system, but did not include a discussion of how this materially impacted the volume of complaints received in 2022. The Department requests Otter Tail discuss this topic in its Reply Comments.

The Department acknowledges OTP’s fulfillment of the requirements of Minnesota Rules, part 7826.2000.

E. COMPLIANCE WITH PERTINENT COMMISSION ORDERS

The Commission's January 28, 2020 Order in Docket No. E017/M-19-260 included Attachment B, which updated the annual reporting requirements for the Utility. Attachment B required the following to be reported by OTP:

- a. Non-normalized SAIDI, SAIFI, and CAIDI values;
- b. SAIDI, SAIFI, and CAIDI values calculated using the IEEE 2.5 beta method;
- c. MAIFI, normalized and non-normalized;
- d. CEMI – at normalized and non-normalized outage levels of 4, 5, and 6;
- e. The highest number of interruptions experienced by any one customer;
- f. CELI – at normalized and non-normalized intervals of greater than 6 hours, 12 hours, and 24 hours;
- g. The longest experienced interruption by any one customer (or feeder);
- h. A breakdown of field versus office staff required;
- i. Estimated restoration times;
- j. IEEE benchmarking;
- k. Performance by customer class; and
- l. More discussion of leading causes of outages and mitigation strategies.

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

a. Non-normalized SAIDI, SAIFI, and CAIDI values

OTP provided this information in Tables 4 and 4a on page 11 of its 2022 SRSQ Report. The following tables show the normalized and non-normalized values for SAIDI, SAIFI, and CAIDI as reported by OTP. As there were two major event days during 2022 these numbers are not identical.

Table 13: 2022 Normalized and Non-normalized SAIDI, SAIFI, and CAIDI

Work Center	SAIDI	SAIFI	CAIDI
Bemidji			
Non-normalized	180.54	1.96	92.03
Normalized	141.28	1.65	85.55
Crookston			
Non-normalized	160.95	1.98	81.11
Normalized	151.18	1.78	84.97
Fergus Falls			
Non-normalized	167.17	1.70	98.2
Normalized	100.44	1.47	68.25
Morris			
Non-normalized	493.25	2.92	168.91
Normalized	141.09	2.09	67.51

b. SAIDI, SAIFI, and CAIDI values calculated using the IEEE 2.5 beta method

See Table 13 above.

c. MAIFI – normalized and non-normalized

OTP provided this information on page 35 of its 2022 SRSQ Report. Table 14 below shows the Company’s normalized and non-normalized MAIFI for 2021. There were two major event days in 2022, so these numbers are not identical.

Table 14: 2022 Normalized and Non-Normalized MAIFI

Work Center	Non-Normalized	Normalized
Bemidji	4.81	4.68
Crookston	7.47	7.24
Fergus Falls	6.11	5.19
Morris	7.43	5.97
MN Total	6.26	5.45

d. CEMI – at normalized and non-normalized outage levels of 4, 5, and 6

OTP provided this information in Tables 10 and 10a on page 35 of its Annual Report. Regarding CEMI, the Department notes that the Company had seen an improvement in recent years as the percentage of customers experiencing five or greater outages, and customer experiencing seven or greater outages has decreased from highs in 2015 and 2016 to lows in 2020. Table 15 below shows the Company’s CEMI performance for 2022 at various intervals.

Table 15: 2022 Non-Normalized and Normalized CEMI 4, 5, 6

Metric	Non-Normalized	Normalized
CEMI4	17.99%	13.75%
CEMI5	11.64%	7.57%
CEMI6	4.72%	3.28%

The Department notes that OTP reported higher year-over-year values for both CEMI4 and CEMI5 compared to 2021, with these normalized metrics increasing 97 percent and 52 percent, respectively. The Department requests the Company address this in reply comments.

- e. Highest number of interruptions by any one customer (or feeder, if customer level is not available)*

OTP provided this information on page 35 of its Annual Report. OTP stated that the North Feeder fed from the Ottertail City Substation once again experienced the most interruptions and was the Fergus Falls CSC’s worst performing circuit with four sustained and 21 momentary interruptions. The Department notes that this feeder has been the worst performing circuit in the Fergus Falls CSC for four years consecutively, and requests further information from OTP in Reply Comments regarding the current status of planned projects and anticipated improvements to this feeder.

- f. CELI – at intervals of greater than 6 hours, 12 hours, and 24 hours*

OTP provided this information in Tables 11 and 11a on page 36 of its Annual Report. Table 16 below shows the Company’s CELI performance for 2022 at the various intervals.

Table 16: 2022 CELI at 6, 12, and 24 Hours – Non-Normalized and Normalized

Metric	Non-Normalized	Normalized
CELID – 6	12.10%	2.94%
CELID – 12	6.86%	0.55%
CELID – 24	2.76%	0.11%

- g. Longest interruption experienced by any one customer*

OTP stated that the Northwest Feeder from the Louisburg Lac Qui Parle Substation experienced the longest duration interruption at 51 hours and 20 minutes during the May 12, 2022 Major Event Day severe weather outbreak that caused significant damage and exposed 24,000 customers in MN and SD to prolonged outages.

h. A breakdown of field vs office staff required

OTP provided this information on page 26 of its 2022 SRSQ Report. The Department previously discussed this information above and provided the information in Table 7 of these comments.

i. Estimated restoration times

OTP stated it historically has not had the ability to estimate restoration times. The Company did note that the Outage Management System installed in 2022 was fully implemented at the beginning of 2023 and will provide the Company with the capability to track estimated and actual restoration times and report them in future reporting.¹⁶

j. IEEE benchmarking results for SAIDI, SAIFI, CAIDI, and MAIFI

This requirement was superseded by a similar requirement in the Commission's Order dated March 2, 2022, in Docket No. E017/M-21-225.

k. Performance by customer class

Regarding performance by customer class, OTP stated that it currently does not possess the capability of monitoring reliability by customer class and only has the ability to measure reliability at feeder level. The Company shared that the implementation of its OMS in 2023 should make reporting by customer class possible for next year's SRSQ Report, and it is currently working with the OMS provider to enable these capabilities in its system.

l. More discussion of leading causes of outages and mitigation strategies

OTP provided this information in its discussion of the reliability reporting requirements in Section IV of the 2022 SRSQ Report and provided a categorized table of sustained interruptions by CSC and cause in Table 5 of the filing.

December 18, 2020, Order in Docket No. E017/M-20-401

- Ordering paragraph 5:** *The utilities must file the reliability (SAIDI, SAIFI, CAIDI, MAIFI, normalized, non-normalized) for feeders with grid modernization investments such as Advanced Metering Infrastructure [AMI] or Fault Location Isolation and Service Restoration {FLISR} to the historic five-year average reliability for the same feeders before grid modernization efforts.*

This requirement is not applicable to OTP as it doesn't yet have AMI or FLISR installed on its system. The Company will begin AMI installations in 2023.

¹⁶ 2022 SRSQ Report, at 36.

- Ordering paragraph 16:** *After consultation with Department and Commission staff, each utility must file revised categories for reporting complaint data.*

OTP provided a synopsis of the 2021 Complaint Category Working Session convened by Commission staff and attended by the Consumer Affairs Office, Department of Commerce, Xcel Energy, Minnesota Power, and Otter Tail Power in Section XII of its 2022 SRSQ Report beginning on page 65. The Company explained that parties had agreed to including additional details in future reporting by expanding the “Inadequate Service” category to include four sub-categories: Field/Operations, Customer Service, Programs and Services, and Cold Weather Rule Protection. OTP intends to begin reporting compliant with these new requirements in its 2023 SRSQ Report to be filed in April of 2024.

December 2, 2021, Order in Docket No. E017/M/-21-225

- Order paragraph 2:** *Require Minnesota Power, Otter Tail Power, and Xcel Energy to provide the following new information regarding electronic utility-customer interaction beginning with reports filed in April 2023.*

OTP provided percentage uptime and error rate percentage metrics for its electronic utility-customer interactive platforms in Table 12 of its filing, reproduced here below.

Table 17: Uptime and Error Rate Percentage

Percentage Uptime		
	General Website	99.27%
	Payment Services	99.88%
	Third-party web payment services	100.00%
	Outage map &/or Outage Info page	99.27%
Error Rate Percentage		
	Payment Services	0.125%

The Company noted that its Outage Map and Outage Information page were included in the General Website uptime percentage, and that the Outage Map was taken down in late 2022 as OTP transitioned to a new outage map that went live in December 2022. OTP also indicated that it is currently unable to obtain more granular data to further categorize error rates into unexpected, outside the customer’s control, or other meaningful categorizations.

- Ordering paragraph 3:** *Require Minnesota Power, Otter Tail Power, and Xcel Energy to provide percentage uptime and error rate percentage information in their annual reports for the next three reporting cycles, to build baselines for web-based service metrics.*

It is the Department’s understanding that OTP will continue to collect and report this information as above to build baselines for web-based service metrics in the next two reporting cycles.

5. **Ordering paragraph 4:** *Require Minnesota Power, Otter Tail Power, and Xcel Energy to continue to provide information on electronic utility-customer interaction such that baseline data are collected:*
 - a. *Yearly total number of website visits;*
 - b. *Yearly total number of logins via electronic customer communication platforms;*
 - c. *Yearly total number of emails or other customer service communications by subject, including categories for communications related to assistance programs and disconnections as part of reporting under Minn. R. 7826.1700.*

OTP provided this information in Tables 13 through 15 on pages 39 and 40 of the 2022 SRSQ Report, and noted specifically that the Company's website visits were down in 2022 due to the fact that the code required to run the Google Analytics used by the Company to track visit counts was broken from January to June of 2022, rendering this data unavailable to OTP.

6. **Ordering paragraph 7:** *Require Minnesota Power, Otter Tail Power, and Xcel Energy to file public facing summaries with their annual Safety, Reliability and Service Quality Reports.*

Otter Tail's 2022 Public Facing Summary was published on its website at www.optco.com/help-center/ and was included as Attachment 2 to the SRSQ Report.

March 2, 2022, Order in Docket No. E017/M-21-225

7. **Ordering paragraph 5:** *The Commission sets Otter Tail Power's 2021 statewide reliability standard at the IEEE benchmarking second quartile for medium utilities and sets work center reliability standards at the IEEE benchmarking for second quartile for medium utilities.*
8. **Ordering paragraph 6:** *Otter Tail must file a supplemental filing to its 2021 safety service quality and reliability report 30 days after IEEE publishes the 2021 benchmarking results. The supplemental filing must include an explanation for any standards the utility did not meet.*

The Company agreed to these two requirements in its Report and will provide a supplemental filing within 30 days from when IEEE publishes the 2022 benchmarking results.

November 9, 2022, Order in Docket No. E017/M-22-159

9. **Ordering paragraph 8:** *Required Xcel Energy, Minnesota Power, and Otter Tail Power to each display, either directly or via a link to a PDF file, the utility's public facing summary, as shown in Attachment A, on the utility's website placed such that the summary is available to a website user after a single click away from the homepage.*

The Company included its 2022 Public Facing Summary as Attachment 2 to the SRSQ Report and published it online at www.optco.com/help-center/, and noted that it had created a new left hand navigation option within the help center page to provide visibility to the summary.

III. RECOMMENDATIONS

The Department:

- Recommends that the Commission accept OTP's Annual Safety Report.
- Requests OTP provide a discussion in its reply comments regarding:
 - Why the number of days away from work metric continues to trend higher than the 10-year average;
 - Why normalized and non-normalized CEMI4 and CEMI5 metrics have increased 97 percent and 52 percent over reported 2021 values, respectively;
 - Why and how recent enhancements to the Company's complaint process and training for company representatives materially impacted the volume of complaints received in 2022, which decreased from 2021 levels but remain significantly above the average; and
 - Further information regarding the ongoing and planned remediation projects on the North Feeder leaving Otter Tail City Substation in Fergus Falls.
- will make final recommendations on the Company's Annual Service Quality Report after reviewing its reply comments.
- will provide a recommendation on the Company's Annual Service Reliability Report after reviewing the Company's future supplemental filing on IEEE benchmarking data for 2022.

Response to Information Request MN-DOC-003
Page 1 of 1

OTTER TAIL POWER COMPANY
Docket No: E017-M-23-76

Response to: MN Department of Commerce
Analyst: Christopher Watkins
Date Received: May 22, 2023
Date Due: May 30, 2023
Date of Response: May 30, 2023
Responding Witness: Mike Riewer, Manager, System Infrastructure & Reliability
(218) 739-8565

Information Request:

Please provide a description of any infrastructure hardening or other remedial steps that have been taken or will be taken to prevent future interruptions to utility structures and equipment damaged in the May 12, 2022 and May 30, 2022 storm events.

Attachments: 0

Response:

The Derecho events experienced in May of 2022 and several additional events from blizzard, icing, and wind during winter/spring of 2023 has caused our design team to investigate infrastructure hardening within our structures and equipment assets. In general, each of these event conditions exceeded our current design requirements.

Items our design team is investigating for possible implementation in the future:

- Increasing pole class on future designs.
- Prioritizing upgrades to historic heavy storm event areas.
- Prioritize patrols and assessments of assets in areas where storm events have occurred.
- Increasing the frequency of storm guy wire protections in line design to prevent cascade failures.

Otter Tail has long been committed to learning from past events to improve future reliability of the system for our customers. This will also help us prepare for a future where more frequent and intense storms may be possible.

Response to Information Request MN-DOC-006
Page 1 of 3

OTTER TAIL POWER COMPANY
 Docket No: E017-M-23-76

Response to: MN Department of Commerce
 Analyst: Christopher Watkins
 Date Received: May 22, 2023
 Date Due: May 30, 2023
 Date of Response: June 05, 2023
 Responding Witness: Mike Riewer, Manager, System Infrastructure & Reliability
 (218) 739-8565

Information Request:

For each of the feeders realizing greater than 1,000 occurrences of voltages violating the high threshold criteria in 2022, please provide the following:

1. Has the Company performed any sort of root-cause analysis given this information? If so, please provide that analysis. If not, please explain why it has not studied this issue.
2. Explanation of remedial actions taken to decrease the frequency of these voltage range violations.

Attachments: 0

Response:

Below is a table showing the MN feeders realizing greater than 1000 high voltage occurrences in 2022 and specific notes on monitoring location and load.

Customer Service Center	Feeder	Events - Instantaneous Voltage		Meter Located in Substation Yes or No	Meter location/loading
		Number of Volt(RMS) Below Threshold Events (E6)	Number of Volt(RMS) Above Threshold Events (E7)		
Bemidji	East_ExpressFeeder	0	2,536	Yes	AMI meter is inside the distribution substation
Crookston	MainFeeder	0	32,682	No	At a large grain facility
Crookston	East_NorthFeeder	0	26,278	No	Within 100' of substation

Response to Information Request MN-DOC-006

Crookston	East_StHilaireFeeder	0	21,573	No	long feeder - excess of nine miles
Crookston	East_SouthFeeder	0	15,068	No	Within 300' of substation
Crookston	MainFeeder	0	12,321	No	Natural Gas Delivery Transmission Company
Crookston	NorthFeeder	0	4,474	No	Within 730' of substation
Crookston	MainFeeder	0	3,730	No	Natural Gas Delivery Transmission Company
Crookston	AdamsFeeder	0	2,091	No	CHS facility, agricultural load, large seasonal load swings.
Fergus Falls	MainFeeder	0	12,682	Yes	AMI meter is inside the distribution substation
Fergus Falls	TownFeeder	0	12,379	Yes	AMI meter is inside the distribution substation
Fergus Falls	MainFeeder	0	10,367	Yes	AMI meter is inside the distribution substation
Fergus Falls	SouthFeeder	1	7,271	No	Within 600' of substation
Fergus Falls	LakeFeeder	23	5,819	Yes	AMI meter is inside the distribution substation
Fergus Falls	NorthFeeder	1	5,808	No	
Fergus Falls	MainFeeder	0	1,329	No	With 450' of substation
Fergus Falls	Rural_MainFeeder	0	1,124	No	Well Pump
Morris	SouthFeeder	0	5,348	No	
Morris	ElevatorFeeder	0	4,905	No	Farmers Grain Co, within 575' of substation
Morris	EastFeeder	0	3,632	No	Farmers Grain Co, large seasonal load swings
Morris	WestFeeder	0	3,213	No	School, large seasonal load swings

Response to Information Request MN-DOC-006

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Otter Tail Power Company gathers all (**including instantaneous**) voltage violations from our bellwether configured Itron AMI meters. These meters are installed as close to the feeder breaker as possible. Where feasible, they are located within the substation. Otter Tail is largely a rural utility with long distribution feeders and/or serving several large agricultural and industrial loads.

With load variations (especially large loads dropping off), voltage regulators cannot instantaneously reduce supply voltage levels.

As described in our 2022 filing, Rule 7826.0500, Subpart 1k, Otter Tail has and continues to utilize wireless power quality monitors in identified possible problem areas. In these specific situations, Otter Tail will install monitors at various locations down stream of the feeder substation breaker. These monitors are setup with voltage range B thresholds and duration interval alarm settings. Typically, the duration intervals are set to two minutes, eliminating momentary events and allowing for voltage regulators to respond to voltage threshold outlier occurrences. Those circuits with excessive alarms (low or high) are investigated and remediation steps are taken and addressed.

CERTIFICATE OF SERVICE

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

Minnesota Department of Commerce
Comments

Docket No. E017/M-23-76

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

/s/Sharon Ferguson

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Ray	Choquette	rchoquette@agp.com	Ag Processing Inc.	12700 West Dodge Road PO Box 2047 Omaha, NE 68103-2047	Electronic Service	No	OFF_SL_23-76_M-23-76
Generic Notice	Commerce Attorneys	commerce.attorneys@ag.state.mn.us	Office of the Attorney General-DOC	445 Minnesota Street Suite 1400 St. Paul, MN 55101	Electronic Service	Yes	OFF_SL_23-76_M-23-76
James C.	Erickson	jericksonkbc@gmail.com	Kelly Bay Consulting	17 Quechee St Superior, WI 54880-4421	Electronic Service	No	OFF_SL_23-76_M-23-76
Sharon	Ferguson	sharon.ferguson@state.mn.us	Department of Commerce	85 7th Place E Ste 280 Saint Paul, MN 551012198	Electronic Service	No	OFF_SL_23-76_M-23-76
Jessica	Fyhrie	jfyhrie@otpc.com	Otter Tail Power Company	PO Box 496 Fergus Falls, MN 56538-0496	Electronic Service	No	OFF_SL_23-76_M-23-76
Adam	Heinen	aheinen@dakotaelectric.com	Dakota Electric Association	4300 220th St W Farmington, MN 55024	Electronic Service	No	OFF_SL_23-76_M-23-76
Nick	Kaneski	nick.kaneski@enbridge.com	Enbridge Energy Company, Inc.	11 East Superior St Ste 125 Duluth, MN 55802	Electronic Service	No	OFF_SL_23-76_M-23-76
James D.	Larson	james.larson@avantenergy.com	Avant Energy Services	220 S 6th St Ste 1300 Minneapolis, MN 55402	Electronic Service	No	OFF_SL_23-76_M-23-76
Kavita	Maini	kmains@wi.rr.com	KM Energy Consulting, LLC	961 N Lost Woods Rd Oconomowoc, WI 53066	Electronic Service	No	OFF_SL_23-76_M-23-76
Andrew	Moratzka	andrew.moratzka@stoel.com	Stoel Rives LLP	33 South Sixth St Ste 4200 Minneapolis, MN 55402	Electronic Service	No	OFF_SL_23-76_M-23-76

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Matthew	Olsen	molsen@otpco.com	Otter Tail Power Company	215 South Cascade Street Fergus Falls, MN 56537	Electronic Service	No	OFF_SL_23-76_M-23-76
Wendi	Olson	wolson@otpco.com	Otter Tail Power Company	215 South Cascade Fergus Falls, MN 56537	Electronic Service	No	OFF_SL_23-76_M-23-76
Generic Notice	Regulatory	regulatory_filing_coordinators@otpco.com	Otter Tail Power Company	215 S. Cascade Street Fergus Falls, MN 56537	Electronic Service	No	OFF_SL_23-76_M-23-76
Generic Notice	Residential Utilities Division	residential.utilities@ag.state.mn.us	Office of the Attorney General-RUD	1400 BRM Tower 445 Minnesota St St. Paul, MN 551012131	Electronic Service	Yes	OFF_SL_23-76_M-23-76
Will	Seuffert	Will.Seuffert@state.mn.us	Public Utilities Commission	121 7th Pl E Ste 350 Saint Paul, MN 55101	Electronic Service	Yes	OFF_SL_23-76_M-23-76
Cary	Stephenson	cStephenson@otpco.com	Otter Tail Power Company	215 South Cascade Street Fergus Falls, MN 56537	Electronic Service	No	OFF_SL_23-76_M-23-76
Stuart	Tommerdahl	stommerdahl@otpco.com	Otter Tail Power Company	215 S Cascade St PO Box 496 Fergus Falls, MN 56537	Electronic Service	No	OFF_SL_23-76_M-23-76