



A Touchstone Energy® Cooperative 

March 14, 2023

Via Electronic Filing

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

RE: In the Matter of Minnkota Power Cooperative's 2022-2036 Resource Plan
Docket No. ET6/RP-22-312
Reply Comments

Dear Mr. Seuffert:

Minnkota Power Cooperative, Inc (Minnkota) respectfully submits these Reply Comments to the Minnesota Public Utilities Commission (Commission) in the above-referenced docket. Minnkota has electronically filed this document with the Commission and is serving a copy to all persons on the official service list for this docket. Any questions, please contact me at jovergaard@minnkota.com or (701) 795-4219.

Respectfully submitted,

Jamie Overgaard
Minnkota Power Cooperative, Inc
Rates and Planning Manager
By electronic service c: Service List

DEPARTMENT RECOMMENDATIONS

The Department makes the following requests and recommendations to the Joint System and Commission:

- The Department requests the Joint System provide the following in Reply Comments:
 - **An explanation of the assumptions or methodological choices the Joint System made in forecasting its seasonal demand that caused its forecasted summer peak demand to increasingly under-forecast actual system demand.**

The Joint System utilizes a consultant, Clearspring Energy, to forecast its seasonal demand. In communicating with Clearspring Energy, the following responses were provided:

Background on approach and methodology:

- 1) We are projecting MONTHLY coincident peak demands using econometric modeling for each member cooperative and Northern Municipal Power Agency (NMPA). The summer and winter peaks are then drawn from the projected monthly peak demands.
 - a. Typical variables include Peak Day Max Temperature, Peak Day Minimum Temperature, Winter Peak Day Windspeed, Electric Space Heat Saturation %, Central AC Saturation %, Monthly kWh, and various time shift variables for certain months.
- 2) The projections are based on NORMAL weather, which is to say the 10-year average peak weather is in the forecast. The historic data in the models is based on OBSERVED data. So to the extent that a given year was hotter than the 20-year normal (at the time of peak setting) then it could very well be the case the forecast would underpredict actual peak.
- 3) Overall, the process is essentially the same for all Members (econometric models for each), and the results are aggregated to the Minnkota Joint System level by month.

There are several possible causations to explain the peak discrepancies noted by the PUC:

- 1) Actual v. Normal Weather: Per item #2 above, the predicted load is based on the 10-year average weather. For the period 2017-2022, 5 of the 6 summers were warmer than the average value (meaning the forecast would underpredict), 4 of the 6 winters were average or colder than average (tending to overpredict). Thus the % differences calculated do not truly reflect an accurate depiction of how the forecasts are performing. This was based on peak day weather from Grand Forks International Airport.
- 2) Load Control: Minnkota maintains a robust load control system used primarily in the winter months. The amount of control at the time of peak is inherently included in the coincident peak demand data we receive, and thus incorporated into the model. To the extent that actual load control in a given winter exceeds what is inherent in the model, that could also explain the winter over prediction.
- 3) These are not mutually exclusive and other factors may play some role in the peak discrepancies.

In any case, we will certainly take this information into account as we prepare the monthly peak demand models for the 2023 load forecast.

- **Information about the extent to which any Minnesota member cooperatives are supplying up to five percent of their energy and capacity requirements from other sources.**

Currently, two member cooperatives have small solar garden facilities that fall under Minnkota's five percent provision.

More information on Cass County Electric Cooperative's Prairie Sun Community Solar Garden can be found at <https://casscountyelectric.com/solar>.

More information on Beltrami Electric Cooperative's Northern Solar Community Solar Garden can be found at <https://beltramielectric.com/northern-solar>.

- **A detailed explanation of the Joint System's plan to increase its annual energy savings to meet Minnesota energy policy goals after the departure of some of its member municipal and cooperative utilities from the PowerSavers program.**

Table 6 found on page 11 summarizes the Joint system's realized annual energy savings as a percentage of retail sales to Minnesota customers; however, it does not account for the carry over provision that the state allows utilities to access to reach their CIP requirements. The table misrepresents Minnkota falling short of their CIP regulatory requirements for years 2019 and 2020. The CIP reporting tool that the state uses for utilities to file their annual CIP requirements does not include a carry forward tracking feature, it tracks carry forward balances outside of the CIP reporting tool and applies use of carry forward balances in a CIP regulatory review letter only. The actual savings are reflected in the savings below:

Revised Table

Year	Retail Sales	kWh Savings	Carryforward Savings	Percentage
2010	1,645,135,382	25,872,370		1.57%
2011	1,645,135,382	25,050,178		1.52%
2012	1,779,332,334	35,420,330		1.99%
2013	1,764,679,372	27,446,537		1.56%
2014	1,718,746,166	30,507,492		1.77%
2015	1,748,260,864	43,111,834		2.47%
2016	1,794,803,833	33,330,584		1.86%
2017	1,467,985,277	27,628,406		1.88%
2018	1,261,946,444	21,538,490		1.71%
2019	1,222,912,595	17,359,340	984,349	1.50%
2020	1,235,293,939	14,094,972	4,434,437	1.50%
2021	1,294,575,466	19,186,892	231,740	1.50%

The Minnkota joint system did see a decrease in energy savings occurring after 2018 because of the 2017 amendment to Minn. Stat. § 216B.241, subd. 1b, which provided an exemption from CIP requirements for municipals fewer than 1,000 customers and cooperatives with fewer than 5,000 members. This legislation allowed three of the joint systems’ cooperatives, who played key roles in promoting the PowerSavers Program, to be exempt from CIP requirements.

This amendment isn’t the only reason the Joint System has seen a decrease in energy savings. Technologies are becoming more and more efficient which decreases the kWh savings we are able to claim. As lighting, heating, ventilation and air-conditioning (HVAC) measures become more efficient, the baseline for which they are measured against adjusts and has resulted in fewer kWh savings over the years.

Going forward, the Joint System plans to take advantage of the flexibility the Energy Conservation and Optimization (ECO) Act will provide in meeting CIP requirements. Having the flexibility to meet our annual energy savings goal through a combination of programs delivering energy conservation, efficient fuel-switching, load management and other measures should eliminate some of the barriers we have experienced in the past.

- **An update on the impact of the Regional Haze Rule on the Coyote Plant's operations and the Joint System's resource needs.**

North Dakota Department of Environmental Quality (NDDEQ) prepared a well-supported plan for making reasonable progress toward the national visibility goal. The State Implementation Plan (SIP) is consistent with the applicable laws and guidance, and it includes reasoned analysis to justify the state's policy determinations. August 10, 2022 NDDEQ officially submitted the state approved North Dakota Regional Haze State Implementation Plan Revision for Round 2 of the visibility protection program.

Specific to the Coyote Station, NDDEQ undertook a rigorous "four factor" reasonable progress analysis for the facility, consistent with the Clean Air Act (CAA) and Environmental Protection Agency (EPA) requirements. North Dakota reasonably concluded that the costs associated with additional controls for Coyote could not be justified on the basis of the minimal, if not meaningless, visibility improvements that would result from installing and operating those controls.

The NDDEQ's SIP analysis shows that the emission controls at Coyote, along with recent and forthcoming facility shutdowns and other on-the-books controls required by various Clean Air Act and state regulatory programs, place North Dakota well on the way to complete elimination of manmade visibility impairment, as required by the regional haze program. The SIP has the state already achieving more progress than called for by EPA's "uniform rate of progress" to natural visibility by the year 2064. Considering the four-factor analyses alongside the visibility improvement results, consistent with the law and EPA rules and guidance, confirms that no controls are required for Coyote Station or other facilities during this planning period.

EPA Region 8 Administrator Becher sent letter of SIP Completeness Determination on August 23, 2022. On August 30, 2022, EPA issued Findings of Failure for 15 states, including amongst others Minnesota, Missouri, Iowa, Illinois, and Nebraska. We are not otherwise aware of a timeline for determination from the EPA on the SIP.

- **An updated table showing the anticipated GHG reductions achievable throughout the IRP planning period without including Project Tundra's anticipated impacts.**

The table below reflects GHG emissions in the event Project Tundra does not get implemented. If Project Tundra is not implemented Minnkota Power Cooperative, Inc would likely retire Renewable Energy Credits from existing wind farms in order to meet state and federal regulations/obligations.

Table 3a without Tundra

Year	2005 CO ₂ Emissions, Tons	Projected CO ₂ Emissions, Tons	Percent reduction of CO ₂ from 2005
2014	2,143,689.25	1,960,741	-8.5%
2015		1,878,563	-12.4%
2016		1,862,782	-13.1%
2017		1,760,344	-17.9%
2018		1,842,868	-14.0%
2019		1,816,882	-15.2%
2020		1,699,231	-20.7%
2021		1,654,209	-22.8%
2022		1,737,193	-19.0%
2023		1,750,643	-18.3%
2024		1,763,943	-17.7%
2025		1,663,997	-22.4%
2026		1,651,152	-23.0%
2027		1,659,820	-22.6%
2028		1,668,854	-22.2%
2029		1,677,241	-21.8%
2030		1,683,622	-21.5%
2031		1,689,309	-21.2%
2032		1,694,872	-20.9%
2033		1,698,731	-20.8%
2034	1,703,998	-20.5%	
2035	1,710,137	-20.2%	
2036	1,712,794	-20.1%	
2037	1,715,116	-20.0%	

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Analyst assigned: Christopher Watkins

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