

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

Katie Sieben
Hwikwon Ham
Valerie Means
Joseph Sullivan
John Tuma

Chair
Commissioner
Commissioner
Commissioner
Commissioner

**IN THE MATTER OF THE 2023
MINNESOTA BIENNIAL
TRANSMISSION PROJECTS REPORT**

**MPUC DOCKET NO. E999/M-23-91
MINNESOTA TRANSMISSION OWNERS
REPLY COMMENTS**

INTRODUCTION

The Minnesota Transmission Owners (MTO) submit these Reply Comments according to the Minnesota Public Utilities Commission's (Commission) November 8, 2023, Notice of Comment Period and Establishment of Service List in the above-referenced docket.¹ Completeness comments were filed in this docket in November 2023 by the Department of Commerce, Division of Energy Resources (Department) and Ms. Carol Overland of Overland Legalelectric (Ms. Overland).² Initial comments were filed on January 16, 2024, by EDF Renewables (EDF), the Department, and Ms. Overland.³ In these Reply Comments, the MTO provides a response to each commenter, and respectfully affirms its request that the Commission approve the 2023 Biennial Transmission Projects Report (Biennial Report).

DISCUSSION

I. REPLY TO DEPARTMENT

In its comments, the Department recommends the Commission: (a) determine that the Biennial Report is complete;⁴ (b) approve the Biennial Report; and (c) modify the definition of

¹ Notice of Comment Period and Establishment of Service List (Nov. 8, 2023) (eDocket No. 202311-200342-01).

² Completeness Comments by the Department (Nov. 15, 2023) (eDocket No. 202311-200517-01) (Department Completeness Comments); Completeness Comments by Overland (Nov. 27, 2023) (eDocket No. 202311-200727-01) (Overland Completeness Comments).

³ Initial Comments by EDF (Jan. 16, 2024) (eDocket No. 20241-202223-01) (EDF Comments); Initial Comments by the Department (Jan. 16, 2024) (eDocket No. 20241-202220-01) (Department Comments); Initial Comments by Overland (Jan. 16, 2024) (eDocket No. 20241-202195-01) (Overland Comments).

⁴ Department Completeness Comments at 2.

“inadequacy” to be applied in future biennial transmission project reports.⁵ The MTO appreciates the Department’s review of the Biennial Report, and the Department’s recognition that the Biennial Report is both complete and warrants approval.

The Department also recommends that the term “inadequacy” or “inadequacies” appearing in Minn. Stat. § 216B.2425 and Minn. R. Ch. 7848 be defined “as any issue where the solution would require a [certificate of need (CN)].”⁶ As noted by the Department, if the proposed definition of inadequacy applied to this reporting cycle, the inadequacies identified would shrink from 164 to 12,⁷ providing more focused materials for the Department’s, stakeholders’, and the Commission’s review. The MTO acknowledges that review of the biennial transmission projects reports can be a time-consuming endeavor for the Department and Commission. As such, if the Department seeks to narrow the scope of future biennial transmission projects reports, the MTO supports those efforts. To the extent other stakeholders have concerns that this change will limit the ability for stakeholder feedback, the MTO notes the issues no longer covered by biennial transmission reporting requirements will still be subject to routing and other permitting requirements before the Commission, thereby maintaining the public stakeholder review component.

If the Commission adopts the Department’s recommendation, it may also be prudent to revisit the ongoing usefulness of some of the other content that has been added to the biennial report over time. The MTO is open to working with the Department and other stakeholders to bring forward meaningful revisions for the Commission’s consideration.

II. REPLY TO EDF RENEWABLES’ REQUEST TO CONDITION APPROVAL OF THE BIENNIAL REPORT UPON THE MTO’S SUBMISSION OF A SUPPLEMENTAL FILING OR INITIATION OF A NEW PROCEEDING

In comments, EDF: (a) supports the Grid North Partners’ implementation of 19 transmission upgrade projects addressing reliability and congestion relief; (b) expresses concern with curtailment issues in southwest Minnesota; and (c) suggests a new 345 kilovolt (kV) outlet is

⁵ Department Comments at 13.

⁶ Department Comments at 9.

⁷ Department Comments at 10. The MTO identified a small correction to the identified projects requiring a CN. Dairyland’s Project 2023-SE-N8 “J898 Interconnection at Beaver Creek” also requires a CN because it is above 100 kV and crosses a state border. With this correction, the total number of projects requiring a CN would be 13.

needed to resolve the curtailment concerns.⁸ EDF then recommends the Commission condition approval of the Biennial Report upon the MTO's submission of a supplemental filing or initiation of a new proceeding addressing: (1) how projects described in the Biennial Report will improve future congestion and curtailment in southwest Minnesota; (2) the causes of stability, thermal, or other issues in southwestern Minnesota, including Midcontinent Independent System Operator (MISO) regional and local transmission owner studies; and/or a supplemental filing outlining how such issues will be resolved with a detailed timeline and technical data.⁹ The MTO appreciates EDF's thoughtful feedback on the Biennial Report, and recognizes there are important considerations impacting various stakeholders. The MTO, therefore, provides the following information to help contextualize EDF's concerns and addresses EDF's proposed solution.

A. MISO Transmission Planning and the MTEP24 Near-Term Congestion Study.

The MTO continues to coordinate with MISO on transmission planning and congestion issues. Members and stakeholders have worked with MISO staff to develop business practices associated with the various planning efforts undertaken within the MISO footprint. These practices guide timing and ways reliability and economic studies are performed, and ways generation interconnection and retirement requests are processed and studied. A summary of MISO's generation interconnection process is shown in Attachment A.

Additionally, MISO stakeholders have an opportunity to request a congestion study to address concerns with real-time congestion. MISO has been aware of ongoing market congestion which has resulted in increased load costs and generator curtailments. Upon recommendation from stakeholders, including the MTO, MISO undertook an informational market congestion study in 2023 to provide insight into the persistence and magnitude of existing system congestion issues. This initial testing included an examination of historical binding transmission facilities to provide further insight into market congestion drivers.

MISO is presently exploring three scope options, including congestion issue identification in near-term horizons, out to two or five years, or concentrating on construction outages. In soliciting feedback, stakeholders were requested to provide feedback on each of the three possible

⁸ EDF Comments at 2-4.

⁹ EDF Comments at 4.

scopes in terms of ways they would affect their company. This 2024 study is expected to be complete in Q3 of 2024.

B. Suggested Mitigation Measures and Future Planning.

In addition to general planning issues, EDF also expressed concerns about specific issues in southwestern Minnesota, recommending that a 345 kV outlet be built “to export power from this pocket of the grid.”¹⁰ MTO member, Northern States Power Company, dba Xcel Energy (Xcel Energy), is aware of EDF’s concerns and is currently working with another party and the Electric Power Research Institute (acting as a consultant) to study the area. This study will take an in-depth look at the stability concerns of the area and the possible solutions available to address the issues. This study will likely take six months from agreements being signed. There are several projects in the MISO Tranche 2 Long Range Transmission Planning (LRTP) Process with goals of increasing outlet from the Buffalo Ridge area. Projects are in the selection process and final approval by the MISO Board of Directors is expected at the end of 2024.

While the MTO understands EDF’s concerns, specific coordination and efforts are already under way to identify potential solutions. Many of these efforts will not be completed until later this year or potentially longer. Given the existing coordination between the MTO members, MISO, and other stakeholders, as well as the current planning efforts that are underway, it is premature to seek supplementary information in this proceeding or require that a new docket be opened to analyze these issues further. Therefore, the MTO respectfully disagrees with EDF’s recommendation that the Commission initiate a separate proceeding or require supplemental information in this docket.¹¹

III. REPLY TO MS. OVERLAND

The MTO also appreciates Ms. Overland’s review of the Biennial Report and her involvement in this docket. While a number of Ms. Overland’s comments are not directly related

¹⁰ EDF Comments at 3.

¹¹ For the same reasons, the MTO also disagrees with substantially similar recommendations contained within the late-filed comments by the Murray County Board of Commissioners. The MTO will address any technical distinctions during the Commission agenda meeting in this proceeding. *See* Letter by Murray County Board of Commissioners (Feb. 29, 2024) (eDocket No. 20242-203948-01).

to information provided in the Biennial Report, the MTO provides the following responses to relevant issues to help better clarify the record in this proceeding.

A. Reliance Upon MISO Transmission Planning.

In both comments, Ms. Overland recommends the Commission strike references to MISO approval as a representation of “need.”¹² Ms. Overland states: “It’s clear that the utilities rely on MISO transmission planning for its need claims, planning which is market based. All such references to MISO ‘approval’ should be stricken from this Report, as this is not a demonstration of need, but of marketing plans.”¹³ As a threshold matter, the MTO agrees with the Department’s assessment: MISO’s planning is not solely market-based. MISO has eight categories of transmission projects, such as Baseline Reliability Projects, which include the LRTP Tranche 1.¹⁴ Additionally, though the MTO acknowledges the Biennial Report relies on MISO transmission planning, MISO transmission planning is not a proxy for approval in Minnesota. As noted by the Department, proposed “projects must meet the various criteria established by the Minnesota Statutes and Minnesota Rules.”¹⁵ The MTO members are committed to ensuring any proposed transmission project is properly reviewed and approved by the Commission. Therefore, the MTO respectfully disagrees with Ms. Overland’s recommendation to disregard reliance on MISO material in the Biennial Report.

B. Minnesota’s Certificate of Need Process Effectively Determines Questions of Need.

While the MTO appreciates Ms. Overland’s contributions to the record, many of Ms. Overland’s critiques are issues that are part of existing CN processes. First, Ms. Overland questions the overall need for the LRTP projects noting that:

[w]e’ve been told repeatedly that transmission build-out will decrease the needed reserve margin. How’s that working? If so, what’s the impact on “need” for the massive MISO Tranche 1 build-out...[t]he Biennial Transmission Plan should address peak demand and impact on planning as transmission, and alternatives to

¹² Overland Completeness Comments at 1; Overland Comments at 1.

¹³ Overland Comments at 1.

¹⁴ Department Comments at 10; MISO Long Range Transmission Planning (last visited February 16, 2024), <https://www.misoenergy.org/planning/long-range-transmission-planning/#:~:text=In%20July%20of%202022%2C%20MISO's,to%20address%20future%20reliability%20needs.>

¹⁵ Department Comments at 10.

transmission, must be developed based on peak, and reduction in peak through shifting demand.^[16]

The MTO agrees with the Department's assessment that this concern should be addressed in the on-going CN dockets.¹⁷

Similarly, Ms. Overland generally questions the "need" for the Minnesota Energy Connection project and specific substations in Lyon County.¹⁸ Again, the MTO agrees with the Department's assessment of Ms. Overland's concerns: "Questions as to need for the Minnesota Energy Connection and related substations are best addressed in the on-going certificate of need proceeding."¹⁹ The Commission's robust review of CN proposals has proven to be a thorough process and the best forum to address specific questions of need.

Ms. Overland also incorrectly asserts that the Biennial Report is incomplete with respect to discussion of optical ground wire (OPGW) improvements.²⁰ As noted in the Biennial Report, MPUC tracking number 2023-SW-N5, the OPGW on the Brookings–Lyon County and the Hampton–Helena 345 kV lines is being replaced due to degradation resulting from lightning strike, icing, and line galloping. The OPGW is critical for communication between protection relays located at each end of the lines. The work is being done in conjunction with double circuiting these corridors, thus reducing the cost of replacing the OPGW at a later date. It should be noted that the easements associated with these lines prohibit using the OPGW for other purposes. Ms. Overland's concerns should be addressed as part of the Commission's specific permitting processes.

¹⁶ Overland Comments at 6; *see also*, Overland Completeness Comments at 1. In making this criticism, Ms. Overland also compares the claimed 1,300 MW shortfall outlined in the North America Electric Reliability Corporation Long-Term Reliability Assessment to Xcel Energy's reported 1,500 MW of excess capacity. As correctly noted by the Department, this comparison conflates mismatched data. The 1,300 MW shortfall refers to the summer of 2023, including the 2023-24 planning year, while Xcel Energy's excess capacity related to the previous year. Therefore, Ms. Overland's criticism on this point should also be disregarded. Department Comments at 11.

¹⁷ Department Comments at 11; *citing In the Matter of the Application of Great River Energy and Minnesota Power for a Certificate of Need and Route Permit for an approximately 180-mile, Double Circuit 345-kV Transmission Line in Itasca, Aitkin, Crow Wing, Morrison, Benton, and Sherburne Counties*, MPUC Docket Nos. E015, ETT2/CN-22-416; *In the Matter of the Application of Xcel Energy for a Certificate of Need for the Mankato to Mississippi River 345 kV Transmission Line Project*, MPUC Docket No. E002/CN-22-532; *In the Matter of the Application for a Certificate of Need for the Big Stone South – Alexandria – Big Oaks Transmission Project*, MPUC Docket No. E002, E017, ET2, E015, ET10/CN-22-538.

¹⁸ Overland Completeness Comments at 2-3; Overland Comments at 7-8.

¹⁹ Department Comments at 12.

²⁰ Overland Comments at 8.

CONCLUSION

The Minnesota Transmission Owners respectfully request the Commission to take action and issue an order regarding the Biennial Report that includes the following:

1. Find that the Biennial Report meets the requirements of Minn. Stat. § 216B.2425 and accept the report.
2. Find that since no party has requested certification for any of the projects listed in the reports, it is unnecessary to certify, certify as modified, or deny certification of any projects.
3. Extend a variance to Minnesota Rules part 7848.0900 that has been granted for the last several biennial transmission projects reports to relieve the utilities of the obligation to hold public meetings in each transmission planning zone. And further, determine that the MTO shall not be required to hold a webinar on the Biennial Report.
4. Direct the Transmission Owners to include content similar to the Biennial Report in the 2025 report, subject to any modifications outlined during the Commission agenda meeting.
5. Find that for future reports, the MTO may provide a link to the report on the MTO website, www.minnelectrans.com, as well as directions to access the report via eDockets, in lieu of mailing CDs or jump drives with electronic copies of the report or the required notice lists.

Dated: March 1, 2024

Respectfully submitted,



Christina K. Brusven (# 388226)
Riley A. Conlin (#0398860)
FREDRIKSON & BYRON, P.A.
60 South Sixth Street, Suite 1500
Minneapolis, MN 55402-4400
Telephone: (612) 492-7000
Fax: (612) 492-7077

Attorneys for Minnesota Transmission Owners

ATTACHMENT A

This document summarizes study assumptions and processes from BPM-015 (Business Practice Manual: Generation Interconnection) that may have an impact on system congestion.

Study Models and Dispatch Assumptions

BPM-015 section 6.1.1.1.2 states that proposed generation interconnections on the MISO transmission system must be studied in two seasonal models: summer peak and shoulder peak. The generator dispatch assumptions for those seasonal models are listed below. When studying proposed interconnections, MISO dispatches all proposed interconnections in a study cycle against existing generation in the region of the proposed interconnection. As an example, generators proposing to interconnect to GRE's transmission system would be dispatched against "MISO North" generation. From a model perspective, this means, in theory, the resulting models could have a proposed wind farm interconnecting 5 miles away from a wind generator that went into service a year before, and the "older" wind farm would be dispatched lower than the proposed wind farm.

Table 0-1 Dispatch per Fuel Type for Study and Higher Queued Generators (without a GIA)

Fuel Type under Study and Higher Queued	Summer Peak Dispatched as % of Interconnection Service	Shoulder Peak Dispatched as % of Interconnection Service
Combined Cycle	100%	50%
Combustion Turbine	100%	0%
Diesel Engines	100%	0%
Hydro	100%	100%
Nuclear	100%	100%
Storage ⁹	100% ¹⁰	- 100%, 0% ^{9,10}
Steam – Coal	100%	100%
Oil	100%	0%
Waste Heat	100%	100%
Wind	15.6% ¹¹	100%
Solar	100%	0% ¹²
Hybrid Facility ¹³ (Any combination of the above fuel types except Battery which can be assumed up to 100% dispatchable in both Summer Peak and Shoulder Peak)	Battery up to 100% Last Fuel Dispatched Other Fuels based on above dispatch assumptions of each fuel type with any adjustment based on requested interconnection Service¹⁴	Battery Up to 100% Last Fuel Dispatched Other Fuels based on above dispatch assumptions of each fuel type with any adjustment based on requested interconnection Service¹⁵

DFAX Criteria

As outlined in section 6.1.1.1.8 of BPM-015, all generators, including energy storage devices, must mitigate injection constraints identified in the study. A constraint is identified as an injection constraint if:

- The generator, regardless of interconnection service type (NRIS or ERIS), has a larger than 20% sensitivity factor on the overloaded facility under n-1 or 5% sensitivity factor under system intact conditions. This is the Base criteria.
- If LRTP projects are included in the study cases, the constraint criteria are modified to:
 - Facilities less than 345 kV:
 - Generator has a larger than 10% sensitivity factor on the overloaded facility under n-1 or 5% sensitivity factor under system intact conditions.
 - Facilities greater than 345 kV:
 - Base criteria identified above.

If an individual generator does not qualify under any of the criteria above, there is “group criteria” that largely replicates the above criteria. The main takeaway is that interconnection customers do not have to mitigate a violation until the thresholds above are met. That means a proposed generator could overload a line to 104% system intact and not have to fix the violation. As a comparison, utilities acting as TPs under NERC TPL-001 must fix any thermal violation over 100%.

Local Planning Criteria

BPM-015 allows Transmission Owners to apply a Local Planning Criteria to the Definitive Planning Phase (DPP) studies. A Local Planning Criteria specifies study assumptions MISO must comply with. Local Planning Criteria are more prescriptive than the criteria laid out in BPM-015. Very few Transmission Planners (TPs) in MISO North have invoked an LPC as part of the DPP study process.

“NRIS” vs. “ERIS”

BPM-015 allows two types of interconnection service: Network Resource Interconnection Service (NRIS) and Energy Resource Interconnection Service (ERIS). NRIS service is occasionally referred to as “firm” service as the interconnection customer must commit to paying for all network upgrades required for full generation output (no curtailment). NRIS service also provides the interconnection customer with MISO capacity accreditation rights. A majority (more than 90%) of the generation interconnection requests in the last four DPP study cycles have been NRIS requests. While not addressed explicitly in BPM-015, the concepts of NRIS and ERIS do not seem to exist in MISO’s day-ahead commitments and real-time operations. As such, it is difficult to say whether NRIS service guarantees an interconnection customer anything more than ERIS service from operational and energy markets perspectives.

Resulting Market Congestion

Dispatch assumptions within the DPP studies do not reflect daily operational realities and may lead to congestion in day-ahead and real-time markets that is not seen in the DPP study process.