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MTOs Information Request No. 1
Docket No.: E999/M-21-111; E999/M-23-91
Response To: Minnesota Public Utilities Commission (MPUC)
Requestor: Charley Bruce, Craig Janezich
Date Received: May 12, 2023

Question:

Staff requests that the MTOs provide an assessment of the current transmission system in Minnesota and its ability to reach the carbon-free standard by 2040, as required by Minnesota Laws 2023, Chapter 7, section 10 recently passed by the Minnesota Legislature.

Response:

Minnesota Laws 2023, Chapter 7, contains several updates to the clean energy standards set forth in Minn. Stat. § 216B.1691, including additional milestones for renewable energy and new carbon-free energy standards. The standards now include:

	2025	2030	2035	2040
Renewable Energy (RES)	25%		55%	
Solar Energy* (SES)	1.5%		10%	
Carbon-free Energy (CFS)		80% for public utilities; 60% for other electric utilities	90%	100%

*See Minn. Stat. § 216B.1691, subd. 2f, for additional detail relevant to the solar energy standards.

As noted in previous Biennial Reports, the utilities that are required to submit the Biennial Transmission Projects Report are not identical to those that are required to meet the RES, SES, and now the CFS. The utilities participating in this part of the 2023 Biennial Report that will also report on renewable and carbon-free energy include the following:

Investor-owned Utilities

Minnesota Power

Northern States Power Company

Otter Tail Power Company

Generation and Transmission Cooperative Electric Associations

Basin Electric Power Cooperative

Dairyland Power Cooperative

East River Electric Power Cooperative¹

Great River Energy

L&O Power Cooperative¹

Minnkota Power Cooperative

Municipal Power Agencies

Central Minnesota Municipal Power Agency

Minnesota Municipal Power Agency

Southern Minnesota Municipal Power Agency

Western Minnesota Municipal Power Agency/Missouri River Energy Services

Power District

Heartland Consumers Power District

Currently, each of these utilities is meeting the 25% by 2025 RES requirements with the existing transmission system. The Commission is currently seeking stakeholder input to provide guidance to electric utilities on implementation of the RES and SES requirements in Docket No. E999/CI-23-151. At the request of the Department of Commerce, the comment period in this docket was extended such that initial comments are due on July 12, 2023, and reply comments are due on July 28, 2023.

According to the Notice of Comment Period in Docket No. E999/CI-23-151, the Commission plans to take up implementation guidance for the CFS after it has issued orders providing guidance on compliance with the new RES and SES requirements. Accordingly, the MTO utilities are still in early planning stages related to compliance with 2023 Minnesota Session Laws, Chapter 7. It is unlikely that the Commission's guidance on the RES, SES, and CFS will be available in time for the MTO to complete a full gap analysis or conduct additional analyses to identify needs in the existing transmission system in Minnesota to fully implement 2023 Minnesota Session Laws, Ch. 7 in time for the November 1, 2023 filing of the 2023 Biennial Report.

¹ L&O Power Cooperative ("L&O") and East River Electric Power Cooperative ("EREPC") are members of and contracts with Basin Electric Power Cooperative ("Basin") to supply all generation beyond L&O's and EREPC's Western Area Power Administration ("WAPA") allocation. It will be Basin's obligation to adhere to the applicable generation laws in Minnesota. Also, L&O and EREPC are members of Southwest Power Pool ("SPP") who performs the transmission planning on the system. L&O and EREPC intend to construct new or upgrade existing facilities as directed by SPP as a result of additional load flows realized by the addition of local carbon-free generation sources.

The MTO has been participating, along with Commission Staff and other stakeholders, in the robust planning effort that MISO is undertaking to identify Tranche 2 projects through the Long-Range Transmission Planning (LRTP) process. The base planning assumptions for Tranche 2 include Minnesota’s new CFS by 2040 legislative requirements. MISO’s current schedule anticipates Board of Directors approval for Tranche 2 projects in the first half of 2024.² Given the November 1 statutory filing deadline for the 2023 Biennial Report, it is unlikely that these projects will be identified in the 2023 Biennial Report. The MTO utilities continue to engage with MISO around the assumptions, modeling, and planning activities for the LRTP Tranche 2 projects to advance progress on the identification of additional transmission necessary to implement Minnesota’s new carbon-free legislation.

Lead Preparers:	Jason Standing (Xcel Energy)	Gordon Pietsch (GRE)
Title:	Manager	Director
Department:	Integrated Transmission Planning	Transmission Planning & Compliance
Telephone:	612-330-7768	763-445-5941
Date:	June 29, 2023	

² <https://cdn.misoenergy.org/MISO%20Long-Range%20Transmission%20Planning%20LRTP%20Tranche%202%20FAQs627648.pdf>

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MTOs	Information Request No.	2
Docket No.:	E999/M-21-111; E999/M-23-91	
Response To:	Minnesota Public Utilities Commission (MPUC)	
Requestor:	Charley Bruce, Craig Janezich	
Date Received:	May 12, 2023	

Question:

What upgrades, improvements, and future investments in transmission are being planned in order to achieve this requirement?

Response:

As noted in response to MPUC Information Request No. 1, the MTO has been participating, along with Commission Staff and other stakeholders, in the robust planning effort that MISO is undertaking to identify Tranche 2 projects through the Long-Range Transmission Planning (LRTP) process. The base planning assumptions for Tranche 2 include implementing Minnesota's new carbon free energy standards by 2040.

At the June 5, 2023 LRTP workshop, MISO indicated they have completed the generation expansion effort for Tranche 2 and have leveraged the latest utility and State plans and policy into MISO's Series 1A Futures effort. MISO indicated that they are building their base models for Future development, and proposed expansion plans, representing critical (energy limited) times throughout the future years to be studied. They anticipate having solved base models available in late summer. MISO plans to host subregional transmission planning meeting in July to gather input on transmission solutions that should be considered to meet the objectives of the Tranche 2 effort.

MISO's current schedule anticipates identification of Tranche 2 projects in early 2024. Given the November 1 statutory filing deadline, it is unlikely these projects will be identified in the 2023 Biennial Report. The MTO utilities continue to engage with MISO around this planning activity to advance progress on the identification of additional transmission necessary to implement Minnesota's new carbon-free legislation.

For L&O and EREPC, SPP members, no upgrades are currently planned to achieve the Minnesota statutory requirements, but L&O and EREPC will adhere to future upgrades and improvements as directed by SPP – see the MTO response to MPUC Information Request No. 1.

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MTOs	Information Request No.	3
Docket No.:	E999/M-21-111; E999/M-23-91	
Response To:	Minnesota Public Utilities Commission (MPUC)	
Requestor:	Charley Bruce, Craig Janezich	
Date Received:	May 12, 2023	

Question:

Staff requests that the MTOs provide an assessment of how their project planning process will include an analysis of project impacts on environmental justice areas as defined in Minnesota Law 2023, Chapter 7, section 3, including an assessment of the expected local benefits as detailed in section 15 of the same law.

Response:

While each utility's planning efforts differ slightly, the MTO anticipates the following analyses and engagement will be conducted as part of the planning activities for newly proposed transmission lines in Minnesota:

1. Early in the planning process, mapping tools will be used to identify and assess environmental justice (EJ) communities in the vicinity of each project area. Utilities have relied on the Minnesota Pollution Control Agency's (MPCA) screening tools to help identify EJ areas.¹ The MTO anticipates that MPCA's screening tools will be updated to reflect the new EJ definition in Minnesota Laws 2023, Chapter 7, Section 3.
2. Utilities will engage with these potentially affected EJ communities to ensure equitable access to the planning processes, solicit diverse and representative input, and work to understand community values. This engagement is likely to occur through several outreach efforts, including open houses, discussions with community leaders, social media, and other efforts. The goals of this engagement include developing initial understanding of potential project impacts, both beneficial and adverse; gathering preliminary feedback; and establishing an ongoing two-way engagement process.

Tribal governments and Tribal Historic Preservation Offices, identified through the U.S. Department of Housing and Urban Development's Tribal Directory Assessment Tool or the Minnesota Indian Affairs Council as having historic ties to land in proximity to planned project areas will be notified early in the planning process, so that

¹ See e.g., <https://mpca.maps.arcgis.com/apps/MapSeries/index.html?appid=f5bf57c8dac24404b7f8ef1717f57d00>.

Tribes have the opportunity to advise of any sensitive historical or cultural sites to be avoided.

3. In parallel with the identification and engagement processes, the utilities will also work to identify local benefits as listed in Minnesota Laws 2023, Chapter 7, Section 15.

Consistent with current practice, the MTO anticipate information gathered in these processes will be reflected in any resulting Minnesota certificate of need and route permit applications, so the information is available for the MPUC's consideration as part of the full record.

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MTOs Information Request No. 4
Docket No.: E999/M-21-111; E999/M-23-91
Response To: Minnesota Public Utilities Commission (MPUC)
Requestor: Charley Bruce, Craig Janezich
Date Received: May 12, 2023

Question:

Staff requests the MTOs provide comments on what actions are being taken to alleviate congestion in Southwest Minnesota and to help limit the curtailing of wind resources in that area.

Response:

MTO utilities have taken numerous actions in recent years to alleviate congestion in Southwest Minnesota in an effort to limit curtailment of wind resources in this area. These efforts include:

- a. NSP System Upgrades: Xcel Energy did internal analysis to determine small projects designed to remove system limiters on congested lines in Southwest Minnesota. These projects typically focused on substation equipment and sag limits. Projects budgeted are listed below:

Xcel Congestion Projects

Substation	Chisago County (CHI)
Scope	Replace primary and secondary 115 kV bus 1 differential relays for TR05 and TR06
Property Units	(4) Control System
ISD	8/1/2022

Substation	Inver Hills (IVH)
Scope	Replace busbar
Property Units	(1) Conductor
ISD	3/1/2023

Substation	Kohlman Lake (KOL)
Scope	Replace meter on breaker 5P106
Property Units	(1) Control System
ISD	8/1/2022

Substation	Prairie (PRA)
Scope	Replace meter on breaker 5G8
Property Units	(1) Control System
ISD	8/1/2022

Substation	Scott County (SCO)
Scope	Replace busbar
Property Units	(1) Conductor
ISD	3/1/2023

Substation	Wilmarth (WLM)
Scope	Replace bushing current transformers on breaker 5S11, and switches 8S26B1, 8S25B, 8S25A, 8S26B1
Property Units	(1) Circuit Breaker (BCT) (4) Switches
ISD	3/1/2023

Substation	Riverside (RIV)
Scope	Replace switches 5M330B, 5M331B, 5M329A, 5M330A, 5M329B, 5M331A, aux current transformers on 5M304 and 5M305, and two sections of busbar
Property Units	(6) Switches (2) Device, Potential (2) Conductor
ISD	3/1/2023

Substation	Red Rock (RRK)
Scope	Replace bushing current transformers on breaker K2, switches K2B1, 946B, K2B2, 946A, and meters on 946 and K2
Property Units	(1) Circuit Breaker (BCT) (4) Switches (2) Control Systems
ISD	3/1/2023

- b. Xcel Energy initiated an out-of-cycle request to MISO for completing the second 345 kV circuit from Brookings Co-Lyon Co and Helena-Hampton for the existing CAPX Brookings-TC facility.
- c. Market congestion projects:
 - i. Forman 230/115 kV transformer upgrade
 - ii. De-bifurcation of High Bridge to Rogers Lake 115 kV line to give High Bridge additional outlet using existing transmission availability.

- iii. Fergus Falls-Morris 115 kV line upgrades
 - iv. Hoot Lake 115 kV substation upgrades
 - v. Canby-Granite Falls 115 kV line upgrade
 - vi. Xcel Energy and ITC Midwest constructed the Huntley-Wilmarth 345 kV Market Efficiency Project (MEP)
- d. Transmission System Reconfiguration: Xcel Energy implemented a process to study reconfiguration requests from outside entities. These requests are looked at to determine effectiveness, duration, and impact to the transmission system. Reliability is the primary determinant to whether a reconfiguration request is approved. MISO is working on setting up their process which Xcel Energy will participate in.
- e. The MTOs worked with MISO and other stakeholders to change how ERIS impacts are identified in the MISO DPP process. The current distribution factor (DF) is 20% and the proposal is to reduce the DF to 10% to ensure that more generation is not interconnected without necessary transmission facilities being built to deliver the energy to the system.
- f. Xcel Energy has initiated two projects, MN Energy Connection and King Connection, that are designed to utilize existing transmission access rights. The MISO interconnection queue has a significant number of new interconnection requests currently seeking to connect to a system that is already very congested. Reusing existing transmission rights through the MN Energy Connection and King Connection Projects allows Xcel Energy to interconnect additional MWs through its existing transmission rights, avoiding long delays often related to MISO queue interconnection studies.
- g. Xcel Energy confirmed the first system reconfiguration project in Southwest Minnesota to help alleviate congestion in the area. This request was reversed after several months due to a policy issue with MISO and SPP. In October MISO and SPP began coordinating their Day Ahead studies to recognize some of each other's flowgates which will help reduce SPP flows on the system. SPP previously did not recognize MISO flowgates and set a dispatch that could negatively impact MISO's dispatch.
- h. Grid North Partners' Tech Team is working with all MTOs to identify simple system upgrades ($\leq$ \$1M cost) to improve transmission line ratings.
- i. MISO LRTP Tranche 1 projects in Minnesota are utilizing the existing 345 kV second circuit capabilities where possible which will increase the overall ability to transfer power across the system.

- j. Xcel Energy has initiated an internal study process to determine any transmission system reconfigurations on the underlying transmission system able to have a positive impact on the bulk transmission system and congestion.
Xcel Energy Transmission Operations takes both system reliability and curtailment and congestion cost impact into consideration when scheduling transmission outages.
- k. Xcel Energy has been monitoring congestion and curtailment on a weekly basis to find new issues as they arise and determine whether a permanent solution is warranted or if the congestion is related to temporary system conditions.

GRE is examining factors that have led to increased market congestion, where congestion is occurring and what we can do in the near-term to address present congestion. GRE is undertaking this congestion effort with the goal of positioning the grid for operational reliability and market efficiency.

In April 2021, GRE was asked to develop an operating guide associated with the Helena-Scott County 345 kV outage and the Chub Lake 345/115 kV TR1 being prone to congestion for loss of Chub Lake- Hampton 345 kV line. To alleviate this congestion, MISO will ask GRE to open a Chub Lake 345 kV breaker so the Helena-Chub Lake 345 kV/Chub Lake TR1 path will open for loss of Chub Lake-Hampton 345 kV line.

Pre-contingent, MISO monitored the Chub Lake TR1 loading for congestion and directed the opening of Chub Lake breaker accordingly. After the Chub Lake breaker was opened, congestion could occur on the following facilities for loss of Chub Lake-Hampton 345 kV.

- i. McLeod 230/115 kV TR1 (MISO transferred facility)
- ii. Traverse-Kelso 69 kV Arlington-Kelso 69 kV
- iii. Arlington-Carver County 69 kV
- iv. Hutchinson-Winthrop 69 kV

Xcel Energy monitored the 69 kV network for post-contingent overloads via Real Time Contingency Analysis. If sectionalizing the 69 kV network to address 69 kV congestion results in further pre- or post-contingent 69 kV ratings exceedances, Xcel Energy would request GRE to close Chub Lake breaker.

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MTOs Information Request No. 5
Docket No.: E999/M-21-111; E999/M-23-91
Response To: Minnesota Public Utilities Commission (MPUC)
Requestor: Charley Bruce, Craig Janezich
Date Received: May 12, 2023

Question:

Staff requests that the MTOs provide information on recent congestion problems, solutions to the problems implemented over the last 3 years, and potential mitigation alternatives still under consideration, including non-transmission alternatives.

Response:

See MTO's response to MPUC Information Request No. 4.

Lead Preparers:	Jason Standing (Xcel Energy)	Gordon Pietsch (GRE)
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MTOs	Information Request No.	6
Docket No.:	E999/M-21-111; E999/M-23-91	
Response To:	Minnesota Public Utilities Commission (MPUC)	
Requestor:	Charley Bruce, Craig Janezich	
Date Received:	May 12, 2023	

Question:

Staff requests that the MTOs provide comments on Minnesota area congestion problems and mitigation including non-transmission alternatives which may not be obvious from MISO MTEP planning.

Response:

The Grid North Partners (DPC, OTP, MP, MRES, CMMPA, RPU, SMMPA, WPPI, Xcel Energy and GRE) conducted a study to identify the root causes of congestion from July 2020 to July 2022. The study identified 94 facilities in and around Minnesota causing congestion in Minnesota. The second circuit on the Brookings Co-Lyon Co and Helena-Hampton transmission lines, along with five other projects to upgrade facilities are already submitted in MISO's MTEP to mitigate some of this congestion. The study identified 17 facilities able to be upgraded with relatively low cost (under \$1 million) and another five upgrades under \$10 million to mitigate congestion. Much of the congestion observed is due to high-wind weather patterns with much longer duration than the typical 4-hour batteries available as non-transmission alternatives.

Also see MTO's response to MPUC Information Request No. 4.

Lead Preparers:	Jason Standing (Xcel Energy)	Gordon Pietsch (GRE)
Title:	Manager	Director
Department:	Integrated Transmission Planning	Transmission Planning & Compliance
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MTOs Information Request No. 7
Docket No.: E999/M-21-111; E999/M-23-91
Response To: Minnesota Public Utilities Commission (MPUC)
Requestor: Charley Bruce, Craig Janezich
Date Received: May 12, 2023

Question:

Staff requests information about the status of MISO’s Long Range Transmission Planning (LRTP) and the MISO-Southwest Power Pool (SPP) Joint Targeted Interconnection Queue (JTIQ) processes.

For the LRTP, provide specific information on the status of the MISO-approved Tranche 1 projects and the Tranche 2 study.

Response:

MISO’s Board of Directors approved the LRTP Tranche 1 Portfolio in July of 2022.¹ The Tranche 1 Portfolio includes all or portions of three transmission line projects in Minnesota referred to as LRTP Nos. 2, 3, and 4. The following table summarizes the status of each of these LRTP Tranche 1 Projects:

LRTP #2 – Big Stone South – Alexandria – Big Oaks Transmission Project	
Docket No.	E002, E017, ET2, E015, ET10/CN-22-538
Applicants	Xcel Energy, along with Great River Energy, Minnesota Power, Otter Tail Power Company and Western Minnesota Municipal Power Agency
Description	One new 345 kV transmission line between Big Stone City, South Dakota, and Sherburne County, Minnesota which will be comprised of two segments: The western segment will run from the existing Big Stone South Substation near Big Stone City, South Dakota to the existing

¹ <https://www.misoenergy.org/planning/transmission-planning/long-range-transmission-planning/>

	Alexandria Substation near Alexandria, Minnesota (Western Segment); and • The eastern segment will continue on from the existing Alexandria Substation to a new Big Oaks Substation in Sherburne County, Minnesota (Eastern Segment).
Application Timing	Certificate of Need Quarter 3 2023 Eastern Route Permit Quarter 3 2023 Western Route Permit Quarter 4 2024
Proposed ISD	June 2030

LRTP #3 – Northland Reliability Project	
Docket No.	E015, ET2/CN-22-416
Applicants	Minnesota Power and Great River Energy
Description	The Applicants propose to construct the Iron Range – Benton County – Big Oaks transmission line, which consists of two major segments: • Segment 1: construction of a new, approximately 140-mile long, double-circuit 345 kilovolt (kV) transmission line connecting the existing Iron Range Substation, a new Riverton Series Compensation Station (described below), and the existing Benton County Substation, and generally located near existing transmission line corridors; and Segment 2: replacement of two existing transmission lines. a. Replace approximately 20-mile 230 kV line with two 345 kV circuits from the Benton County Substation to the new Big Oaks Substation along existing transmission corridors on double circuit 345 kV structures; and b. Replace an approximately 20-mile 345 kV line from the Benton County Substation to the existing Sherco Substation in Sherburne County along existing transmission corridors using double circuit 345 kV structures. The Northland Reliability Project will also involve the following improvements to the power grid: • Expansion of the existing Iron Range Substation, located near Grand Rapids, and expansion of the existing Benton County Substation, located near St. Cloud, and reconfiguring existing transmission lines at the Iron Range and Benton County substations; and

	Construction of a new series compensation station at or near the existing Riverton Substation and reconfiguring existing transmission lines in the Riverton area.
Application Timing	August 2023
Proposed ISD	June 2030

LRTP #4 Mankato to Mississippi River 345 kV Transmission Project	
Docket No.	E002/CN-22-532
Applicants	Xcel Energy, along with Dairyland Power Cooperative, Southern Minnesota Municipal Power Agency and the City of Rochester, Minnesota
Description	A new 345 kV transmission line between the Wilmarth Substation in Mankato, Minnesota and the Mississippi River and will be comprised of three segments: - Wilmarth to West Faribault – a new 345 kV transmission line between the existing Wilmarth Substation and the West Faribault Substation. - West Faribault to North Rochester – a new 345 kV transmission line between the existing West Faribault Substation and the existing North Rochester Substation. - North Rochester to Mississippi River – a new 345 kV transmission line between the existing North Rochester Substation and the Mississippi River. The Project also includes the relocation and rebuilding of the existing 161 kV transmission line between the existing North Rochester Substation and the existing Chester Substation.
Application Timing	Fourth Quarter 2023
Proposed ISD	June 2028

Additional detail regarding each of these Tranche 1 LRTPs can be found in the dockets referenced in the tables above.

MTO utilities and many other stakeholders are also engaged with MISO on the development of the LRTP Tranche 2 Portfolio. MISO anticipates that Tranche 2 will be completed for Board approval in the first half of 2024.² MISO is currently completing a refresh of its Future 2A. Models for Tranche 2 are expected to be completed in the third quarter of 2023. Workshops are planned throughout 2023-24 to provide a forum for discussions regarding study work and a draft portfolio is expected to be available for stakeholder review in early 2024.³

MISO and SPP released the completed JTIQ study in March of 2022.⁴ The study identified a seven-project JTIQ Portfolio with a planning level estimated cost of \$1.65 billion. The recommended JTIQ Portfolio is expected to fully address the set of transmission constraints evaluated in the JTIQ Study as being significant barriers to the development of new generation along the SPP-MISO seam. The Planning Advisory Committee within MISO presented the JTIQ draft tariff additions and revisions on April 26, 2023, and comments were due by May 10, 2023. MISO and SPP are targeting filings with FERC for approval of the tariff and related interconnection agreements in Q3 of 2023 and MISO and SPP Board approvals in December of 2023 or Q1 of 2024.⁵

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Date:	June 29, 2023	

²<https://cdn.misoenergy.org/20230127%20LRTP%20Workshop%20Item%2002%20Overview%20and%20Status627638.pdf>

³<https://cdn.misoenergy.org/MISO%20Long-Range%20Transmission%20Planning%20LRTP%20Tranche%202%20FAQs627648.pdf>

⁴<https://www.spp.org/engineering/spp-miso-jtiq/>

⁵<https://cdn.misoenergy.org/20230426%20PAC%20Item%2006c%20JTIQ%20Update%20and%20Draft%20Tariff%20Presentation628664.pdf>

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MTOs	Information Request No.	8
Docket No.:	E999/M-21-111; E999/M-23-91	
Response To:	Minnesota Public Utilities Commission (MPUC)	
Requestor:	Charley Bruce, Craig Janezich	
Date Received:	May 12, 2023	

Question:

Staff requests as assessment of whether the LRTP and JTIQ processes are progressing and that the identified upgrades will be available in a timely manner.

Response:

See response to MPUC Information Request No. 7. The MTO utilities are working with MISO to ensure these projects are approved in a timely manner, but the nature of cost allocation changes increases uncertainty in approval timing.

With respect to LRTP processes, the MTO utilities are progressing on a timeline to place the projects in service by the MISO-approved dates. We are continually analyzing project timelines to leverage any efficiencies that may be available.

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MTOs	Information Request No.	9
Docket No.:	E999/M-21-111; E999/M-23-91	
Response To:	Minnesota Public Utilities Commission (MPUC)	
Requestor:	Charley Bruce, Craig Janezich	
Date Received:	May 12, 2023	

Question:

Staff requests a discussion of the steps taken by utilities to encourage MISO to keep the LRTP and JTIQ processes on-track for a timely decision by MISO's board of directors.

Response:

Each of the MTO utilities that are members of MISO regularly participate in MISO workshops and planning activities to support the timeline completion of the LRTP and JTIQ processes. These efforts include, but are not limited to, providing timely responses to information requests and carefully reviewing modeling assumptions to ensure they are as accurate as possible.

For example, Xcel Energy is a regular participant in open stakeholder meetings, as well as individual meetings with MISO staff and leadership to underscore the urgency needed in these efforts. To better assist MISO, Xcel Energy has increased the rigor of feedback and provided detailed information on model building as well as early routing and siting impacts to ensure efforts to advance JTIQ and LRTP Tranche 2 aren't subjected to excessive iteration in the stakeholder process. Xcel Energy has also increased coordination with our neighboring utilities to better understand the positions of each company and address any misalignment prior to MISO's project submission and alternatives request.

L&O and EREPC are members of SPP's Zone 19 (Upper Missouri Zone or "UMZ") and participates in the applicable UMZ meetings. Due to their location along the SPP-MISO seam, L&O and EREPC promote SPP-MISO coordination and proposed projects & improvements along the seam. This includes helping to keep the JTIQ process moving forward.

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