

215 South Cascade Street
PO Box 496
Fergus Falls, Minnesota 56538-0496
218 739-8200
www.otpc.com (web site)



July 31, 2023

Mr. Will Seuffert
Executive Secretary
Minnesota Public Utilities Commission
350 Metro Square Building
121 7th Place East
St. Paul, MN 55101-2147

**RE: In the Matter of an Investigation into Self-Commitment and Self-Scheduling of
Large Baseload Generation Facilities
Docket No. E999/CI-19-704
Reply Comments**

Dear Mr. Seuffert:

Otter Tail Power Company (Otter Tail) hereby submits its Reply Comments to the Minnesota Public Utilities Commission (Commission) in the above referenced matter.

Otter Tail has electronically filed this document with the Minnesota Public Utilities Commission and is serving a copy on all persons on the Official Service List for this docket. A Certificate of Service is also enclosed.

Should you have any questions regarding this filing, please contact me at 218-739-8042 or pfoster@otpc.com.

Sincerely,

/s/ PAULA FOSTER
Paula Foster
Supervisor, Regulatory Analysis

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Enclosures
By electronic filing
c: Service List

**STATE OF MINNESOTA
BEFORE THE
MINNESOTA PUBLIC UTILITIES COMMISSION**

**In the Matter of an Investigation into
Self-Commitment and Self-Scheduling
of Large Baseload Generation Facilities**

**Docket No. E999/CI-19-704
REPLY COMMENTS**

I. INTRODUCTION & BACKGROUND

On March 1, 2023, Otter Tail Power Company (Otter Tail) submitted its annual compliance filing (2023 Compliance Filing) for calendar year 2022 in the above referenced docket. On May 31, 2023, the Department of Commerce – Division of Energy Resources (Department) filed its Comments on Otter Tail’s compliance filing¹. On June 20, 2023, the Commission issued its Notice of Extended Comment Period and Additional Reporting.² Otter Tail provides the following Reply Comments.

II. OTTER TAIL RESPONSES TO DEPARTMENT’S COMMENTS & RECOMMENDATIONS

Otter Tail provides the following responses to items raised by the Department in Comments filed on May 31, 2023:

A. The Department recommends OTP explain in reply comments if it can reduce must run commitment during periods when there is no co-owner requests and the associated cost savings that those might generate.

Through beneficial discussions with the Department, Otter Tail understands that the Department’s recommendation is intended to facilitate further analysis of hours where self-commitment was not forced. In the 2022 Big Stone and Coyote data sets, there were numerous hours where a must run commit status was identified, but there was no corresponding reason for unavoidable self-commitment. This occurred in 1733 out of 8760 hours at Big Stone and 2810 out of 8760 hours at Coyote. The Department was seeking additional insight on those

¹ No other party filed Comments on Otter Tail’s compliance filing.

² The June 20, 2023, Notice of Extended Comment Period and Additional Reporting sought additional commentary on whether the Commission should make modifications to the reporting obligations in this docket based on recent statutory changes.

hours. Otter Tail explained the majority of those hours actually did maintain an unavoidable self-commitment requirement, primarily a co-owner request or a need for building heat. However, to be fully transparent, Otter Tail did not categorize those hours as unavoidable self-commitment because the Company also endorsed self-commitment during those periods. A summarized financial analysis of those Otter Tail endorsed self-commitment hours is included in the original filing (Big Stone page 19, Coyote page 22).

After hearing Otter Tail's explanation on how the data was presented, the Department requested in future filings that Otter Tail specify every hour, and associated cause, where unavoidable self-commitment occurs, including the hours Otter Tail endorses self-commitment. Specifically, this means Otter Tail will report any hour that any non-Otter Tail co-owner requests self-commitment as unavoidable self-commitment, independent of Otter Tail's endorsement.

Otter Tail appreciates the Department's analysis and will update its reporting processes as requested for future filings.

B. The Department recommends OTP explain in reply comments how much of the disagreements between its units' (Big Stone and Coyote) commitment among the plant co-owners is due to divergent financial incentives.

Otter Tail is not able to speak with certainty regarding the decision processes and priorities driving co-owner offer preferences and requests. That being said, Otter Tail highlights the 2022 average day ahead LMP prices at Big Stone (MISO: \$19.40, SPP: \$31.60) and Coyote (MISO: \$38.27, SPP: \$40.18). These price differences, especially at Big Stone, suggest divergent financial incentives play a significant role in differing offer preferences. Other co-owner concerns that likely drive differing offer preferences include (1) the inability of economically decommitted units to respond to real time price volatility, (2) the risk of becoming a real-time price taker if commitment is forced by the opposite ISO, and (3) the lack of startup make whole payments when a unit is committed by the opposite ISO.

C. The Department recommends OTP explain in reply comments why the actual net benefits for both its units is outside the range of self-commitment and economic scenarios.

Otter Tail believes the delta between actual operations and modeled results observed by the Department is largely due to necessary modeling assumptions and

simplifications. Otter Tail calculated/modeled the range between the self-commitment and full economic offer scenarios utilizing the Big Stone and Coyote data sets filed in this docket. As discussed in Otter Tail's 2023 Compliance Filing (pages 26 through 29) the modeled range between self-commitment and full economic offer scenarios are estimates. It is not possible for Otter Tail to precisely calculate/model how the MISO and SPP markets might have been committed and dispatched under real time operations utilizing different offer assumptions.

To model the self-commitment and full economic offer scenarios, several simplifying assumptions were required for modeling purposes (as compared to actual MISO and SPP commitment and dispatch processes). Those assumptions are summarized below:

1. Unit commitment decisions were based on a calendar day basis, not an hour-by-hour basis.
2. The unit is only committable in the DA market, not the RT market (theoretically a baseload coal unit could be committed in the RT, but in practice this has very rarely occurred).
3. Co-optimization of ancillary services is not considered in this analysis. Commitment, dispatch, and market revenues are only based on energy.
4. Ramp rates are not accounted for in this analysis. Hour by hour dispatch was determined solely by market pricing, the unit's heat input curve, and cost of fuel and reagents.
5. Historical derates are not accounted for. It is assumed the unit maintains its full range of normal dispatch, economic minimum to economic maximum, for every hour the unit is not on outage. Economic minimum constraints associated with the Big Stone AQCS scrubber train transitions are not accounted for.
6. When an operating day contained one or more hours of outage, the unit's outage was assumed to be for the entire calendar day.
7. Minimum cool down and startup times are not considered in the analysis.
8. The analysis utilizes fuel costs and heat input curves in effect on December 31, 2022.

As actual MISO and SPP commitment and dispatch differ from the necessary simplification assumptions utilized within the modeling, it is possible for actual results to fall outside of the modeled bandwidth. Specifically, for both Big Stone and Coyote, assumptions 1, 5, 6, 7, and 8 could contribute to a higher modeled bandwidth than actual results. Despite the delta between actual operations and modeled results, Otter Tail believes the modeled bandwidth is a reasonable indicator of self-commitment versus economic offer performance.

D. The Department recommends all three utilities explain in reply comments the reasons behind the large amounts of curtailment both for company owned and contracted wind facilities, and the contribution of must run units towards that curtailment.

Curtailment of Otter Tail wind resources (owned generation and PPAs) are the result of low LMP pricing or the need to maintain system reliability. All directives for curtailment originate from MISO, who serves as the system operator.

Self-commitment of thermal resources may in some cases increase the supply of low-cost, wholesale energy on the electrical grid, which could contribute to curtailment of wind facilities. Other factors that can contribute to curtailment include transmission constraints, transmission outages, and the location of the wind farm, all of which can contribute to bottlenecks in the delivery of wind energy. Due to the many complexities and interdependencies of the MISO electrical grid and commitment and dispatch engines, it is not possible for Otter Tail to estimate the contribution of must run units (Otter Tail owned or system wide) toward wind generation curtailment.

III. OTTER TAIL RESPONSES TO TOPICS OPEN FOR COMMENT

On March 28, 2023, the Commission issued a Notice of Extended Comment Period and listed Topics Open for Comment in that Notice. Otter Tail provides the following responses to those topics open for comment:

A. Are the March 1, 2023, filings by the utilities adequate and in compliance with prior Commission Orders?

Otter Tail's 2023 Compliance Filing is adequate and complies with the Commission's prior orders.

B. What conclusions can be drawn from the data filed by the utilities in conjunction with what has been learned earlier in this investigation?

The data included in the 2023 Compliance filings and prior filings provides insight into many issues being examined in this docket. Otter Tail believes several conclusions can be drawn from the data, including the following:

1. Otter Tail's Baseload plants operated cost-effectively in 2022.
2. Customers have benefitted from Otter Tail's consistent and cost-effective portfolio of resources since at least 2013, which is the starting point of the data provided in the docket.
3. The production-cost-comparison-to-market-price often referenced in this docket is useful in considering how greater responsiveness might improve the cost of energy. This analysis, however, requires caution as it can be used to incorrectly disfavor generation that is less responsive to market prices (based load and renewables) in favor of highly responsive generation types (e.g. gas peakers).
4. As noted in earlier filings, the perceived cost-effectiveness of Otter Tail's Baseload units (as evaluated under the limited perspective of the production-cost-comparison-to-market-price analysis) is not so much dependent on the costs of operating the plants, which are very consistent, but instead it is dependent on the market, which has varied in recent years, with some periods of very low market prices.
5. Questions of self-commitment vs. economic commitment are most relevant in periods of very low market conditions (conditions where the market prices are frequently below the costs of operating the plants); they are less relevant in periods of higher market prices (conditions where market prices are less frequently below the costs of operating the plants).
6. Otter Tail has worked proactively with the co-owners of Coyote and Big Stone to design and implement capability for economic dispatch of these plants when doing so is forecasted to be beneficial, doing so within the context of a multi-owner, multi-market structure. Implementation occurred in April 2020 at Big Stone and in April 2021 at Coyote.

C. How should the Commission use the information provided by the utilities in this docket going forward?

Going forward, the Commission should use the information to inform its participation in the Organization of MISO States, thereby contributing to an even more efficient MISO market that may, in time, facilitate multi-day commitments.

D. Should the Commission order any further analysis for future reports, or any additional reports by the utilities?

Otter Tail believes the information the Commission currently requires is reasonable for the purpose of this docket. Otter Tail and its plant co-owners continually evaluate the most efficient and best use of their plants and make business decisions based on the best information available. As noted earlier, Otter Tail and its Big Stone co-owners transitioned to unit economic commitment in April 2020 and the Coyote co-owners did the same in April 2021.

E. Are there any modifications to reporting requirements that should be made due to the changes to Minnesota Statute 216B.2422 or other statute during the 2023 Legislative session?

Otter Tail does not believe any modifications to Otter Tail's reporting requirements in this docket are necessary due to changes to Minnesota Statute 216B.2422 or other statutory changes made in the 2023 Minnesota legislative session. As referenced in the Notice of Extended Comment Period and Additional Reporting, Minnesota Statute 216B.2422 was recently amended to include the following new subdivision 8:

Carbon dioxide emissions reduction.

(a) The commission may issue an order to reduce carbon dioxide emissions from coal-fired electric generating units located in Minnesota that do not have applicable capacity obligations with a regional transmission organization and are wholly owned by a public utility required to file a resource plan under this section. The order may:

(1) require the public utility to develop and implement a plan to operate coal-fired electric generating units only during the months of June, July, August, December, January, and February, other than for emergency or reliability purposes; or

(2) establish an annual limit on the carbon dioxide emissions from coal-fired electric generating units.

(b) Nothing in this subdivision affects a public utility's obligation to comply with the provisions of section 216B.1691.

This statutory change references coal-fired electric generating units located in Minnesota that are wholly owned by a utility required to file integrated resource plans with the Commission. With the closure of Otter Tail's Hoot Lake Plant in Fergus Falls, Otter Tail no longer has an ownership interest in coal-fired generating units described by this new subdivision. Other statutory changes appear to be covered by other dockets before the Commission and would not require changes to the reporting obligations established in this docket.

F. Should the Commission establish enforcement procedures for this issue?

No. Otter Tail believes this docket should remain informational.

IV. CONCLUSION

Otter Tail appreciates the opportunity to provide these Reply Comments and respectfully requests approval of its annual filing.

Dated: July 31, 2023

Respectfully submitted,
OTTER TAIL POWER COMPANY

By /s/ PAULA FOSTER
Paula Foster
Supervisor, Regulatory Analysis
215 South Cascade
Fergus Falls, MN 56538-0496
(218) 739-8042

CERTIFICATE OF SERVICE

**RE: In the Matter of an Investigation into Self-Commitment and Self-Scheduling of Large Baseload Generation Facilities
Docket No. E999/CI-19-704**

I, Kim Ward, hereby certify that I have this day served a copy of the following, or a summary thereof, on Will Seuffert and Sharon Ferguson by e-filing, and to all other persons on the attached service list by electronic service or by First Class Mail.

**Otter Tail Power Company
Reply Comments**

Dated this **31st** day of **July, 2023**.

/s/ KIM WARD

Kim Ward
Lead Regulatory Filing Coordinator
Otter Tail Power Company
215 South Cascade Street
Fergus Falls MN 56537
(218) 739-8268

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Alison C	Archer	aarcher@misoenergy.org	MISO	2985 Ames Crossing Rd Eagan, MN 55121	Electronic Service	No	OFF_SL_19-704_Official
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_19-704_Official
Hillary	Creurer	hcreurer@mnpower.com	Minnesota Power	30 W Superior St Duluth, MN 55802	Electronic Service	No	OFF_SL_19-704_Official
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_19-704_Official
Bruce	Gerhardson	bgerhardson@otpc.com	Otter Tail Power Company	PO Box 496 215 S Cascade St Fergus Falls, MN 565380496	Electronic Service	No	OFF_SL_19-704_Official
Allen	Gleckner	gleckner@fresh-energy.org	Fresh Energy	408 St. Peter Street Ste 350 Saint Paul, Minnesota 55102	Electronic Service	Yes	OFF_SL_19-704_Official
Kim	Havey	kim.havey@minneapolismn.gov	City of Minneapolis	350 South 5th Street, Suite 315M Minneapolis, MN 55415	Electronic Service	No	OFF_SL_19-704_Official
Adam	Heinen	aheinen@dakotaelectric.com	Dakota Electric Association	4300 220th St W Farmington, MN 55024	Electronic Service	No	OFF_SL_19-704_Official
Kristin	Henry	kristin.henry@sierraclub.org	Sierra Club	2101 Webster St Ste 1300 Oakland, CA 94612	Electronic Service	No	OFF_SL_19-704_Official
Holly	Lahd	holly.lahd@target.com	Target Corporation	33 South 6th St CC-28662 Minneapolis, MN 55402	Electronic Service	No	OFF_SL_19-704_Official

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Leann	Oehlerking Boes	lboes@mnpower.com	Minnesota Power	30 W Superior St Duluth, MN 55802	Electronic Service	No	OFF_SL_19-704_Official
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_19-704_Official
Isabel	Ricker	ricker@fresh-energy.org	Fresh Energy	408 Saint Peter Street Suite 220 Saint Paul, MN 55102	Electronic Service	Yes	OFF_SL_19-704_Official
Christine	Schwartz	Regulatory.records@xcelenergy.com	Xcel Energy	414 Nicollet Mall FL 7 Minneapolis, MN 554011993	Electronic Service	No	OFF_SL_19-704_Official
Will	Seuffert	Will.Seuffert@state.mn.us	Public Utilities Commission	121 7th PI E Ste 350 Saint Paul, MN 55101	Electronic Service	Yes	OFF_SL_19-704_Official
Shane	Stennes	stennes@umn.edu	University of Minnesota	319 15th Avenue SE Minneapolis, MN 55455	Electronic Service	No	OFF_SL_19-704_Official
Stuart	Tommerdahl	stommerdahl@otpc.com	Otter Tail Power Company	215 S Cascade St PO Box 496 Fergus Falls, MN 56537	Electronic Service	No	OFF_SL_19-704_Official
Brian	Tulloh	btulloh@misoenergy.org	MISO	2985 Ames Crossing Rd Eagan, MN 55121-2498	Electronic Service	No	OFF_SL_19-704_Official
Laurie	Williams	laurie.williams@sierraclub.org	Sierra Club	Environmental Law Program 1536 Wynkoop St Ste 200 Denver, CO 80202	Electronic Service	No	OFF_SL_19-704_Official