

June 7, 2019

Daniel P. Wolf
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-19-260

Dear Mr. Wolf:

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 2019.

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

 Jessica Fyhrie
 Supervisor, Regulatory Proceedings
 Otter Tail Power Company
 215 South Cascade Street
 PO Box 496
 Fergus Falls, Minnesota 56538-0496

The Department recommends that the Commission **accept** Otter Tail Power's (OTP) report and set OTP's 2019 SAIFI, SAIDI and CAIDI goals at the 2013 levels until the Company demonstrates further improvement in meeting its performance goals.

Sincerely,

/s/ DANIEL W. BECKETT
Rates Analyst

DWB/ja
Attachment

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Before the Minnesota Public Utilities Commission

Comments of the Minnesota Department of Commerce Division of Energy Resources

Docket No. E017/M-19-260

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’s March 19, 2019 Order in Docket No. E017/M-18-247 froze Otter Tail Power Company’s (OTP or the Company) goals at the 2013 levels, and required the Company to include the following in its next annual filing:

- a. Non-normalized SAIDI, SAIFI, and CAIDI values;
- b. SAIDI, SAIFI, and CAIDI values calculated using the IEEE 2.5 beta method;
- c. CEMI – at normalized and non-normalized outage levels of 4, 5, and 6;
- d. CELI – at intervals of greater than 6 hours, 12 hours, and 24 hours;
- e. CELI;
- f. Estimated restoration times;
- g. IEEE benchmarking;
- h. Performance by customer class; and
- i. More discussion of leading causes of outages and mitigation strategies.

Additionally, the Commission’s March 19, 2019 Order required the Company to provide a discussion of how grid modernization initiatives could impact reliability metrics and what technologies are needed to advance tracking of additional metrics.

On April 1, 2019, OTP filed its 2019 Annual Safety, Reliability and Service Quality Reports and Proposed SAIFI, SAIDI and CAIDI Reliability Standards (2019 Annual Report) in Docket No. E017/M-19-260 to comply with the Commission's March 19, 2019 Order and the requirements of Minnesota Rules Chapter 7826.

II. SUMMARY OF REPORT AND DEPARTMENT ANALYSIS

The Minnesota Department of Commerce, Division of Energy Resources (Department) reviewed OTP's 2018 Annual Report to assess compliance with Minnesota Rules, Chapter 7826 and the Commission's March 19, 2019 Order. The Department used information from past annual reports to facilitate identification of issues and trends regarding OTP's performance.

A. 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 12 years.

Table 1: Number of Cases

	Number of Deaths	Number of Cases with Days Away from Work	Number of Cases with Job Transfer or Restriction	Other Recordable Cases
2007	0	6	0	17
2008	0	0	2	12
2009	0	2	0	15
2010	0	4	0	23
2011	0	3	1	15
2012	0	1	7	11
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

Table 2: Number of Days

	Days of Job Transfer or Restriction	Days Away from Work
2007	0	83
2008	25	0
2009	0	14
2010	0	98
2011	6	39
2012	6	39
2013	147	15
2014	48	14
2015	349	90
2016	240	10
2017	41	11
2018	152	6

Table 3: Injury & Illness Types

	Injuries	Skin Disorders	Respiratory Conditions	Poisonings	All Other Illnesses
2007	21	0	0	0	0
2008	14	0	0	0	0
2009	16	0	0	0	1
2010	20	0	0	2	1
2011	18	1	0	0	0
2012	19	0	0	0	0
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

In each report since the inception of Minnesota Rules, Chapter 7826 reporting requirements, OTP has reported that no incidents in which an injury requiring medical attention due to system failure have occurred.

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

Table 4: Property Damage Claims

	Claims	Cause	Total Amount Paid
2004	3	failed/damaged cable	information not provided
2005	1	failed insulator	information not provided
2006	4	faulty cable	information not provided
2007	1	low clearance	\$1,203.63
2008	3	equipment failure (2) pole fire/tree (1)	\$6,560.59
2009	4	truck pulled line down (2) underground cable failure overhead wire failure	\$7,058.34
2010	1	Farm implement pulled overhead service down	\$220.00
2011	0	N/A	N/A
2012	0	N/A	N/A
2013	1	Downed Power Lines	\$632.97
2014	5	Bad Connection, wrong voltage, bad cable, power surge (2)	\$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

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

B. ANNUAL RELIABILITY REPORT

Minnesota Rules, part 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

OTP’s assigned service territory consists of six work centers.

The following table shows the Company’s 2018 reliability performance compared with the goals set by the Commission in Docket No. E017/M-18-247.¹

Table 5: OTP’s 2018 Reliability Performance Compared with Goals²

Work Center		2018 Performance	2018 Goals
Bemidji	SAIDI	77.35	70.64
	SAIFI	1.14	1.26
	CAIDI	67.86	56.06
Crookston	SAIDI	74.75	69.33
	SAIFI	1.79	1.19
	CAIDI	41.70	58.26
Fergus Falls	SAIDI	57.65	66.97
	SAIFI	0.81	1.11
	CAIDI	71.35	60.33
Milbank	SAIDI	70.35	75.49
	SAIFI	0.74	1.82
	CAIDI	94.68	41.48
Morris	SAIDI	88.09	55.78
	SAIFI	1.41	1.01
	CAIDI	62.29	55.23
Wahpeton	SAIDI	201.38	57.24
	SAIFI	3.07	1.13
	CAIDI	65.67	50.65
All MN Customers	SAIDI	75.33	64.95
	SAIFI	1.23	1.13
	CAIDI	61.12	57.48

¹ The Department notes that SAIDI = SAIFI * CAIDI.

² SAIDI – System Average Interruption Duration Index

Shaded cells in Table 5 indicate reliability goals that were not met in 2018. See Section II.B.3 below for a discussion of OTP's 2018 reliability performance.

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

2. Storm-Normalization Method

OTP calculated its 2018 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, one day met the criteria to be considered a Major Event Day. The Company provided the following details about that day:³

On June 29, 2018, severe weather resulted in widespread outages for many of our North Dakota and Minnesota customers. Outages began shortly after midnight on June 29 in western North Dakota and continued through northern Minnesota as the storm moved north and east. The storm systems carried heavy rain, hail, and strong winds that damaged trees and downed poles. Over 20 minutes of system SAIDI would have accumulated due to this event had it not been storm normalized.

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 failure to meet its 2018 reliability goals. The Company missed goals in all six work centers, or customer service centers (CSCs), in 2018. As an update to the Commission's December 20, 2012 Order in Docket No. E017/M-12-325, the Company provided a discussion of continuing efforts made to improve reliability.⁴

OTP included a table showing the causes of sustained outages by CSC. The following summarizes the top 4 causes by CSC:

SAIFI – System Average Interruption Frequency Index
CAIDI – Customer Average Interruption Duration Index

³ 2019 Annual Report, p. 10

⁴ 2019 Report, p. 15.

Table 6: Top Causes of Sustained Outages

	Bemidji	Crookston	Fergus Falls	Milbank	Morris	Wahpeton
Weather-Related	30	38	6	6	51	1
Equipment Failure	28	18	10		23	
Unknown	5	13	14		25	15
Arrestor/Insulator Failure			15		16	

OTP’s action plan consisted of an update to past and continuing efforts. The Company noted that, “Overall system improvements will be realized over longer periods of time.”

The Department notes that, in last year’s service quality proceeding, the Department asked the Company to address the need to focus on reducing outages due to equipment failure.⁵ In response, OTP indicated the following:⁶

Implementation of the new interruption monitoring system, which will be used to report 2019 filing data submitted in April 2020, will have additional capabilities allowing the capture of additional “granular” equipment type classifications. OTP will then be able to conduct a thorough pareto analysis, identifying the most common types of equipment and prescribing follow up action, i.e. maintenance replacement, sourcing investigations, etc.

On page 14 of OTP’s Report in the instant proceeding, the Company stated:

As of note, migration into the new IMS has taken place in 2018, interruption cause data details for 2018 lacked the detail and granularity for optimum post analysis. Otter Tail expects increased capabilities in this area through implementation of the new system.

The Department appreciates that efforts are being made to improve reliability, and looks forward to assessing whether the new IMS will improve OTP’s ability to more specifically, and effectively, target future efforts.

⁵ Page 7 of the Department’s June 1, 2018 comments in Docket No. E017/M-18-247.

⁶ Pages 1-2 of OTP’s June 11, 2018 reply comments in Docket No. E017/M-18-247.

4. Bulk Power Supply Interruptions

OTP reported that it sustained one interruption to a Minnesota Bulk Power Supply Facility in 2018. The Company stated that the event occurred on August 13th at 2:00 p.m. when a 115KV transmission line between Ortonville, MN and Fairmount, ND was interrupted due to a phase-to-ground fault. This resulted in approximately 14 minutes of interruption to Minnesota customers served off the line.

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

5. Major Service Interruptions

OTP provided copies of each report it filed under Minnesota Rules, part 7826.0700. The Company reported 19 major service interruptions in 2018. The largest major service interruption affected approximately 3,000 customers and was due to strong storms. OTP stated that the length of the outage, which began approximately at 5:00 a.m. on June 29, 2018, was unknown. Other causes for major service interruptions included equipment failure and maintenance work.

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

6. Worst Performing Circuit

OTP identified the worst performing feeder in each work center, including its SAIDI, SAIFI and CAIDI, the major causes of each feeder's outages, and the remedial measures planned or taken by the Company. The Department notes that, according to OTP's annual reports over the years, there is no apparent trend in terms of outage causes or continuing poor performance for any particular feeder. The Department uses historical data to identify potential areas of concerns regarding any feeders that appear multiple times as a worst performing feeder. After reviewing 13 years of historical data, the Department concludes that there is no concern with any specific feeder at this time.

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) voltage range B in 2018. OTP noted that most of the feeders with numerous occurrences were feeders serving a single large customer with a very large load (mostly pipelines). 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, 2018. The following table summarizes total staffing levels over the past 13 years.

Table 7: OTP Work Center Staffing Levels

	Field	Office	Total
2006	112	34	146
2007	110	37	147
2008	113	39	152
2009	110	38	148
2010	109	35	144
2011	103	32	135
2012	107	33	140
2013	109	33	142
2014	107	33	140
2015	114	29	143
2016	116	32	148
2017	111	43	154
2018	123	39	162

Given OTP's history of failing to meet many of its reliability goals, the Department is encouraged by the increase in field staff in 2018. 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 2019 Annual Report⁷ provided updates on continuing developments from the Company's use of the Interruption Monitoring System (IMS). Specifically OTP reported that:

⁷ 2019 Annual Report, pages 24-25.

- OTP has implemented a project to replace its obsolete IMS as it relates to the planned shutdown of cellular 2G service. The implementation of the plan was completed in late 2018.
- OTP’s NextGen IMS and the use of power quality meters will continue to provide optimized and focused deployment of vegetation management and maintenance resources to areas that are identified through its interruption data collection process in the Company’s efforts to achieve reliability.
- OTP continues to explore ways to assess reliability performance, including using the Customers Experiencing Multiple Interruptions (CEMI_n) index where n = 5 interruptions and where n = 7 interruptions.

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.

C. PROPOSED RELIABILITY STANDARDS FOR 2019

OTP proposed the following reliability goals for 2019:

Table 8: OTP’s Proposed 2019 Goals

Work Center	SAIDI	SAIFI	CAIDI
Bemidji	70.64	1.26	56.06
Crookston	69.33	1.19	58.26
Fergus Falls	66.97	1.11	60.33
Milbank	75.49	1.82	41.48
Morris	55.78	1.01	55.23
Wahpeton	57.24	1.13	50.65
All MN Customers	64.95	1.13	57.48

OTP proposed the continued use of performance standards at the 2013 levels until further improvement is achieved.

In the past, the Commission has typically set reliability goals at the 5-year average. However, in the case of OTP, the Commission’s December 12, 2014 Order froze OTP’s SAIDI, SAIFI, and CAIDI goals at the 2013 levels until the Company improves its reliability performance. The 2013 goals have been in place from 2013 through 2018. Thus, the Department reviewed whether the Company’s reliability performance improved to the extent that moving back to the 5-year average goal-setting method would be appropriate. Table 9 below shows how many of its eighteen annual goals⁸ OTP has met since 2008.

⁸ The eighteen goals are SAIDI, SAIFI, and CAIDI for all six of the Company’s CSCs.

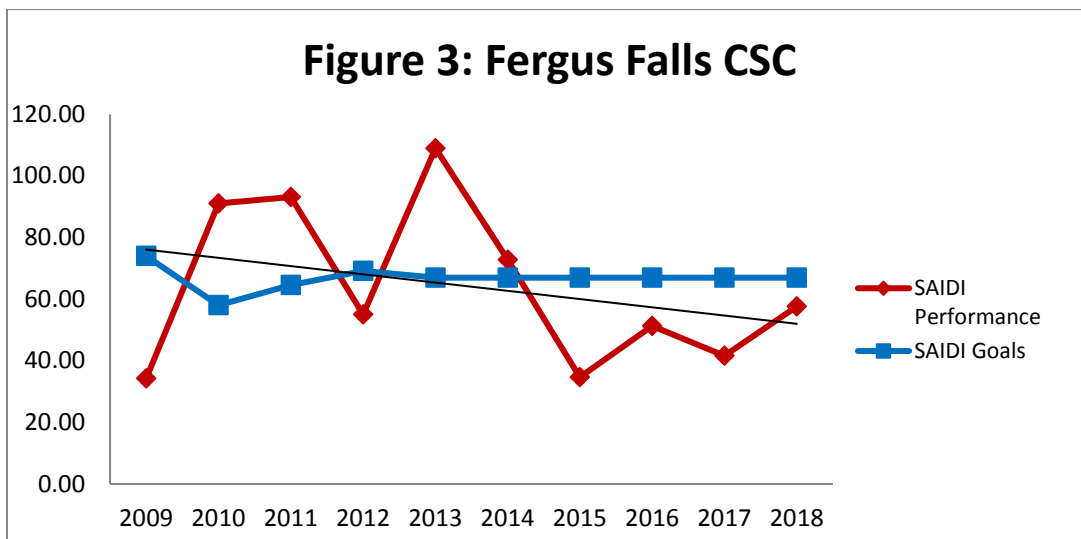
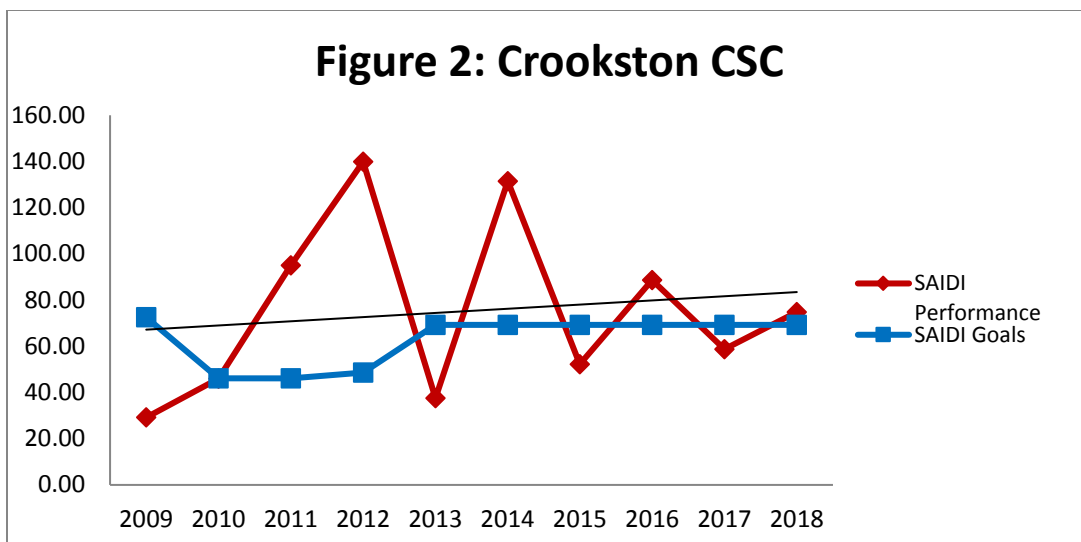
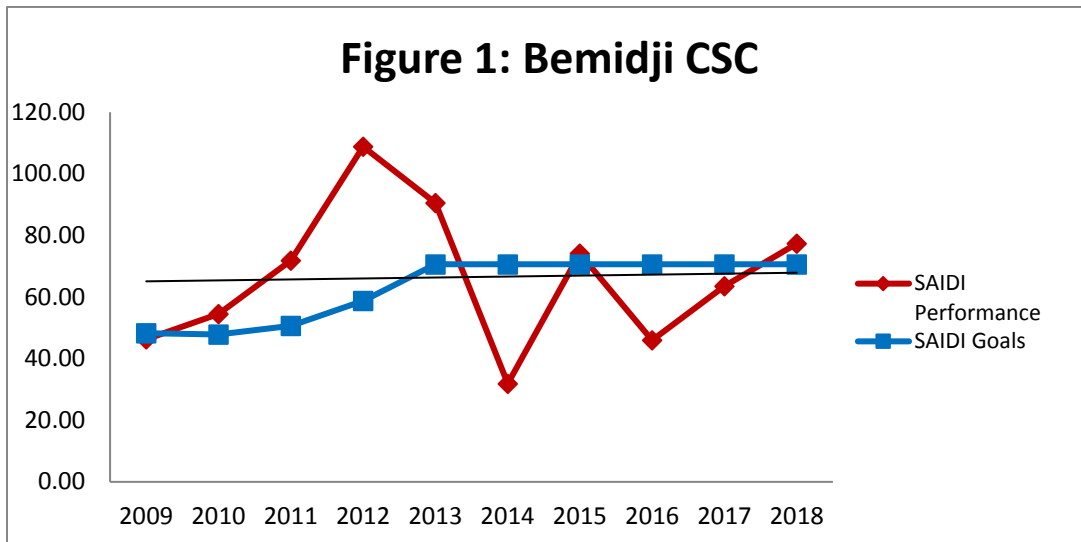
Table 9: OTP's Reliability Goals⁹

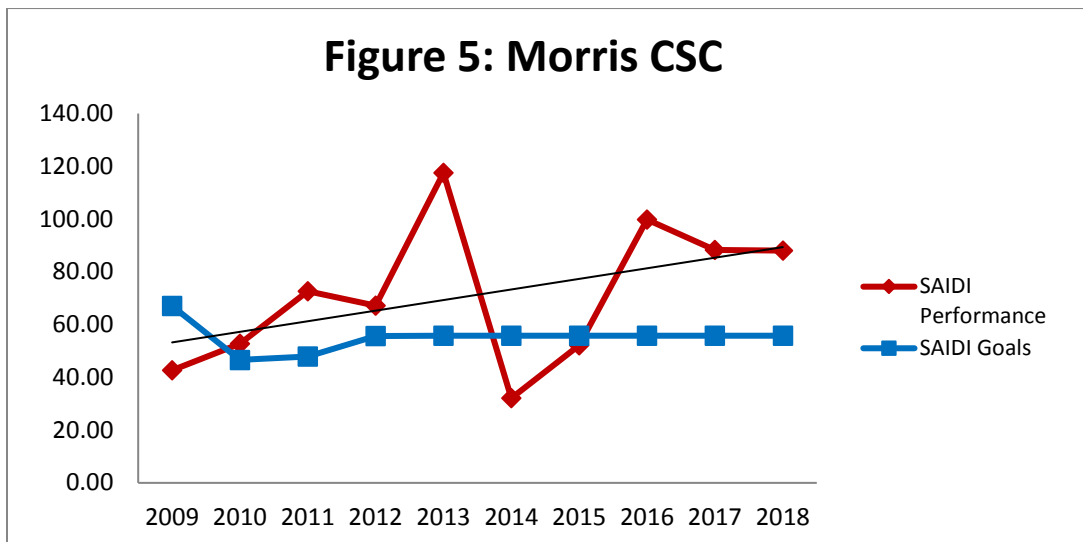
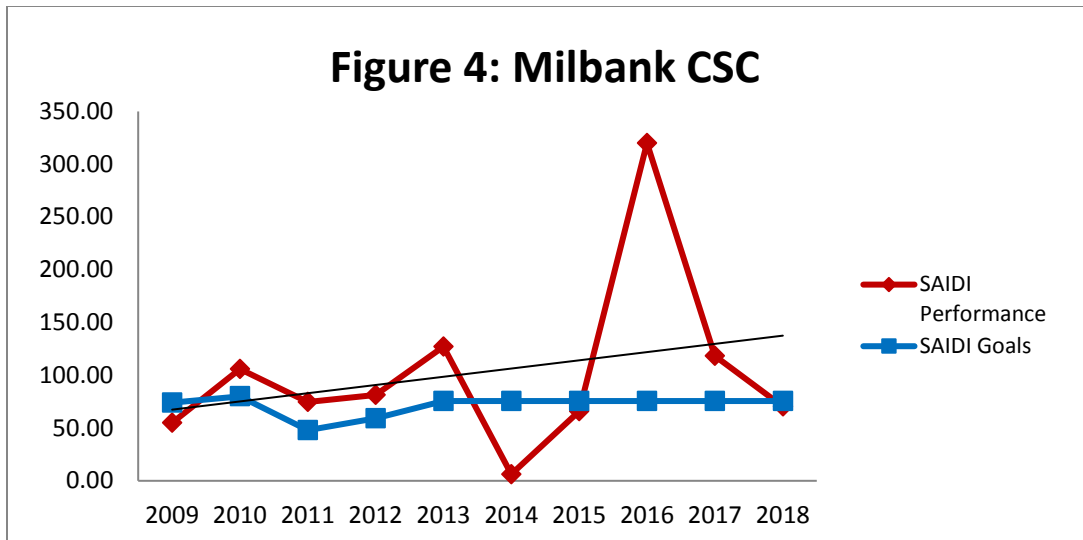
		2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Bemidji	SAIDI	40.42	48.25	47.85	50.65	58.74	70.64	70.64	70.64	70.64	70.64	70.64
	SAIFI	0.76	0.90	1.08	1.11	1.16	1.26	1.26	1.26	1.26	1.26	1.26
	CAIDI	53.18	53.61	44.31	45.74	50.64	56.06	56.06	56.06	56.06	56.06	56.06
Crookston	SAIDI	83.38	72.55	46.15	46.12	48.58	69.33	69.33	69.33	69.33	69.33	69.33
	SAIFI	1.71	1.48	1.08	1.05	0.93	1.19	1.19	1.19	1.19	1.19	1.19
	CAIDI	48.76	49.02	44.31	43.87	52.24	58.26	58.26	58.26	58.26	58.26	58.26
Fergus Falls	SAIDI	78.48	74.00	58.03	64.63	69.16	66.97	66.97	66.97	66.97	66.97	66.97
	SAIFI	1.40	1.27	1.09	1.15	1.17	1.11	1.11	1.11	1.11	1.11	1.11
	CAIDI	56.06	58.27	53.00	56.21	59.11	60.33	60.33	60.33	60.33	60.33	60.33
Milbank	SAIDI	66.64	74.00	80.00	47.97	59.24	75.49	75.49	75.49	75.49	75.49	75.49
	SAIFI	1.43	1.30	3.00	1.35	1.57	1.82	1.82	1.82	1.82	1.82	1.82
	CAIDI	46.60	56.92	26.67	35.57	37.73	41.48	41.48	41.48	41.48	41.48	41.48
Morris	SAIDI	74.82	67.05	46.62	47.84	55.71	55.78	55.78	55.78	55.78	55.78	55.78
	SAIFI	1.48	1.34	1.10	1.13	1.12	1.01	1.01	1.01	1.01	1.01	1.01
	CAIDI	50.55	50.04	42.47	42.26	49.74	55.23	55.23	55.23	55.23	55.23	55.23
Wahpeton	SAIDI	66.64	74.00	28.91	44.92	57.00	57.24	57.24	57.24	57.24	57.24	57.24
	SAIFI	1.43	1.30	0.43	0.84	1.15	1.13	1.13	1.13	1.13	1.13	1.13
	CAIDI	46.60	56.92	67.07	53.42	49.57	50.65	50.65	50.65	50.65	50.65	50.65

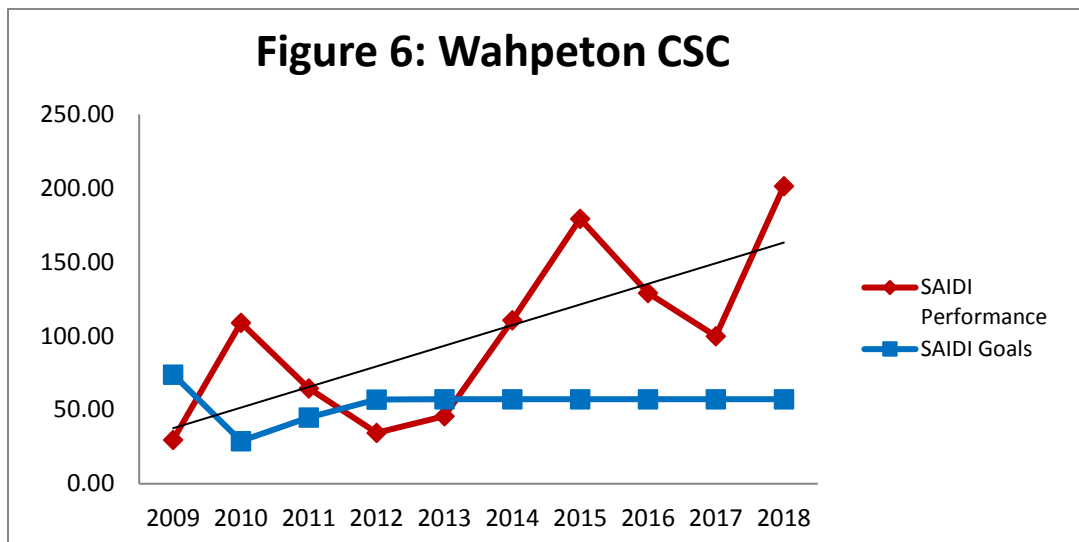
As the above table illustrates, OTP did not have trouble meeting the majority of its goals until 2010. As a result, most of the Company's goals were generally trending downward (becoming harder to achieve) until 2010. While the Company was more successful in meeting its goals in 2012 over the previous two years, that limited success was not maintained in 2013. In 2015, OTP accomplished 61 percent of its CSC goals, the most successful performance since 2009. However, the last three years have seen the Company perform poorly in achieving its goals as it has not been above a 50 percent success rate since 2015. The Company has consistently reported over the years that its failure to achieve its reliability goals was primarily due to weather and other issues out of its control.

The following figures highlight OTP's SAIDI performance trends for the six CSCs from 2009-2018, including a black trend line to indicate performance patterns overtime. It should be noted that all CSCs other than Bemidji and Fergus Falls show trends of worsening performance.

⁹ Shading indicates unmet goal.







While Minnesota Rules, part 7826.0600 requires reliability performance standards to be set by work center, and does not require establishing an overall goal for a utility’s entire Minnesota service territory, OTP has provided overall metrics in its annual reports. As an additional check on OTP’s reliability performance trend, the Department examined the extent to which the Company met its overall goals for its Minnesota service area in the past seven years. This information is shown in Table 10.

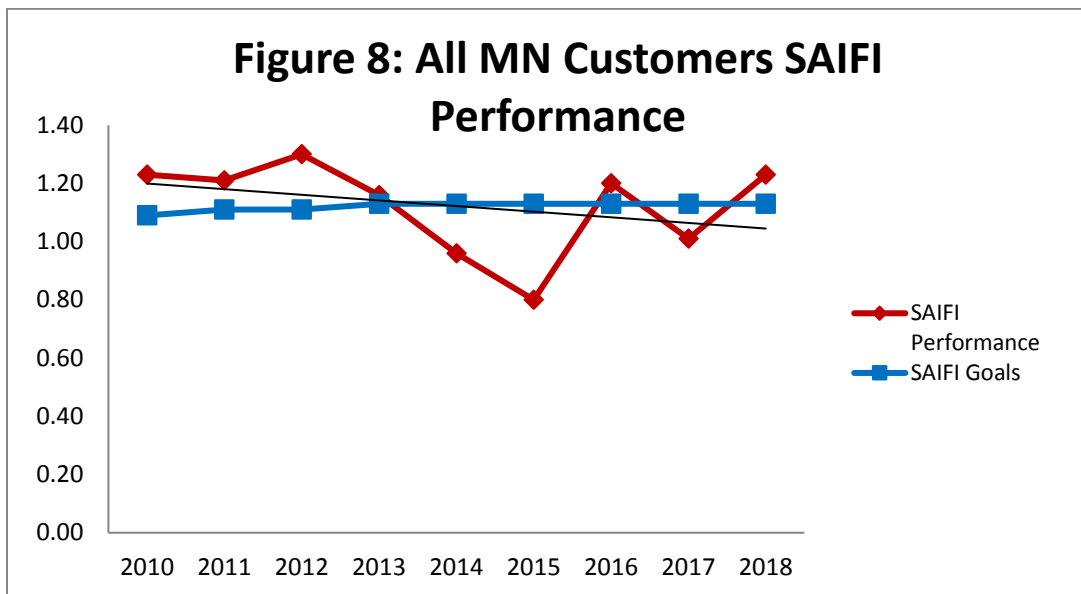
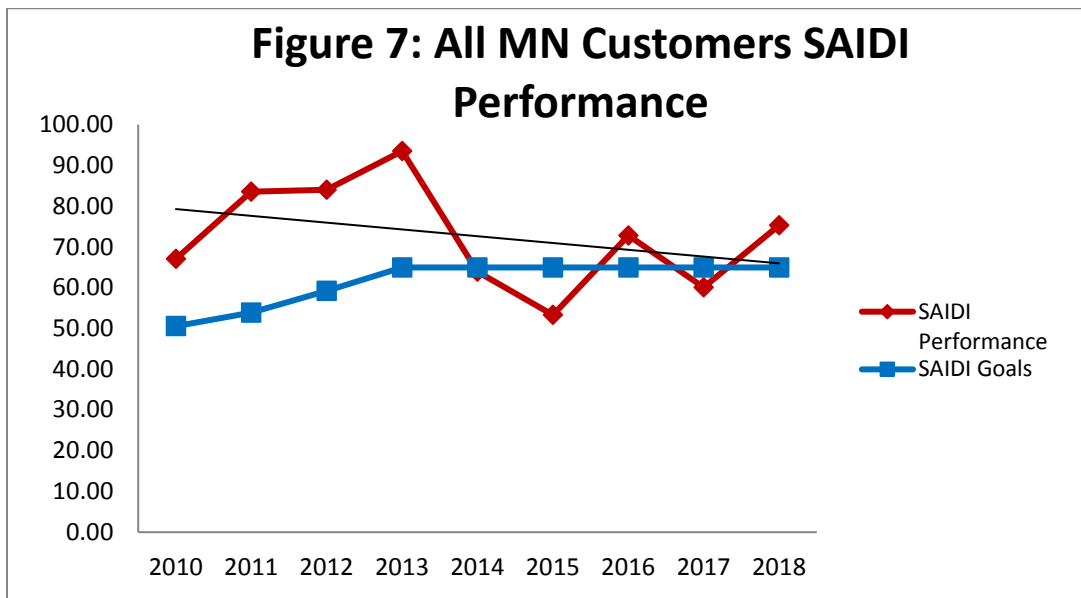
Table 10: OTP’s MN Service Area Goals vs Performance¹⁰

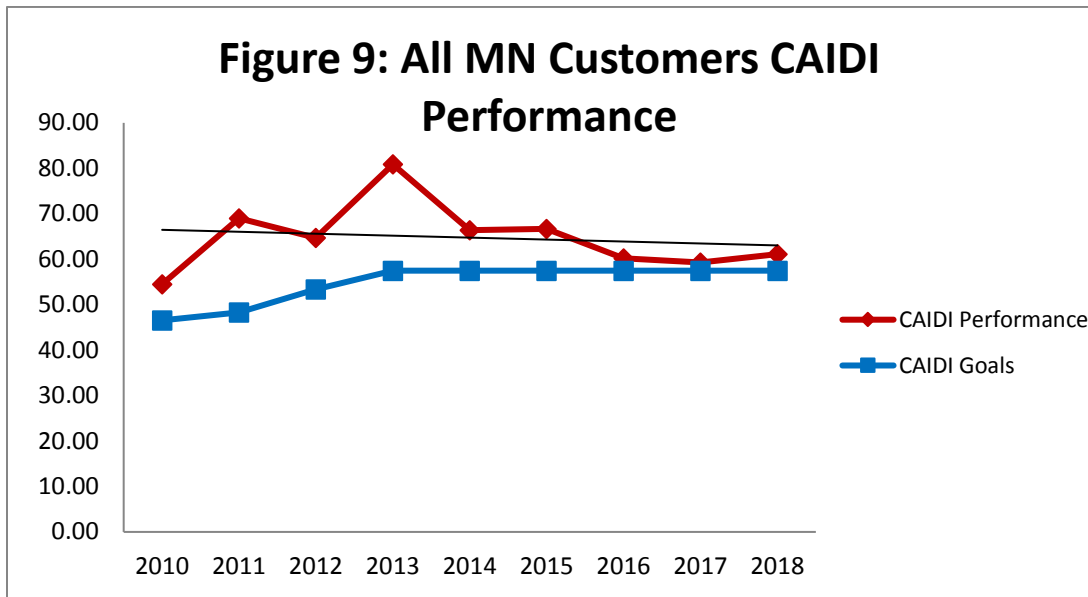
	2010	2011	2012	2013	2014	2015	2016	2017	2018
Goal SAIDI	50.54	53.84	59.21	64.95	64.95	64.95	64.95	64.95	64.95
Goal SAIFI	1.09	1.11	1.11	1.13	1.13	1.13	1.13	1.13	1.13
Goal CAIDI	46.55	48.3	53.34	57.48	57.48	57.48	57.48	57.48	57.48
Actual SAIDI	67.02	82.66	84.05	93.51	63.93	53.30	72.80	60.06	75.33
Actual SAIFI	1.23	1.21	1.30	1.16	0.96	0.80	1.20	1.01	1.23
Actual CAIDI	54.51	68.30	64.67	80.86	66.37	66.70	60.20	59.31	61.12

As can be seen in Table 10, OTP has seen some success in achieving its SAIDI and SAIFI goals at the statewide level. However, in 2018, the Company failed to achieve all three of its SAIDI, SAIFI, and CAIDI goals.

¹⁰ Goals highlighted in grey indicate that OTP did not meet its performance goal.

While the Company had seen a retrogression in its SAIDI and SAIFI performance in 2016 and 2018, the overall trend of the past nine years has been in an improving direction, as shown in Figures 7 and 8 below. The Company's CAIDI performance has remained relatively flat over that time, but has missed its goal in each of the nine years.

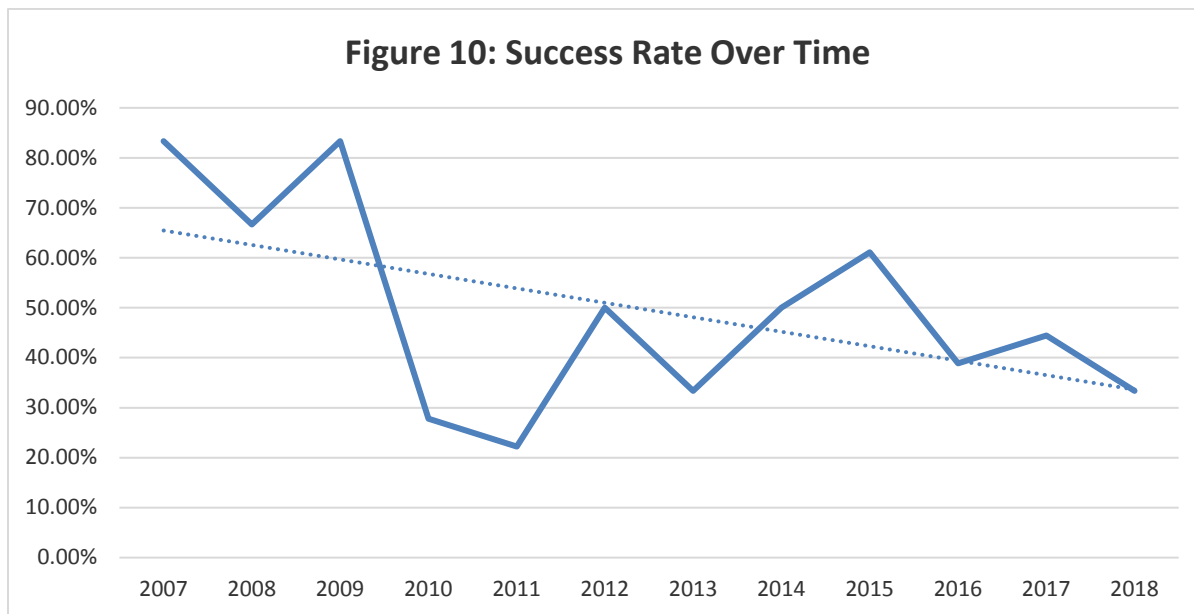




Finally, the Department compared the Company’s 2018 performance with its 2018 goals in OTP’s six CSCs.

Table 11: OTP-Proposed Goal Comparison

Work Center	SAIDI	SAIFI	CAIDI
Bemidji			
2018 Goal	70.64	1.26	56.06
2018 Performance	77.35	1.14	67.86
2019 Proposed Goal	70.64	1.26	56.06
Crookston			
2018 Goal	69.33	1.19	58.26
2018 Performance	74.75	1.79	41.70
2019 Proposed Goal	69.33	1.19	58.26
Fergus Falls			
2018 Goal	66.97	1.11	60.33
2018 Performance	57.65	0.81	71.35
2019 Proposed Goal	66.97	1.11	60.33
Milbank			
2018 Goal	75.49	1.82	41.48
2018 Performance	70.35	0.74	94.68
2019 Proposed Goal	75.49	1.82	41.48
Morris			
2018 Goal	55.78	1.01	55.23
2018 Performance	88.09	1.41	62.29
2019 Proposed Goal	55.78	1.01	55.23
Wahpeton			
2018 Goal	57.24	1.13	57.48
2018 Performance	201.38	3.07	65.67
2019 Proposed Goal	57.24	1.13	57.48



Due to OTP’s declining performance trend over the last several years in most of its work centers, the Commission has frozen the Company’s goals at its 2013 levels to avoid setting goals that would have been progressively easier to achieve if based on a 5-year average of OTP’s performance levels. The Commission’s January 13, 2014 Order in Docket No. E017/M-13-253 states:

Since improving reliability performance – not just maintaining it – is one of the goals of the standard-setting process, the Commission will continue to require reports on the Company’s reliability initiatives in its next annual filing, as well as reports on the causes of outages on major event days.

As can be seen from Figure 10 above, OTP has trended downward over time regarding its ability to meet its goals. On average, since 2007, OTP has achieved approximately 50 percent of its goals, with 2018 coming in lower than that at approximately 33 percent. The Department recommends that the Company’s goals remain frozen at 2013 levels until performance improves. The Department notes that data from OTP’s new IMS may support revisions to the Company’s reliability goals, once sufficient data are available indicating improved reliability.

D. ANNUAL SERVICE QUALITY REPORT

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

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 12 summarizes OTP’s meter reading statistics.

Table 12: OTP Meter-Reading Performance

	Percent Read by OTP	Percent Read by Customer	Percent Not Read
2006	92.9%	2.5%	4.6%
2007	93.4%	2.8%	3.9%
2008	93.8%	2.7%	3.5%
2009	94.1%	2.4%	3.5%
2010	94.4%	2.6%	3.0%
2011	95.1%	2.6%	2.3%
2012	95.9%	2.1%	2.0%
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%

The Department notes that OTP has improved its meter-reading performance over the years measured.

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 95 percent of all meters each month during 2018. According to OTP, there were two

meters that were not read for a period of 6-12 months in 2018. Additionally, there were no meters that were not read for a period of greater than 12 months.

The Company reported that it maintained an average of approximately 72 customer service representatives in 2018. 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 Chapter 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 13: 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
2005	33,274	302	260	86%	1,008	351	22
2006	37,980	388	291	75%	873	295	54
2007	39,022	671	573	85%	1,293	416	61
2008	41,764	1,062	970	91%	973	289	28
2009	36,976	1,139	1,139	100%	1,069	432	40
2010	38,119	1,837	1,837	100%	1,122	428	44
2011	38,723	2,118	2,118	100%	1,168	506	38
2012	39,912	2,139	2,137	99.9%	745	558	29
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

OTP reported that 67,015 disconnection notices were sent to residential, small commercial and large commercial customers in 2018, 62,201 being for residential customers. This number is significantly larger than the Company's previous numbers. The Department requests that, in Reply Comments, the Company provide some context to this number as to why it is so much larger than the historical figures.

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 2018, 357 customers requested service to a location not previously served, all of which were connected on time. As for locations previously served, OTP reported that 1,649 of these requests were made in 2018, 15 of which were connected late. The Department looks for any significant trends in overall service request response times. At this time, response times for 2018 appear to be relatively consistent with past years.

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 96.70 percent of calls were answered within 20 seconds in 2018. Therefore, the Department concludes that OTP is in compliance with Minnesota Rules, part 7826.1200.

The Company stated that, as of March 13, 2017, it went live with a new telecommunications system that should allow for accurate call center response time reporting.

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 8 Minnesota customers requested emergency medical account status in 2018, all of whom were granted that status.

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 14 summarizes the number of customer deposits required over the past nine years. The number of customers served by OTP is provided for context.¹¹

¹¹ Source: Otter Tail's "Minnesota Electric Utility Annual Report" filed pursuant to Minnesota Rules Chapter 7610. Annual reports are filed by Minnesota utilities on July 1 of each year.

Table 14: Customer Deposits Required

	Number of Deposits Required	Total Customers Served
2005	417	58,516
2006	395	58,841
2007	509	59,171
2008	700	59,364
2009	869	59,421
2010	635	59,425
2011	807	59,486
2012	847	59,615
2013	895	59,849
2014	783	61,169
2015	597	60,232
2016	715	61,226
2017	698	61,568
2018	685	61,888 ¹²

The Department notes that the previous upward trend appears to be stabilizing in recent years. 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;
- 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)

¹² The total customers served for 2018 was taken from the Minnesota Jurisdictional 2018 Report in Docket No. 19-4 rather than the Minnesota Rules Chapter 7610 reports as the data were not yet available at the time for filing.

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 15 contains a limited summary of OTP’s customer complaint history.

Table 15: OTP Customer Complaint Selected Summary

	Number of Complaints	High Bills	Billing Error	Service Restoration	Resolved Upon Initial Inquiry	Took Action Customer Requested
2006	175	39%	7%	2%	54%	49%
2007	220	27%	29%	5%	66%	46%
2008	325	52%	18%	2%	60%	34%
2009	185	29%	14%	5%	78%	36%
2010	91	26%	11%	11%	78%	25%
2011	110	19%	9%	10%	73%	30%
2012	61	7%	11%	7%	72%	32%
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%

The Department notes that 16 of the 34 complaints from 2018 were listed in the “other” category, which is approximately 47 percent of the total number of complaints. The Company stated that this category includes such complaints as “rebate timing, planned outages and third party meter readers.”¹³

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

E. COMPLIANCE WITH MARCH 19, 2019 ORDER

1. In future annual reports, Otter Tail must file the following:

- a. Non-normalized SAIDI, SAIFI, and CAIDI values.
- b. SAIDI, SAIFI, and CAIDI values calculated using the IEEE 2.5 beta method.
- c. CEMI – at normalized and non-normalized outage levels of 4, 5, and 6.

¹³ 2019 Annual Report, p. 51

- d. CELI – at intervals of greater than 6 hours, 12 hours, and 24 hours.
- e. CELI
- f. Estimated restoration times.
- g. IEEE benchmarking.
- h. Performance by customer class.
- i. More discussion of leading causes of outages and mitigation strategies.

Additionally, the Commission required the Company to provide a discussion of how grid modernization initiatives could impact reliability metrics and what technologies are required for advanced tracking of various metrics.

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

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

OTP provided this information in Tables 4 and 4a on page 11 of its Report. The following tables show the normalized and non-normalized values for SAIDI, SAIFI, and CAIDI as reported by OTP.

Table 16: Normalized and Non-normalized SAIDI, SAIFI, and CAIDI

Work Center	SAIDI	SAIFI	CAIDI
Bemidji			
Non-normalized	127.27	1.38	92.44
Normalized	77.35	1.14	67.86
Crookston			
Non-normalized	69.33	1.95	42.98
Normalized	74.75	1.79	41.70
Fergus Falls			
Non-normalized	57.65	0.81	71.35
Normalized	57.65	0.81	71.35
Milbank			
Non-normalized	70.35	0.74	94.68
Normalized	70.35	0.74	94.68
Morris			
Non-normalized	88.09	1.41	62.29
Normalized	88.09	1.41	62.29
Wahpeton			
Non-normalized	201.38	3.07	65.67
Normalized	201.38	3.07	65.67

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

See Table 16 above.

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

OTP provided this information in pages 24-25 and page 32 of its Report. Regarding CEMI, the Department notes that the Company has 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 2018. Additionally, the Company provided CEMI at the four and six outage intervals in its Report.

D. CELI – at intervals of greater than 6 hours, 12 hours, and 24 hours

OTP provided this information on page 32 of its Report. Table 17 below shows the Company’s CELI performance for 2018 at the various intervals.

Table 17: 2018 CELI at 6, 12, and 24 Hours

CELID – 6	5.26%
CELID – 12	1.25%
CELID – 24	0.00%

E. CELI

No additional discussion on CELI was provided in OTP’s Report.

F. Estimated restoration times

OTP stated that, “by definition, CAIDI results and/or goals, are actual or ‘estimated restoration’ durations.”¹⁴

G. IEEE benchmarking

OTP provided a summary of its participation with Edison Electric Institute’s (EEI) Reliability Benchmark Survey over the past five years. The Company notes that, from data collected on 89 utility companies in 2017, it performs in the first quartile for CAIDI, mid quartile for SAIDI, and fourth quartiles for SAIFI and MAIFI.

H. 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 as it lost this capability two years ago on its former IMS due to vendor issues. The Company stated that its new IMS, implementation of which will be reflected in 2019 for reporting purposes, will have the ability to create customer

¹⁴ 2019 Report, p.33.

class groups subsequently allowing for an analysis of such data. Additionally, OTP stated that it continues to improve on its interruption cause analyses and that it uses these data to help inform both its capital spending forecasts and its maintenance activities. The Company stated that it believes its new IMS will improve analysis granularity in the future and will allow for increased mitigation strategies.

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

OTP stated that it continues to improve on its interruption cause analyses and use of these data has helped inform their capital spending forecasts, as well as maintenance activities. Additionally, the Company stated that it believes its new IMS system will improve the granularity of its analyses, which can allow for increased mitigation strategies.

J. How grid modernization initiatives could impact reliability metrics and what technologies are required for advanced tracking of various metrics

Concerning the effects of grid modernization on reliability metrics and technologies, OTP provided a discussion of how grid modernization initiatives could impact its reliability and what potential technologies are needed to advance tracking. The Company stated that it will discuss this specific topic in more detail in Docket No. E017/CI-18-253.¹⁵ In the instant Petition, the Company provided a more abstract discussion of the subject.

III. RECOMMENDATIONS

The Department recommends that the Commission accept OTP’s 2019 Annual Report.

The Department also recommends that the Commission keep the Company’s reliability standards for 2019 frozen at the level of the 2013 goals until OTP demonstrates further improvement in meeting its performance goals.

Table 16: OTP Proposed and Department Recommended Goals for 2019

Work Center	SAIDI	SAIFI	CAIDI
Bemidji	70.64	1.26	56.06
Crookston	69.33	1.19	58.26
Fergus Falls	66.97	1.11	60.33
Milbank	75.49	1.82	41.48
Morris	55.78	1.01	55.23
Wahpeton	57.24	1.13	50.65
All MN Customers	64.95	1.13	57.48

¹⁵ *In the Matter of Distribution System Planning for Otter Tail Power Company.*

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Analyst assigned: Daniel W. Beckett

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Finally, the Department requests that, in Reply Comments, the Company provide information regarding the increased number of disconnection notices issued in 2018 when compared with the number issued in previous years.

/ja

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-19-260

Dated this 7th day of June 2019

/s/Sharon Ferguson

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Gail	Baranko	gail.baranko@xcelenergy.com	Xcel Energy	414 Nicollet Mall 7th Floor Minneapolis, MN 55401	Electronic Service	No	OFF_SL_19-260_M-19-260
Ray	Choquette	rchoquette@agp.com	Ag Processing Inc.	12700 West Dodge Road PO Box 2047 Omaha, NE 68103-2047	Electronic Service	No	OFF_SL_19-260_M-19-260
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