BEFORE THE MINNESOTA COURT OF ADMINISTRATIVE HEARINGS
600 North Robert Street
St. Paul, MN 55101

FOR THE MINNESOTA PUBLIC UTILITIES COMMISSION
121 7th Place East, Suite 350
St Paul MN 55101-2147

IN THE MATTER OF THE APPLICATION FOR A CERTIFICATE OF NEED FOR THE POWERON MIDWEST 765 KV AND 345 KV HIGH VOLTAGE TRANSMISSION LINE PROJECT	MPUC Docket No. E002, ET2, ET6675/CN-25-117 CAH Docket No. 28-2500-41617

DIRECT TESTIMONY AND ATTACHMENTS OF LOGAN HICKS

ON BEHALF OF

THE MINNESOTA DEPARTMENT OF COMMERCE
DIVISION OF ENERGY RESOURCES

AUGUST 13, 2026

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I. INTRODUCTION

Q. Would you state your name, occupation and business address?

A. My name is Logan Hicks. I am employed as a Public Utilities Rates Analyst by the Minnesota Commerce Department, Division of Energy Resources (Department). My business address is 85 7th Place East, Suite 280, St. Paul, Minnesota 55101-2198.

Q. What is your educational and professional background?

A. I have been employed by the Department and the Public Utilities Commission (Commission) since May 2024. I have a Bachelor of Science in Physics from Northern Kentucky University. Please refer to Ex. DOC-___, LH-D-1 (Hicks Resume).

Q. What is your experience on regulatory matters?

A. I have provided system alternatives analysis and policy analysis on two Certificates of Need dockets. Docket No. E002, ET2, E017, ET6135/CN-25-116—Certificate of Need Application for the Bison to Alexandria Second Circuit 345 kV Transmission Line Project and Docket No. E015/CN-25-111—Certificate of Need Application for the Iron Range-St. Louis County-Arrowhead 345 kV Transmission Line Project. Before my current position as an analyst with the Department, I worked as an environmental review manager and permitting specialist for large energy infrastructure for both the Department and the Commission for two years. Prior to that, I was a contracted regulatory inspector and enforcer for the National Pollution Discharge Elimination System for the State of Hawaii Department of Transportation for three years.

II. PURPOSE AND SCOPE

Q. What are your responsibilities in this proceeding?

A. I am submitting testimony on behalf of the Department in analyzing an application for a certificate of need (CN) filed on behalf of Great River Energy (GRE), ITC Midwest LLC (ITC Midwest), and Northern States Power Company doing business as Xcel Energy (Xcel Energy) (together, the Applicants). The Application for a Certificate of Need (Application) consists of a joint application to the Commission for a CN to construct a 765 kV and 345 kV transmission line in Minnesota. My testimony covers the following matters:

- Summary of the Applicants' proposed project;
- Analysis of the Applicants' provided alternatives and Minnesota Rules 7849.0120B 1-4;
- Discussion of the Applicants' provided environmental and socioeconomic data and Minnesota Rules 7849.0120C 1-4;
- Discussion of the Applicants' provided permit requirements and Minnesota Rules 7849.0120D;
- Analysis of the project in relation to other pertinent state policies; and
- Summary of recommendations.

Q. Do you testify as to which route for the proposed 765 kV transmission line is appropriate?

A. No, I do not.

Q. Please summarize the organization of your testimony.

A. I begin by summarizing the Applicants' *Joint Application to the Minnesota Public Utilities Commission for a Certificate of Need for PowerOn Midwest*, a 765 kV and 345 kV transmission line and associated facilities.[1] I then present relevant criteria in Minnesota Statutes, Minnesota Rule 7849.0120 and the requirements it establishes for a CN. Then, I will discuss how the Commission may determine that the PowerOn Midwest 765 kV Transmission Project meets these criteria. Next, I will discuss how the project will be affected by potential permits and additional policies. Finally, I will present my recommendations for the Commission based on my analysis.

III. CERTIFICATE OF NEED REQUIREMENTS

Q. What issues do you address in this section?

A. I discuss Minnesota Rule 7849.0120, which contains the Commission's rule criteria for evaluating an application for a CN for a transmission line of this length and voltage pursuant to Minnesota Statutes Section 216B.243. I also address other relevant statutory criteria that are not reflected in Minnesota Rules. Please refer to Ex. DOC-___, LH-D-2 (Statute and Rule Citation). I organize this discussion in five parts: Part 1 – Alternatives Analysis, Part 2 – Environmental and Socioeconomic Analysis, Part 3 – Other Permits and Policies Analysis, and Part 4 – Recommendations.

[1] PowerOn Midwest Certificate of Need Application (Feb. 3, 2026) (eDocket No. 20262-227787-02) (Initial Application).

Q. What record do you rely upon for the natural and socioeconomic environmental analyses?

A. I rely on the environmental report (ER) written by Commission Energy Infrastructure Permitting (EIP) staff for the natural and socioeconomic analyses of certificate of need proceedings. I recommend that the Commission consider the ER that will be filed by Commission EIP staff in the Commission's decision in this matter.

Q. Does your analysis include Minnesota Rule 7849.0120 A?

A. It does not. Ms. Park conducted a review of the Need Analysis for the project, pursuant to Minnesota Rules 7849.0120A 1-5. Please refer to Ex. DOC-___ (Park Direct).

IV. ALTERNATIVE ANALYSIS

Q. What does Minnesota Rule 7849.0120, subpart B require the Commission to consider?

A. Minnesota Rule 7849.0120 subp. B requires the Commission to evaluate whether "a more reasonable and prudent alternative to the proposed facility has not been demonstrated by a preponderance of the evidence on the record, considering" four conditions.[2] I go over these conditions here.

[2] Minn. R. 7849.0120 subp. B.

A. SIZE, TYPE, AND TIMING

Q. What does Minnesota Rule 7849.0120 B(1) require the Commission to consider?

A. It requires the Commission to consider "the appropriateness of the size, the type, and the timing of the proposed facility compared to those of reasonable alternatives."[3]

1. Size

Q. How has the Department defined "size" in the context of transmission lines?

A. For definitions of size, type, and timing, the Department uses long-standing definitions that have been accepted by the Commission.[4] The Department defines "size" as referring to "the quantity of power transfers that the transmission infrastructure improvement enables."

Q. What is the size of the project as proposed by the Applicants?

A. The Applicants propose to build 271 miles of 765 kV transmission line, and 69 miles of 345 kV transmission line.[5]

Q. Did the Applicants review higher voltage system alternatives?

A. No. The amount of voltage on the line proposed, 765 kilovolts, is currently the largest in the United States. Given that there are no higher AC voltage lines in the country, the

[3] Minn. R. 7849.0120 subp. B(1).

[4] *See, e.g.*, *In re App. of Otter Tail Power Co., Minn. Power and Minnkota Power Coop., Inc. for a 230 kV Transmission Line from Bemidji to Grand Rapids, Minn.*, MPUC Docket No. E-017, E-015, ET-6/CN-07-1222, ORDER at 1, 12 (July 14, 2009) (eDocket No. 20097-39617-01) (adopting the Department's definitions of size, type, and timing for transmission facilities) (Department Definitions).

[5] Initial Application at 1.

Applicants did not consider higher voltages for the project. [6] Given that 765 kV meets the project need and that supporting infrastructure for voltages above 765 kV does not exist in the United States it is appropriate that 765 kV is the highest voltage considered.

Q. Did the Applicants review lower voltage system alternatives?

A. They did. The Applicants analyzed a double-circuited 345 kV transmission line as opposed to the proposed 765 kV line. They concluded that one double-circuited 345 kV line will not address the constraint issues the proposed 765 kV line will address and thus would require more 345 kV lines. This alternative would incur higher costs and require a larger right of way than a single 765 kV line, so it was considered, but ultimately rejected for these reasons.[7]

Q. Based on your analysis, is the Applicants' proposed size reasonable?

A. Yes, the size is reasonable.

2. Type

Q. How has the Department defined "type" in the context of transmission lines?

A. The Department defines “type” as referring to “the transformer nominal voltages, rated capacity, SIL [surge impedance loading], and nature (AC or DC) of power transported.”[8]

[6] Initial Application at 157.
[7] Initial Application at 154-157.
[8] Department Definitions.

Q. What is the nature of power to be transported by the proposed project?

A. The Applicants propose to build overhead 345 kV and 765 kV alternating current (AC) high-voltage transmission lines.

Q. What does the Application state regarding the relative advantages of high voltage direct current and alternating current in this case?

A. Direct current (DC) can be highly beneficial when transporting high voltages long distance, as the line loss is lower than AC.[9]

Q. What is the break-even distance at which HVDC becomes cost advantageous, and how does that compare to the length of the proposed project?

A. The Applicants claim that approximately 260 miles is the minimum length for DC to be cost-effective. The total project length is over 260 miles, with the longest segment being approximately 130 miles. The minimum length for cost-effectiveness is due to the converter stations needing to convert AC to DC and vice versa. These converter stations cost approximately $750 million to $900 million each, and there would need to be at least three built in Minnesota.[10] These costs do not include the actual line itself. Cost does not preclude alternatives under this section, so DC can be considered reasonable in terms of type.

[9] Initial Application at 174 and 175.
[10] *Id.*

Q. Did the Applicants review upgrading existing lines as an alternative?

A. They did. The Applicants reviewed the cost to upgrade existing transmission lines in areas of congestion and steady-state reliability violations. These areas were being upgraded in capacity by either rebuilding for higher voltage or double circuiting. The Applicants state that the upgrading option would address only the minimum NERC reliability requirements on the current grid, cost more and generate less savings, take a longer time to complete, and not meet future needs.[11]

Q. Did the Applicants review grid enhancing technologies as part of their alternatives analysis?

A. Not initially. I sent an Information Request asking, generally, if they considered grid enhancing technologies (GETs) or planned to implement them in the final design of the proposed line. Ex. DOC-___, LH-D-3 (DOC IR 2). The Applicants did not consider GETs as a viable alternative to the proposed project, as the use of GETs in place of the proposed project would not be guaranteed to mitigate the constraints on the current lines. There has not been a determination if GETs will be implemented on the proposed project, but they may be included in final engineering.

[11] *Id.,* at 170 to 172.

Q. Would any single grid enhancing technology, or combination of them, both meet the capacity need and maintain a reasonable cost?

A. No. According to Applicants' response in Ex. DOC-__,LH-D-3, while GETs would increase capacity of the existing lines, GETs alone would not address the current reliability concerns. I agree with this assessment.

Q. Did the Applicants review the possibility of using generation to meet the demand?

A. Yes, they reviewed various forms of generation, such as peaking, renewable, distributed, and nuclear options.[12]

Q. Would additional generation in the area address the identified congestion or regional transfer capability need?

A. The proposed project is designed to address congestion and curtailment, in addition to reliability improvements and increased transfer capability, not to address having insufficient power capacity to meet peak load demand. As the need is not meeting peak load demand, the issue is not lack of power, it is the lack of transmission capacity to move power from sources of generation to where it is consumed. Regardless of the source of generation, more power without the capability of moving the power would only exacerbate the current issues. The Applicants conclude, and I agree, that generation is not a viable alternative to the project.

[12] *Id.,* at 158-167.

Q. Did the Applicants review the possibility of using underground lines?

A. Yes, for the 765 kV lines, underground cables are not currently available from manufacturers. There are 345 kV and 500 kV lines available, but if they were utilized, the Applicants claim that the costs would be roughly five times more per mile, making it infeasible. [13] Given my previous analysis of lower voltage lines, and that they would not meet the need of the project, underground lines are not considered a viable alternative.

Q. Based on your analysis, is the Applicants' proposed type reasonable?

A. Yes, the type is reasonable.

3. Timing

Q. How has the Department defined "timing" in the context of transmission lines?

A. The Department defines “timing” as referring to “the on-line date for the transmission infrastructure improvements.” [14]

Q. What in-service date does the Application propose?

A. The Applicants state that the 345 kV facilities associated with the project are to be in service by 2032 and by 2034 for the 765 kV facilities. [15]

[13] Initial Application at 175 and 176.
[14] Department Definitions.
[15] Initial Application at 22.

Q. What in-service date has the Midcontinent Independent System Operator, Inc. (MISO) targeted for the proposed project?

A. MISO has a targeted in-service date for these projects between 2032 and 2034.[16]

Q. What are the targeted in-service dates for the other projects in the portfolio?

A. MISO has a targeted in-service date for all Tranche 2.1 projects between 2032 and 2034.

Q. Based on your analysis, is the Applicants' proposed timing reasonable?

A. Yes, the timing is reasonable, as it is within MISO's target date. The proposed project is designed to work in coordination with the rest of the MISO LRTP Tranche 2.1 Portfolio, so an in-service date that aligns with the rest of the Portfolio is reasonable.

4. Size, Type, and Timing Conclusion

Q. Based on your analysis, what do you conclude regarding Minnesota Rule 7849.0120 subpart B(1)?

A. The project as proposed is the most viable alternative in terms of size and timing. In terms of type, high voltage DC lines could be a viable alternative to the project.

[16] MISO Energy, Multi-Value Project Dashboard, Tranche 2.1 Portfolio (Mar. 31, 2026). Available at https://cdn.misoenergy.org/Tranche%202.1%20Dashboard732078.pdf?v=20251215144025 (MVP Dashboard).

B. COST ANALYSIS

Q. What does Minnesota Rule 7849.0120 subpart B(2) require the Commission to consider?

A. Minnesota Rule 7849.0120 subp. B(2) requires the Commission to consider "the cost of the proposed facility and the cost of energy to be supplied by the proposed facility compared to the costs of reasonable alternatives and the cost of energy that would be supplied by reasonable alternatives."[17]

Q. Are there viable alternatives that could meet the proposed project's need in terms of size, type, and timing?

A. Yes, high voltage DC lines are a reasonable alternative.

Q. How are the costs of this viable alternative compared to the proposed project?

A. The cost of this alternative would well exceed the cost of the proposed project. Given that DC lines would add substantial cost in terms of energy conversion, DC is not viable in terms of cost.

Q. What is the cost of the proposed project as stated in the Application?

A. The Applicants estimate in the Initial Application that the proposed project will cost between $3.327 billion to $4.323 billion.[18]

[17] Minn. R. 7849.0120 subp. B(2).
[18] Initial Application at 37.

Q. How does that compare to the cost approved in MISO's transmission expansion plan (MTEP)?

A. The proposed project (Project IDs 22-25) was approved in MTEP24 in December of 2024 for $4.251 billion (2024$). According to the MISO Multi-Value Project Dashboard, the costs were updated in Q4 of 2025 to $5.333 billion. I noticed that the portion from project ID 24 rose from $1.195 billion to $1.955 billion, an approximately 63.6% increase. This was also flagged by MISO as having the "Cost change under review."[19]

Q. Did you seek an explanation of any discrepancy between those figures?

A. Yes. I sent Information Requests to both the Applicants and MISO to try and better understand the estimations, increases, what is included in the cost review, and if the dollars reported were nominal or 2024$. Please refer to Ex. DOC-___, LH-D-4 (DOC IR 7) and Ex. DOC-___, LH-D-5 (DOC IR 12).

Q. What was the Applicants' response?

A. The Applicants explained the cost discrepancy relied on several factors including inflation, supply chain disruptions, labor market spikes, and tariffs that have all taken place since 2024, when the proposed project was approved by MISO. Additionally, the Applicants state that the cost evaluation process is different between themselves and MISO. MISO used planning-level scope and cost assumptions, while the Applicants did a more on detailed engineering and estimates from preliminary bids.

[19] MVP Dashboard.

Q. Is there a MISO cost review currently in process for the proposed project?

A. Yes, MISO has stated that the portion of the project (project ID 24) has a cost change that is currently under review. MISO notes that while it is flagged for review, they have not begun a Variance Analysis but the project may require one.

Q. How does MISO update its costs and benefits analysis for Tranche 2.1 Portfolio projects?

A. MISO has a triennial review of multi-value projects, such as the proposed project. Since the proposed project was approved as a part of MTEP24 (2024), the costs and benefits of the project will be reviewed for MTEP27 (2027).

Q. What is value engineering?

A. Value engineering (VE) is a full analysis of every aspect of a project to keep total costs at the lowest level while meeting the project need. VE aims to create discipline in review around cost drivers, such as materials, construction, operations, maintenance, and technologies used.

Q. Has MISO or the applicant used value engineering (VE) for this project to inform cost estimates?

A. The Applicants stated that VE was conducted for the selection of conductor lines, but not for life-cycle operation and maintenance costs, as it is not a requirement for the CN process. Ex. DOC-___, LH-D-6 (DOC IR 3), LH-D-7 (DOC IR 5). MISO stated it does not

conduct VE for its LRTP projects as the engineering and design is performed by the developers. Ex. DOC-___, LH-D-8 (DOC IR 13).

Q. Do you have any recommendations based on what you have learned about the project's use of VE?

A. Yes, the lack of VE in certain aspects of the project from the Applicants and MISO show the need for cost controls. To accomplish this cost control, I support the cost control conditions outlined by Ms. Park's testimony Ex. DOC-___ at Section VI (Park Direct).

Q. Based on your analysis, what do you conclude regarding Minnesota Rule 7849.0120B 2?

A. The project as proposed by the Applicants is the most viable in terms of cost. Given the cost issues with high voltage DC lines, I believe they are not considered a reasonable alternative after this stage of the analysis.

C. NATURAL AND SOCIOECONOMIC ENVIRONMENTS ANALYSIS

Q. What does Minnesota Rule 7849.0120 subpart B(3) require the Commission to consider?

A. Minnesota Rule 7849.0120 subp. B(3) requires the Commission to consider "the effects of the proposed facility upon the natural and socioeconomic environments compared to the effects of reasonable alternatives."[20]

[20] Minn. R. 7849.0120 subp. B.3.

Q. Do you conduct natural and socioeconomic analysis for this project?

A. No, the Commission's EIP staff will perform the analysis of natural and socioeconomic impacts in their ER, which is not currently complete. I only give a broad look at the impacts based on the application.

Q. What do the Applicants state regarding the effects of the portfolio as a whole?

A. The Applicants do not directly address the natural environment with respect to the whole Tranche 2.1 Portfolio. However, they do address the socioeconomic benefits. They state that the economic savings from the portfolio are estimated to be between $23.1 billion and $72.4 billion over the first 20 years of service.[21]

Q. Does the proposed project require new right of way acquisition?

A. As there is no route determined for the proposed project, the total right-of-way acquisition is currently unknown. It can be assumed some sort of new right of way will need to be acquired for the size of the project, as there are no other 765 kV lines in Minnesota. However, the Applicants state in the Application that they included an existing 345 kV transmission line in the notice area between the North Rochester substation and Hampton substation.[22] If this existing right of way is used, then that portion of the project would likely not require any new right of way.

[21] Initial Application at 78.

[22] Initial Application at 26.

Q. Based on your analysis, what do you conclude regarding Minnesota Rule 7849.0120 subpart B(3)?

A. The Applicants have done an environmental review for the notice area. Depending on alternatives, such as high voltage DC lines, the natural and socioeconomic impacts may differ. I recommend the Commission rely on the forthcoming ER written by Commission EIP staff for the natural and socioeconomic analyses of CN proceedings.

D. RELIABILITY ANALYSIS

Q. What does Minnesota Rule 7849.0120 subpart B(4) require the Commission to consider?

A. Minnesota Rule 7849.0120 subp. B(4) requires the Commission is to consider "the expected reliability of the proposed facility compared to the expected reliability of reasonable alternatives."[23]

Q. What is the goal of the proposed project?

A. The project is designed to increase the reliability of the regional grid, specifically, being able to transfer power where and when it is needed. The project is proposed to help with existing issues of congestion, reducing curtailed generation by 7,207,981 MWh in 2042.[24] The Applicants state that it will mitigate 102 different system overloads and mitigate overloads on an additional 24 transmission facilities during low-probability, high-impact events. Applicants also state that the proposed project will mitigate

[23] Minn. R. 7849.0120 subp. B(4).
[24] Initial Application at 156.

1,305,000 MWh (1,305 GWh) of unserved demand through 2042, which is caused by either lack of available generation or inadequate transmission. It is also proposed to enable forecasted future demand of approximately 3,010 megawatts.[25]

Q. What alternatives did the Applicants consider?

A. The only alternative to the proposed project the Applicants have shown to meet the long-term demand and proposed need of the project are high voltage DC lines. They did not consider these further due to cost issues.

Q. Can any single alternative or combination of alternatives meet the proposed project's capacity or regional transfer capabilities for the long term?

A. Yes. High voltage DC lines could potentially meet the same needs as the proposed project.

Q. Based on your analysis, what do you conclude regarding Minnesota Rule 7849.0120 subpart B(4)?

A. The proposed project would increase reliability, and the only viable alternative in terms of reliability would be DC lines.

[25] Initial Application at 118.

E. CONCLUSION

Q. Based on your analysis of the four considerations in subpart B, what do you conclude?

A. While high voltage DC lines may meet the need of the project, they are not financially reasonable. With that, I believe the Applicants have shown no other reasonable or prudent alternative exists.

V. ENVIRONMENTAL AND SOCIOECONOMIC ANALYSIS

Q. What does Minnesota Rule 7849.0120 subpart C require the Commission to consider?

A. Minnesota Rule 7849.0120 subp. C requires the Commission to consider whether "by a preponderance of the evidence on the record, the proposed facility, or a suitable modification of the facility, will provide benefits to society in a manner compatible with protecting the natural and socioeconomic environments, including human health."[26] I recommend the Commission rely on the ER written by Commission EIP staff for the natural and socioeconomic analyses of CN proceedings.

Q. Has the ER been filed in this proceeding?

A. No, not yet. It is currently scheduled to be available in September 2026.

[26] Minn. R. 7849.0120 subp. C.

A. OVERALL STATE ENERGY NEEDS

Q. What does Minnesota Rule 7849.0120 subpart C(1) require the Commission to evaluate?

A. It states that the Commission shall evaluate "the relationship of the proposed facility, or a suitable modification thereof, to overall state energy needs."[27]

Q. Was the proposed project designed as part of a package of projects addressing needs across the MISO footprint?

A. Yes. The project is proposed by the Applicants as a portion of the MISO LRTP Tranche 2.1 Portfolio. The need was addressed in the MTEP24 Report by MISO.[28]

Q. What does the Application state regarding the relationship of the proposed project to state energy needs?

A. The need of the project, along with the rest of the Tranche 2.1 Portfolio, is beyond just the state of Minnesota. The project is designed to address regional issues. However, that does not mean Minnesota will not benefit from the project. The Applicants make the following case for Minnesota benefits:

> The [project] provide[s] the ability to transfer bulk energy to, through, and out of Minnesota to continue to serve load every hour of every day. As Minnesota and other states increasingly rely on weather-dependent generation resources and load becomes more variable, the ability to transfer energy to follow weather patterns is critical to system reliability.[29]

[27] Minn. R. 7849.0120 subp. C(1).
[28] PowerOn Midwest Certificate of Need Application, Appendix E (Feb. 3, 2026) (eDocket No. 20262-227787-08).
[29] Initial Application at 107.

Q. Will the proposed project individually benefit state energy needs?

A. It will. The project, along with the rest of the Tranche 2.1 Portfolio, will allow more transfer capacity, which means energy generated in Minnesota can be exported when abundant, enabling economic growth, while also being able to provide Minnesota with energy imports when generation is low in the state.

Q. Based on your analysis, what do you conclude regarding Minnesota Rule 7849.0120 subpart C(1)?

A. I agree with the Applicants that the proposed project was designed by MISO as part of a package of projects to address reliability needs all across the MISO Midwest subregion and that the proposed project individually will benefit state energy needs.

B. EFFECTS ON NATURAL AND SOCIOECONOMIC ENVIRONMENTS

Q. What does Minnesota Rule 7849.0120 subpart C(2) require the Commission to evaluate?

A. Minnesota Rule 7849.0120 subp. C(2) states that the Commission shall evaluate "The effects of the proposed facility, or a suitable modification thereof, upon the natural and socioeconomic environments compared to the effects of not building the facility."[30]

[30] Minn. R. 7849.0120, subp. C(2).

Q. What record provides information related to this consideration?

A. The ER will provide information related to the effects of the proposed project upon the natural and socioeconomic environments compared to the effects of not building the facility.

Q. What do you recommend regarding Minnesota Rule 7849.0120 subpart C(2)?

A. I recommend that the Commission consider the ER filed by Commission EIP staff in the Commission's decision in this matter.

C. INDUCED DEVELOPMENT

Q. What does Minnesota Rule 7849.0120 subpart C(3) require the Commission to evaluate?

A. Minnesota Rule 7849.0120 subp. C(3) states that, in assessing need, the Commission shall evaluate "the effects of the proposed facility, or a suitable modification thereof, in inducing future development."[31]

Q. What do the Applicants state regarding inducing future development?

A. The Applicants state "The Project is not intended to induce future development, but it is needed to serve demand arising from future economic development that otherwise would not be possible if the Project and the MISO LRTP Tranche 2.1 Portfolio were not constructed."[32]

[31] Minn. R. 7849.0120, subp. C(3).

[32] Initial Application at 146.

Q. Do you consider possible induced development to be favorable?

A. The potential for the project to be able to interconnect up to 24 GW of generation, 10 GW of which are in Minnesota, would be favorable.[33] Minnesota has a goal to have carbon-free energy by 2040, and the project's creation of additional headroom for new renewable generation is considered more favorable than the consequences of denying the CN.

Q. What record provides information related to this consideration?

A. The ER will provide additional information related to inducing future development.

Q. What do you recommend regarding Minnesota Rule 7849.0120 subpart C(3)?

A. I recommend that the Commission consider the ER filed by Commission EIP staff in the Commission's decision in this matter.

D. SOCIALLY BENEFICIAL USES

Q. What does Minnesota Rule 7849.0120 subpart C(4) require the Commission to evaluate?

A. It states that, in assessing need, the Commission shall evaluate "the socially beneficial uses of the output of the proposed facility, or a suitable modification thereof, including its uses to protect or enhance environmental quality."[34]

[33] *Id.,* at 134.

[34] Minn. R. 7849.0120, subp. C(4). Note that Minn. Stat. §216B.243 subd. 3(5) requires the Commission to evaluate benefits of this facility, including its uses to protect or enhance environmental quality, and to increase reliability of energy supply in Minnesota and the region.

Q. What record provides information related to enhancing environmental quality?

A. The ER will provide information related to enhancing environmental quality.

Q. What do you recommend regarding Minnesota Rule 7849.0120 subpart C(4)?

A. I recommend that the Commission consider the ER filed by Commission EIP staff in the Commission's decision in this matter.

Q. What is your position regarding the determination required by Minnesota Rule 7849.0120 subpart C?

A. I recommend the Commission rely on the ER written by Commission EIP staff for the natural and socioeconomic analyses of CN proceedings.

VI. OTHER POLICIES, RULES, AND REGULATIONS

Q. What does Minnesota Rule 7849.0120 subpart D require the Commission to consider?

A. Minnesota Rule 7849.0120 subp. D requires the Commission to show "the record does not demonstrate that the design, construction, or operation of the proposed facility, or a suitable modification of the facility, will fail to comply with relevant policies, rules, and regulations of other state and federal agencies and local governments."[35] This category discusses various Minnesota policies and how they may or may not apply to the proposed project.

[35] Minn. R. 7849.0120, subp. D.

A. OTHER PERMITS

Q. Where does the Application discuss permits and approvals that may be required?

A. Table 10.8-1 of the Initial Application shows the potentially required permits.

Q. Do you know of any reason why those permits would not be granted?

A. I see no immediate reason why any of these associated permits would be denied.

Q. What do you presume regarding permits required by other agencies?

A. Regarding the permits required by other agencies, I presume that the various agencies will review and confirm that the Applicants are in compliance prior to granting the permits. I rely upon other agencies to enforce their requirements. Should any necessary permits be denied, the proposed project may not be constructed, regardless of the Commission's decision regarding the Application.

B. ROBUSTNESS OF THE TRANSMISSION SYSTEM

Q. What does Minnesota Statutes Section 216B.243 subd. 3(9) require the Commission to evaluate?

A. Minnesota Statutes Section 216B.243 subd. 3(9) states that the Commission shall evaluate "with respect to a high-voltage transmission line, the benefits of enhanced regional reliability, access, or deliverability to the extent these factors improve the robustness of the transmission system or lower costs for electric consumers in Minnesota."[36]

[36] Minn. Stat. § 216B.243 subd. 3(9).

Q. What regional transmission benefits does the Application identify?

A. The project is part of the larger Tranche 2.1 Portfolio, which adds regional benefits. These benefits include reliability benefits, economic benefits, and generation transition capabilities.[37]

Q. Please describe the reliability benefits of the portfolio.

A. The Applicants state that the proposed project will mitigate 102 different system overloads and overload potential for an additional 24 transmission facilities. It is also proposed that it will mitigate 1,305,000 megawatt hours (MWh) of unserved demand through 2042. It is also proposed to enable forecasted future demand of approximately 3,010 megawatts. Lastly, the proposed project is supposed to improve the transfer capacity and increase reliability in general.[38]

Q. Please describe the economic efficiency benefits, including the benefit-to-cost ratio and projected net economic savings.

A. The Applicants state that "The [project is] expected to provide $7.7 billion to $25.3 billion in economic benefits over the first 20 years of service."[39] This amount is based on four factors, including carbon emission reduction. Applicants discuss the various economic savings from the LRTP Tranche 2.1 Portfolio in Section 4, including in Figure 4.6-3. Overall, the total Tranche 2.1 Portfolio is expected to have a benefit-to-cost ratio

[37] Initial Application at 105.
[38] *Id.* at 118.
[39] *Id.* at 130.

of 1.8 to 3.5.[40] The benefit-cost ratio for the LRTP Tranche 2.1 Portfolio indicates that, for every $1 invested, an economic benefit of $1.80 to $3.50 is expected.

Q. Please describe the policy benefits, including congestion relief, enabled interconnection capacity, and projected CO_2 reductions.

A. Minnesota has a carbon-free energy law to have 100% carbon-free energy production by 2040.[41] To meet this goal, new forms of renewable generation need to be added to the system before fossil fuel energy sources can be retired. The increased transfer capacity of the project will allow the interconnection of these carbon-free sources and help Minnesota meet this statutory goal. The project is slated to allow up to 10 gigawatts of new generation in Minnesota to be reliably connected to the grid. It is also projected to help reduce CO2 emissions by 3.6 to 4.5 million tons annually.[42]

Q. What do the Applicants state regarding curtailment and congestion reductions attributable to the portfolio?

A. Curtailment is often defined as "wasted energy," meaning there is load demanding energy, and potential for energy to be sold, but due to congestion across the transmission system, the energy is not deliverable and instead the generator is involuntarily dispatched down. Curtailment is reported as an economic loss. The proposed project is designed to increase the transfer capability in southern Minnesota, allowing the energy that is generated in the region to be dispatched economically,

[40] *Id.* at 10.
[41] Minn. Stat. §216b.1691 subd. 2g.
[42] Initial Application at 134.

instead of being dispatched down. The reduction of curtailment is anticipated to be up to 7.2 million megawatt hours annually.[43]

Q. Based on your analysis, what do you conclude regarding Minnesota Statute Section 216B.243, subd. 3(9)?

A. I conclude the project, as proposed, has the potential to highly increase the robustness of the grid in and around Minnesota. It also has the potential to reduce curtailment, which will effectively lower energy costs for Minnesotans.

C. RENEWABLE PREFERENCE

Q. What sections of Minnesota Statutes provide a preference for renewable resources in resource planning and resource acquisition decisions?

A. Minnesota Statutes Section 216B.243, subd. 3a states:

> The commission may not issue a certificate of need under this section for a large energy facility that generates electric power by means of a nonrenewable energy source, unless the applicant for the certificate has demonstrated to the commission's satisfaction that it has explored the possibility of generating power by means of renewable energy sources and has demonstrated that the alternative selected is less expensive, including environmental costs, than power generated by a renewable energy source. For purposes of this subdivision, "renewable energy source" includes hydro, wind, solar, and geothermal energy and the use of trees or other vegetation as fuel.[44]

Minnesota Statutes Section 216B.2422, subd. 4 states:

> The commission shall not approve a new or refurbished nonrenewable energy facility in an integrated resource plan or a certificate of need, pursuant to section 216B.243, nor shall the

[43] *Id.*

[44] Minn. Stat. § 216B.243 subd. 3a.

> commission allow rate recovery pursuant to section 216B.16 for such a nonrenewable energy facility, unless the utility has demonstrated that a renewable energy facility is not in the public interest.[45]

Q. Would the proposed project interconnect any particular generation resource?

A. No. The proposed project is designed to increase transferability of existing sources future generation sources. MISO maintains a pro forma Open Access Transmission Tariff, in accordance with FERC Order 888, which means the grid operator must ensure that transmission services are just, reasonable, and not unduly discriminatory or preferential.[46] In Minnesota, and based off of MISO's current interconnection queue, any new generation resources seeking to interconnect are more likely than not be renewable forms of generation to meet the statutory goal of carbon-free by 2040.

Q. Is the proposed project needed to transmit power from a particular new generation resource?

A. No, the proposed project is not for any particular generation source.

Q. Based on your analysis, what do you conclude regarding Minn. Stat. §§ 216B.243, subd. 3(a) and 216B.2422, subd. 4?

A. Since this project is not designed to transmit energy from any particular generation source, I conclude these statutory requirements do not apply to this project.

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[45] Minn. Stat. § 216B.242 subd. 4.

[46] *See* Federal Energy Regulatory Commission, FERC ORDER 888 PROMOTING WHOLESALE COMPETITION THROUGH OPEN ACCESS NON-DISCRIMINATORY TRANSMISSION SERVICES BY PUBLIC UTILITIES; RECOVERY OF STRANDED COSTS BY PUBLIC UTILITIES AND TRANSMITTING UTILITIES (Mar. 4, 1997). Available at https://www.ferc.gov/industries-data/electric/industry-activities/open-access-transmission-tariff-oatt-reform/history-oatt-reform/order-no-888.

D. DISTRIBUTED GENERATION ANALYSIS

Q. What does Minnesota Statutes Section 216B.2426 require?

A. Minnesota Statutes Section 216B.2426 requires the Commission "shall ensure that opportunities for the installation of distributed generation, as that term is defined in section 216B.169, Subdivision 1, paragraph (c), are considered in any proceeding under section 216B.2422, 216B.2425, or 216B.243."[47]

Q. How would distributed generation certified by the Commissioner in the past be reflected in this proceeding?

A. It would have been included in both MISO's and the Applicants' models when analyzing the project as proposed.[48]

Q. How would distributed generation certified in the future and sited in the local area affect the analysis?

A. Any distributed generation certified by the Commissioner of the Department in the future and sited in the local area would impact the rate of forecasted distributed generation growth. Increased generation would require the need for more transmission capacity, which wouldn't likely change the outcome of the need analysis.

[47] Minn. Stat. § 216B.2426.

[48] Initial Application at 101-102.

Q. Based on your analysis, what do you conclude regarding Minnesota Statutes Section 216B.2426?

A. I conclude that opportunities for the installation of distributed generation were considered and this statutory criterion has been met.

E. INNOVATIVE ENERGY PROJECT PREFERENCE

Q. What does Minnesota Statutes Section 216B.1694 subd. 2(a)(4) provide?

A. Minnesota Statutes Section 216B.1694 subd. 2(a)(4)states that an Innovative Energy Project:

> shall, prior to the approval by the commission of any arrangement to build or expand a fossil-fuel-fired generation facility, or to enter into an agreement to purchase capacity or energy from such a facility for a term exceeding five years, be considered as a supply option for the generation facility, and the commission shall ensure such consideration and take any action with respect to such supply proposal that it deems to be in the best interest of ratepayers.[49]

Q. Is the proposed facility a generating facility?

A. No, it is not.

Q. Based on your analysis, what do you conclude regarding Minnesota Statutes Section 216B.1694, subd. 2(a)(4)?

A. I conclude this statute does not apply since the proposed facility is a transmission line rather than a generating facility.

[49] Minn. Stat. § 216B.1694 subd. 2(a)(4).

F. RENEWABLE ENERGY STANDARD COMPLIANCE

Q. What does Minnesota Statutes Section 216B.243 subd. 3(10) require the Commission to evaluate?

A. Minnesota Statutes Section 216B.243 subd. 3(10) states that the Commission shall evaluate "whether the applicant or applicants are in compliance with applicable provisions of sections 216B.1691 …"[50]

Q. What does Minnesota Statutes Section 216B.1691 subd. 2a require of each electric utility?

A. Minnesota Statutes Section 216B.1691 subd. 2a states that each electric utility shall provide retail customers in Minnesota the following percentages of total retail electric sales from energy generated by eligible energy technologies:

1) 2012 12 percent;
2) 2016 17 percent;
3) 2020 20 percent;
4) 2025 25 percent;
5) 2035 55 percent.[51]

Q. What does Minnesota Statutes Section 216B.1691 subd. 2f require?

A. Minnesota Statutes Section 216B.1691, subd. 2f requires that public utilities generate or procure solar energy equal to at least 1.5 percent of Minnesota retail sales by the end of 2020. At least ten percent of the 1.5 percent goal must be generated by or procured from solar photovoltaic devices with a nameplate capacity of 40 kW or less.[52]

[50] Minn. Stat. § 216B.243 subd. 3(10).
[51] Minn. Stat. § 216B.1691 subd. 2a.
[52] Minn. Stat. § 216B.1691 subd. 2f.

Q. What does Minnesota Statutes Section 216B.1691, subd. 2g require?

A. Minnesota Statutes Section 216B.1691, subd. 2g states that each electric utility shall provide retail customers in Minnesota the following percentages of total retail electric sales from energy generated from carbon-free energy technologies:

1) 2030 80 percent for public utilities; 60 percent for other electric utilities
2) 2035 90 percent for all electric utilities
3) 2040 100 percent for all electric utilities.[53]

Q. How does the Department review historical compliance with these standards?

A. The Department releases the Minnesota Renewable Energy Standard Utility Compliance Report (RES Report), which reviews compliance with the appropriate utilities.[54]

Q. What did the most recent RES Report conclude regarding the Applicants' compliance?

A. Of the three Applicants that make up the collective Applicants, Xcel Energy and GRE are the only two that are tracked for compliance when it comes to Minnesota Statutes Section 216B.1691 2a and 2g, as ITC Midwest does not sell retail electricity in Minnesota. Xcel Energy and GRE meet all levels of compliance with these statutory requirements. When it comes to Minnesota Statutes Section 216B.1691 2f, only Xcel Energy is tracked, as it is the only regulated public utility of the Applicants. It also meets the Minnesota Statutes Section 216B.1691 2f requirement.

[53] Minn. Stat. § 216B.1691 subd. 2g.

[54] Department of Commerce. *Minnesota Renewable Energy Standard Utility Compliance*. Legislative Reference Library, (2025). Available at: https://www.lrl.mn.gov/docs/2025/mandated/250202.pdf

Q. Based on your analysis, what do you conclude regarding Minnesota Statutes Sections 216B.243, subd. 3(10) and 216B.1691, subd. 2a, 2f and 2g?

A. I conclude that these statutory criteria have been met.

G. ENVIRONMENTAL COST PLANNING

Q. What does Minnesota Statutes Section 216B.243, subd. 3(12) require the Commission to evaluate?

A. It states that the Commission shall evaluate "if the applicant is proposing a nonrenewable generating plant, the applicant's assessment of the risk of environmental costs and regulation on that proposed facility over the expected useful life of the plant, including a proposed means of allocating costs associated with that risk."[55]

Q. Are the Applicants proposing a nonrenewable generating plant?

A. No, they are not.

Q. Based on your analysis, what do you conclude regarding Minnesota Statutes Section 216B.243 subd. 3(12)?

A. I conclude this statute does not apply to this project.

[55] Minn. Stat. §216B.243 subd. 3(12).

H. CARBON DIOXIDE EMISSIONS

Q. What does Minnesota Statutes Section 216H.03 subd. 3 provide?

A. It states that:

> Unless preempted by federal law, until a comprehensive and enforceable state law or rule pertaining to greenhouse gases that directly limits and substantially reduces, over time, statewide power sector carbon dioxide emissions is enacted and in effect, and except as allowed in Subdivisions 4 to 7, on and after August 1, 2009, no person shall construct within the state a new large energy facility that would contribute to statewide power sector carbon dioxide emissions.[56]

Q. Does Minnesota Statutes Section 216H.03 subd. 3 contain a precondition?

A. It does. Minnesota Statutes Section 216H.03, subd. 3 states "until a comprehensive and enforceable state law or rule pertaining to greenhouse gases that directly limits and substantially reduces, over time, statewide power sector carbon dioxide emissions is enacted and in effect…" [57]

Q. Has that precondition been satisfied?

A. It has. The carbon-free standard has satisfied the condition of "comprehensive and enforceable state law pertaining to greenhouse gases."

[56] Minn. Stat. §216H.03 subd. 3.
[57] *Id.*

Q. Has the Commission addressed the effect of the carbon-free standard on Minnesota Statutes Section 216H.03?

A. With the passage of the state's carbon-free energy targets in Minnesota Statutes Section 216B.1691 subd. 2g (carbon-free standard),[58] the Commission determined this section is no longer applicable, as the state has an enforceable law that limits statewide power sector carbon dioxide emissions.[59]

Q. Based on your analysis, what do you conclude regarding Minnesota Statutes Section 216H.03?

A. I conclude this statutory requirement is no longer applicable.

I. LOCAL JOB IMPACTS

Q. What does Minnesota Statutes Section 216B.2422, subd. 4a require of the Commission?

A. Minnesota Statutes Section 216B.2422, subd. 4a states:

> The commission must consider local job impacts and give preference to proposals that maximize the creation of construction employment opportunities for local workers, consistent with the public interest, when evaluating any utility proposal that involves the selection or construction of facilities used to generate or deliver energy to serve the utility's customers, including but not limited to an integrated resource plan, a certificate of need, a power purchase agreement, or commission approval of a new or refurbished electric generation facility. The commission must, to the maximum extent possible, prioritize the hiring of workers from

[58] Minn. Stat. § 216B.1691, subd. 2g.

[59] *In re Xcel Energy's Competitive Resource Acquisition Process for up to 800 Megawatts of Firm Dispatchable Generation,* MPUC Docket No. E002/CN-23-212,ORDER APPROVING PETITION AND REQUIRING COMPLIANCE FILING (Nov. 3, 2023) (eDocket No. 202311-200215-01).

communities hosting retiring electric generation facilities, including workers previously employed at the retiring facilities.[60]

Q. Are there alternative proposals before the Commission in this proceeding to which the preference could be applied?

A. The proposed project would meet the criteria for this statute, as it is a CN proceeding with a "utility proposal that involves the selection or construction of facilities used to generate or deliver energy to serve the utility's customers".

Q. Where will information related to alternative proposals pertaining to local job impacts be found?

A. The ER will provide information related to the effects of the proposed project on socioeconomic environments compared to alternatives explored, if any.

Q. What does the Application state regarding the workforce required to construct the proposed project?

A. The Applicants state that given the size of the line, a large workforce will be required. It is estimated that approximately 650 personnel for construction and 10-20 personnel for maintenance of the line will be required.[61]

[60] Minn. Stat. § 216B.2422, subd. 4a.
[61] Initial Application at 46.

Q. Does the Application state where that labor will be sourced from?

A. The application did not originally discuss where the labor would be sourced from. An Information Request was sent to the Applicants asking for more information on labor such as local hiring practices. In their response, the Applicants describe their intent to source labor locally to the extent practicable. They also demonstrate current projects in which they have sourced local Minnesota labor. Please refer to Ex. DOC-___, LH-D-9 (DOC IR 10).

Q. Based on your analysis, what do you conclude regarding Minnesota Statutes Section 216B.2422 subd. 4a?

A. I conclude that the Applicants have presented enough information for this statute criterion to be met.

J. DOMESTIC CONTENT PREFERENCE

Q. What does Minnesota Statutes Section 216B.2422 subd. 4b provide?

A. It states "The commission may give preference in resource selection to projects utilizing energy technologies produced domestically by entities who received an advanced manufacturing tax credit for those technologies under section 45X of the Internal Revenue Code, as allowed under the federal Inflation Reduction Act of 2022, Public Law 117-169."[62]

[62] Minn. Stat. § 216B.2422, subd. 4b.

Q. To what types of projects does section 45X of the Internal Revenue Code generally apply?

A. That section generally applies to generation projects rather than transmission projects.

Q. Based on your analysis, what do you conclude regarding Minnesota Statutes Section 216B.2422 subd. 4b?

A. I conclude this statute does not apply to this project.

K. INFLATION REDUCTION ACT COMPLIANCE

Q. Please describe the Commission's Order in Docket No. E,G999/CI-22-624.

A. The Commission's September 12, 2023 Order states:

> The utilities shall maximize the benefits of the Inflation Reduction Act in future resource acquisitions and requests for proposals in the planning phase, petitions for cost recovery through riders and rate cases, resource plans, gas resource plans, integrated distribution plans, and Natural Gas Innovation Act innovation plans. In such filings, utilities shall discuss how they plan to capture and maximize the benefits from the Act, and how the Act has impacted planning assumptions including (but not limited to) the predicted cost of assets and projects and the adoption rates of electric vehicles, distributed energy resources, and other electrification measures. Reporting shall continue until 2032.[63]

[63] *In re Joint Investigation into the Impacts of the Federal Inflation Reduction Act*, MPUC Docket No. EG999/CI-22-624, ORDER SETTING REQUIREMENTS RELATED TO INFLATION REDUCTION ACT at 12(Sept. 12, 2023) (eDocket No. 20239-198869-01).

Q. Do the Applicants discuss whether they have evaluated or intend to pursue Inflation Reduction Act benefits?

A. They do not in their initial application. An Information Request was sent to the Applicants for more details on any programs they have pursued or intend to pursue. In their response, the Applicants reviewed four plausible federal programs, including the Inflation Reduction Act, and found none of these to be feasible for this project. The Applicants also note that they continuously review federal funding, financing, and incentive opportunities. Please refer to Ex. DOC-___, LH-D-10 (DOC IR 11).

Q. What do you recommend regarding the Commission's Order in Docket No. E,G999/CI-22-624?

A. I conclude that this statutory requirement has been addressed.

Q. Based on your analysis, what do you conclude regarding Minnesota Rule 7849.0120D?

A. I conclude that the record does not demonstrate that the design, construction, or operation of the proposed facility, or a suitable modification of the facility, will fail to comply with relevant policies, rules, and regulations of other state and federal agencies and local governments.

VII. CONDITIONS

Q. Based on your investigation, do you have any conditions you would like to recommend?

A. I do not.

Q. Does Ms. Park have any conditions to recommend?

A. She does. Please refer to Ex. DOC-___ at Section VII (Park Direct).

Q. Do you agree with Ms. Park's recommended conditions?

A. I do, and I concur that they are appropriate.

VIII. SUMMARY OF RECOMMENDATIONS

Q. Based on your investigation, what do you recommend?

A. Based upon the information available at this time I have found that the proposed project is in compliance with all Minnesota Rule 7849.0120 subparts B, C, and D criteria and other relevant criteria found in state statutes considered in my analysis. I recommend that the Commission consider the ER that will be filed by Commission EIP staff in the Commission's decision in this matter. If the Commission find the impacts detailed in the ER are reasonable, I recommend that the Commission grant the Certificate of Need with the conditions recommended in Ms. Park's testimony. Ex. DOC-__ at Section VII (Park Direct).

Q. Have you completed your Direct Testimony?

A. Yes.

Logan Hicks
Minnesota Department of Commerce
85 7th Place East, Suite 280
St. Paul, MN 55101-2145

Professional Background

Public Utility Rates Analyst 4 | May 2026 - Present

State of Minnesota, Department of Commerce

Saint Paul, Minnesota

- Analyzing certificates of need for large scale infrastructure project
- Following issues related to resource planning for the Midcontinent Independent System Operator, Inc.

Planner Principal State | May 2024 – 2026

State of Minnesota, Department of Commerce and Public Utilities

Commission Saint Paul, Minnesota

- Environmental Review Manger for large scale energy infrastructure
- Managed project processes from concept through permitting to construction and compliance
- Reviewed and wrote environmental documents such as Environmental Reports, Environmental Assessments, and Environmental Impact Statements

Environmental Scientist II – Environmental Scientist IV | July 2020 – May 2024

EnviroServices & Training Center, LLC

Honolulu, Hawaii

- Program Lead for the Storm Water Management Plan for the Hawaii Department of Transportation (HDOT), Highway Division, for their National Pollutant Discharge Elimination System Permit
- Conducted Industrial and Commercial inspections and wrote technical reports
- Reviewed SWPPPs for industrial NPDES permits
- Conducted Illicit Discharge Detection & Elimination inspections and wrote technical reports used in enforcement

Education

Bachelor of Science in Physics | Northern Kentucky University – 2018
Minnesota Wetland Professional Certification Program | In-Training Professional – 2025

Statute or Rule Citation	Notes	Witness
7849.0120 CRITERIA. A certificate of need must be granted to the applicant on determining that:		
A. the probable result of denial would be an adverse effect upon the future adequacy, reliability, or efficiency of energy supply to the applicant, to the applicant's customers, or to the people of Minnesota and neighboring states, considering:	See Ex. DOC__ (Park Direct)	Park
(1) the accuracy of the applicant's forecast of demand for the type of energy that would be supplied by the proposed facility;		Park
(2) the effects of the applicant's existing or expected conservation programs and state and federal conservation programs;		Park
(3) the effects of promotional practices of the applicant that may have given rise to the increase in the energy demand, particularly promotional practices which have occurred since 1974;		Park
(4) the ability of current facilities and planned facilities not requiring certificates of need to meet the future demand; and		Park
(5) the effect of the proposed facility, or a suitable modification thereof, in making efficient use of resources;		Park
B. a more reasonable and prudent alternative to the proposed facility has not been demonstrated by a preponderance of the evidence on the record, considering:	Section IV	
(1) the appropriateness of the size, the type, and the timing of the proposed facility compared to those of reasonable alternatives;		Hicks
(2) the cost of the proposed facility and the cost of energy to be supplied by the proposed facility compared to the costs of reasonable alternatives and the cost of		Hicks

energy that would be supplied by reasonable alternatives;		
(3) the effects of the proposed facility upon the natural and socioeconomic environments compared to the effects of reasonable alternatives; and	Addressed in Environmental Report (ER)	PUC Energy Infrastructure Permitting (EIP)
(4) the expected reliability of the proposed facility compared to the expected reliability of reasonable alternatives;		Hicks
C. by a preponderance of the evidence on the record, the proposed facility, or a suitable modification of the facility, will provide benefits to society in a manner compatible with protecting the natural and socioeconomic environments, including human health, considering:	Section V	
(1) the relationship of the proposed facility, or a suitable modification thereof, to overall state energy needs;		Hicks
(2) the effects of the proposed facility, or a suitable modification thereof, upon the natural and socioeconomic environments compared to the effects of not building the facility;		EIP
(3) the effects of the proposed facility, or a suitable modification thereof, in inducing future development; and		EIP
(4) the socially beneficial uses of the output of the proposed facility, or a suitable modification thereof, including its uses to protect or enhance environmental quality; and		EIP
D. the record does not demonstrate that the design, construction, or operation of the proposed facility, or a suitable modification of the facility, will fail to comply with relevant policies, rules, and regulations of other state and federal agencies and local governments.	Section VI	Hicks
Minn. Stat. § 216B.243, subd. 3(9)		Hicks

Minn. Stat. § 216B.243, subd. 3a Minn. Stat. § 216B.2422, subd. 4		Hicks
Minn. Stat. § 216B.2426		Hicks
Minn. Stat. § 216B.1694, subd. 2(a)(4)		Hicks
Minn. Stat. § 216B.243, subd. 3(10) Minn. Stat. § 216B.1691, subd. 2a Minn. Stat. § 216B.1691, subd. 2f Minn. Stat. § 216B.1691, subd. 2g		Hicks
Minn. Stat. § 216B.243, subd. 3(12)		Hicks
Minn. Stat. § 216H.03, subd. 3		Hicks
Minn. Stat. § 216B.2422, subd. 4a		Hicks
Minn. Stat. § 216B.2422, subd. 4b		Hicks
Commission's Order in Docket No. E,G999/CI-22-624		Hicks

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☒ **Public Document**

Information Request No. 2

Docket No.:	E002/CN-25-117
Response To:	Minnesota Department of Commerce
Requestor:	Daniel Zuckerman, Rock Park, Forest Eidbo
Date Received:	April 27, 2026

Question:

a. Did the applicants explore or consider how GETs and other upgrades such as, but not limited to, advanced reconductoring, could increase capacity, and the potential costs compared to a rebuild or new line construction, like the proposed project? If so, please detail how these were considered, if not, please explain why these upgrades were not considered as a tool to increase capacity.

b. Have the applicants evaluated how GETs could be used to upgrade the proposed project after the in-service date? If so, please detail how GETs could be used, if not, please detail why GETs were not considered as feasible upgrades to the project after the in-service date.

c. Did the applicants explore or consider how GETs could be used during the construction of the proposed project to mitigate congestion and curtailment caused by planned outages? If so, please detail how these were considered, and if not, please explain why these technologies were not considered as a tool to reduce congestion.

d. Transmission owners are required to implement ambient adjusted ratings (AARs) on their transmission lines to comply with FERC Order No. 881. Have the Applicants considered a timeline for when AAR implementation on the proposed line would occur? If so, please provide details of the timeline and which mechanism would be used for rate recovery, if not, please the Applicant's plan for AAR implementation.

Response:

a. Grid Enhancing Technologies (GETs) are defined as "hardware or software that reduces congestion or enhances the flexibility of the transmission system by increasing the capacity of a high-voltage transmission line or rerouting electricity from overloaded to uncongested lines, while maintaining industry safety standards. Grid enhancing technologies include but are not limited to dynamic line rating, advanced power flow controllers, and topology optimization."[1] While the Minnesota statutory definition is

[1] Minn. Stat. §216B.2425, subd. 1a(e)https://www.revisor.mn.gov/statutes/cite/216b.2425.

broad, the general principle of GETs is to allow more power to flow across the grid if and when real-time conditions warrant, thus providing economic benefits through reduced congestion and a lower-cost generation dispatch. As addressed in the GETs Study Report filed on October 31, 2025 in MPUC Docket No. E999/M-25-99, GETs address near term, identified congestion issues and if cost-effective are being deployed by Minnesota utilities. However, for long-term transmission investments, including the Project, there are specific reliability needs that are being addressed separate from GETs. The Studied [2]s[OBJ] are needed to address NERC reliability[3]. The principle of NERC reliability planning is to ensure the transmission grid is both adequate and secure (i.e.,[4] every hour of every day.[OBJ] NERC reliability planning is performed using tools which model forecasted (five to twenty years into[5] conditions during "worst case" scenarios – e.g. summer peak, winter peak, etc. Planning the grid to maintain reliability during each of these highest stressed conditions ensures the grid is reliable.[6] The Studied Projects eliminate expected reliability overloads of 102 different facilities addressing 1,313 reliability issues expected during these modeled "worst case" scenarios. As there is no assurance that future real-time conditions will be less stressed than forecasted, which would allow more power to flow across a transmission line via Dynamic Line Ratings (DLRs) or allow power to flow across less used paths, via power flow controllers or topology optimization, GETs long-term reliability alternative to the Studied Projects. However, GETs are and will continue to be implemented in Minnesota to address economic congestion and are actively being considered by Minnesota utilities and the Commission as part of the required GETs [7]Report in MPUC Docket No. E999.

b. The Applicants have not yet determined if GETs would directly connect to the Project, e.g., DLR sensors, could be included in the final engineering design. Other GETs outside the scope of the Project (e.g., powerflow controllers and topology optimization) would be addressed through separate processes (e.g., the MISO Transmission Expansion Plan (MTEP) or Minnesota Biennial Transmission Projects Report[8]). The Studied Projects, as designed, have adequate capacity to optimally meet the identified reliability need, but also has capacity to accommodate future potential increase in demand.[9] Based on current modeling, the Studied Projects are not expected to cause congestion and thus further increasing capacity when real-time conditions warrant, via GETs, would not result in an increase in Studied Projects performance. It should be noted that GETs, such as DLR sensors, can be added at any time, including after the Project is energized in 2034. Going forward, the Applicants will continue to evaluate the need and benefit of adding GETs to the Project as forecasts are updated.

c. The Applicants will coordinate with MISO and other Transmission Owners to help lessen the impacts of congestion when constructing the Project and other projects that are part of the MISO Long-Range Transmission Plan (LRTP) Tranche 2.1 portfolio. GETs are one

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[2] As described in Section 6.1 of the Certificate of Need Application, for the purposes of the need analysis in this Application, the Applicants studied the entirety of LRTP numbers 22 through 26 (including the portions of those lines outside of Minnesota). This group of projects is referred to as the "Studied Projects."
[3] Certificate of Need Application - Section 6.3.1
[4] Id. – Section 3.4.1.
[5] Id. Section 6.2.2 – specifically "Steady State Reliability" and "System Stability".
[6] Id. Section 6.3.1.
[7] 2025 Biennial Transmission Projects Report.
[8] Minn. Stat. §216B.2425.
[9] Certificate of Need Application – Figure 6.3-3 and Section 6.6.1.

of the multiple options that the Applicants will explore. The Project and the rest of the MISO LRTP Tranche 2.1 portfolio are still in the early stages of development and the routes, which would identify the grid outages necessary to construct the Tranche 2.1 projects, have not yet been identified. As a result, it is too early to know if and what options are prudent to address construction-related congestion.

d. To comply with FERC Order 881, the Project, which has a 2034 estimated in-service date, is expected to utilize AARs upon energization. For public utilities, rate recovery for AARs would be included with other Project costs and recovered through a rate case or transmission cost recovery (TCR) rider.

Preparer:	Matt Ellis, Great River Energy
Title:	Director, Transmission Planning and Compliance
Email Address:	mellis@grenergy.com
Phone Number:	612-590-1136
Department:	Transmission
Date:	May 7, 2026

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☐ **Public Document – Not-Public Data Has Been Excised**
☒ **Public Document**

Information Request No. 7

Docket No.:	E002/CN-25-117
Response To:	Minnesota Department of Commerce
Requestor:	Logan Hicks, Rock Park, Forest Eidbo
Date Received:	July 20, 2026

Question:

Please reference the attached Tranche 2.1 Dashboard: Tranche 2.1 Dashboard732078.pdf

The Department understands that the proposed project references MISO LRTP Tranche 2.1 project numbers 22, 23,24, and 25 (pg. 110 of Initial Application).

As noted on the Tranche 2.1 Dashboard, LRTP Projects 22-25 report cost increases as of Q4 2025. The Department remade the LRTP 22-25 projects in a table below, along with the cost increase as a percentage.

LRTP 22-25 Project Costs Table:

LRTP Project #	MTEP Approved Cost (2024$, millions)	Q4 2025 Costs (2024$, unless noted)	% Change
22	$1,459	$1739*	19.2%
23	$1,375	$1398*	1.7%
24	$1,195	$1955* (cost change under review)	63.6%
25	$222	$241	8.6%

*Some or all facilities reported in nominal (year of occurrence) dollars.

The Application in Section 2.4.1 gives a cost estimate for construction to be $3.327 - $4.323 billion (2024$) for the base and high-end cost projections. MISO's MVP Dashboard for Tranche 2.1 shows that this project was MTEP Approved for $4.251 billion (2024$) and then adjusted in Q4 of 2025 to $5.333 billion.

1) Please reconcile the difference between final MTEP24 approved amounts, as well as Applicant's proposed costs and MISO's cost review currently in process. Applicants should include what role they have had in the cost change currently under review, whether the cost estimate increase will trigger a Variance Analysis, and any other pertinent information related to these cost estimate increases.

Objection:

The Applicants object to the phrase "and any other pertinent information" because it is vague and ambiguous. Subject to and without waiving the foregoing objection, Applicants provide the following response.

Response:

This Application seeks a Certificate of Need (CN) for the Minnesota portions of MISO LRTP Tranche 2.1 project numbers 22, 23, 24, and 25.[1] Consistently, the Applicants' cost estimates in Table 2.4-1 of the Application are for the Minnesota portions of LRTP project numbers 22, 23, 24, and 25. The Applicants have reported the Project's base cost estimate included in Table 2.4-1 of $3.327 million ($-2024) to MISO. The cost estimates in MISO's dashboard (Tranche 2.1 Dashboard732078.pdf) are for the entirety of LRTP 22, 23, 24, and 25, including the portions of LRTP 22 and 23 which are outside of Minnesota.

As stated in Section 2.4.1 of the CN Application, the Applicants recognize that estimates for the Project currently exceed 25 percent more than MISO's original estimate and therefore it is anticipated that MISO will conduct a variance analysis. MISO inquired about the updated costs for LRTP 24, and the Applicants responded on June 19, 2026. MISO has noted LRTP project number 24's "cost change is under review." As of this date, MISO has not commenced variance analysis for LRTP project number 24 or any other LRTP project that is part of this application. Should MISO commence Variance Analysis, the Applicants' role will be to respond to MISO's requests for information on the Applicant's cost estimate. A narrative of the difference between MISO's original approved cost and the Applicants' updated cost estimate is included in Section 2.4.1 of the CN Application.

MISO's cost estimates for the Project were developed based on a planning-level scope and cost assumptions finalized on May 1, 2024 and approved by MISO's Board of Directors in December 2024. The estimated costs the Applicants provided in the CN Application are based on detailed engineering and estimates obtained from preliminary bids from equipment manufacturers and construction contractors in 2025 and early 2026 and finalized on the date of filing of the CN Application on February 3, 2026. The Applicants developed the base cost estimate through an extensive due diligence effort. The base estimate was calculated using the Project specifications and schedule as presented in the CN Application and by incorporating the best-available cost estimate information at the time of the CN Application filing. Due diligence included general area soils investigation and estimates from multiple contractors and vendors as well as necessary consultants.

The MISO-approved cost estimate was developed during the early stages and without full knowledge of the impacts of inflation, supply chain disruptions, labor market spikes and tariffs that have taken place since 2024. The current cost estimates are higher than MISO's 2024 cost estimates primarily due to the costs to construct the substations.

MISO's December 2024 approval estimated LRTP 24 to cost $1,195 million ($-2024). The Applicants estimated the cost of LRTP 24 at $1,955 million ($-2024) (baseline), based on the best available information at the time of the CN Application filing. The Applicants' baseline cost for LRTP 24 is approximately 64 percent above MISO's initial cost estimate mainly due to the detailed design of the substations, with three main drivers:

[1] PowerOn Midwest Certificate of Need Application – page 110

- **27% - Equipment market and design impacts**
  Large infrastructure projects are seeing higher costs due to national and international economic and policy conditions beyond local control. Inflation, rising construction labor costs, supply chain pressures, trade-related impacts and strong demand for transmission and substation components have all contributed to higher costs across the Project. In addition, detailed substation design for the two Project substations identified more precise equipment for reactive power and ampacity needs necessary to meet performance and reliability standards.

- **19% - Land and site work impacts**
  As Project planning advanced and site conditions were evaluated in greater detail, additional land and site work requirements were identified. Increased costs for the substations include higher land value costs for expansion areas driven by market conditions, additional grading needed due to challenging topography, and additional physical security requirements. These factors ensure projects are developed responsibly, with safeguards for landowners, communities, and long-term system reliability.

- **18% - Preconstruction, indirect costs, and other impacts**
  Preconstruction costs have increased as a direct result of overall Project cost growth. As total Project costs rise, so do related preconstruction expenses such as project management, engineering, and other professional services. In addition, the regulatory process for projects of this scale is comprehensive, requiring detailed analysis, expert support, and extensive engagement with landowners and the public. In addition, higher borrowing costs like rising interest rates increase the cost of financing.

Substations
Most of the cost increase from MISO's 2024 cost estimate is related to the PowerOn Midwest substations, two of which are included in LRTP 24 (Pleasant Valley and North Rochester). The main factors driving increases in substation costs include, but are not limited to:

- market and tariff changes causing increases in major equipment prices based on preliminary estimates and bids (i.e., steel, aluminum, equipment costs, supply chain conditions) that occurred after MISO finalized its baseline costs;
- more detailed design work identified additional equipment needs (e.g., reactors) to meet reliability and performance requirements not visible at MISO's planning level estimate;
- additional acquisition costs and site-work needed to accommodate substation footprints and to prepare the areas for substation construction and operation (e.g., grading); and
- increased costs for project management, engineering, and other pre-construction activities as necessitated by additional studies, analysis and documentation to develop the new operating voltage for all owners.

Transmission Lines
The Project's transmission line costs have increased by approximately 21 percent from MISO's 2024 estimate to February 2026. Factors driving the Project's 765 kV line costs include, but are not limited to:

- use of self-supporting lattice structures to lessen potential impacts to agricultural operations as opposed to the use of less-expensive guyed structures;

- more structures per mile (the Applicants' estimate assumes a 1200' ruling span vs. MISO's 1500' ruling span);
- increased foundation costs based on anticipated soil conditions in the Project area;
- use of a larger conductor to satisfy performance requirements, minimize losses, and meet Minnesota noise and other regulatory requirements under all expected conditions;
- market and tariff changes and high demand are driving increased raw material prices (e.g., steel, aluminum) and labor;
- increased land costs due to a combination of wider right-of-way requirements to meet audible noise requirements and comply with safety standards, as well as higher land values in heavy agricultural areas; and
- design criteria to increase resiliency to withstand extreme weather events.

The Applicants thoroughly reviewed and evaluated project construction inputs including labor, equipment and materials. This provides a much more definitive cost projection than the preliminary MISO cost estimate.

Preparer:	Matt Ellis	Derrick Johnson
Title:	Director, Transmission Planning and Compliance	Regional Transmission Project Manager
Department:	Great River Energy	Great River Energy
Date:	August 3, 2026	August 3, 2026

Minnesota Department of Commerce
85 7th Place East | Suite 280 | St. Paul, MN 55101
Information Request

Docket Number: ET6675,E002/CN-25-117 ☐Nonpublic ☒Public
Requested From: MISO, Lisa Crum, Max Meyer Date of Request: 7/21/26
Type of Inquiry: General Response Due: 8/4/26

SEND RESPONSE VIA EMAIL TO: Utility.Discovery@state.mn.us as well as the assigned analyst(s).
Assigned Analyst(s): Rock Park, Logan Hicks, Forest Eidbo
Email Address(es): rock.park@state.mn.us, logan.m.hicks@state.mn.us, forest.eidbo@state.mn.us
Phone Number(s): 651-539-2728, 651-539-1014, 651-539-1447

ADDITIONAL INSTRUCTIONS:
Each response must be submitted as a text searchable PDF, unless otherwise directed. Please include the docket number, request number, and respondent name and title on the answers. If your response contains Trade Secret data, please include a public copy.

Request Number:	**12**
Topic:	MISO Cost Estimates
Reference(s):	LRTP Tranche 2.1 Dashboard

Request:

Please reference the attached Tranche 2.1 Dashboard: Tranche 2.1 Dashboard732078.pdf for the following questions.

The Department understands that the proposed project references MISO LRTP Tranche 2.1 project numbers 22, 23, 24, and 25 (pg. 110 of Initial Application). As noted on the Tranche 2.1 Dashboard, LRTP Projects 22-25 report cost increases as of Q4 2025. The Department remade the LRTP 22-25 projects in a table below.

LRTP Project #	MTEP Approved Cost (2024$, millions)	Q4 2025 Costs (2024$, unless noted)	% Change
22	$1,459	$1739*	19.2%
23	$1,375	$1398*	1.7%
24	$1,195	$1955* (cost change under review)	63.6%
25	$222	$241	8.6%

*Some or all facilities reported in nominal (year of occurrence) dollars.

(*Continued on next page)*

To be completed by responder

Response Date: August 4, 2026
Response by: Jeanna Furnish, Senior Director of Expansion Planning
Email Address: jfurnish@misoenergy.org
Phone Number: 317.249.5400

Minnesota Department of Commerce
85 7th Place East | Suite 280 | St. Paul, MN 55101
Information Request

Docket Number: ET6675,E002/CN-25-117 ☐Nonpublic ☒Public
Requested From: MISO, Lisa Crum, Max Meyer Date of Request: 7/21/26
Type of Inquiry: General Response Due: 8/4/26

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In regards to the MISO Tranche 2.1 Dashboard:

a) Please reconcile the difference between final MTEP24 approved amounts, as well as MISO's cost review currently in process. Will the cost estimate increase trigger a Variance Analysis? If so, please provide information related to these cost estimate increases.
b) Who reported the cost estimate changes in the Tranche 2.1 dashboard to MISO?
c) What does "cost change under review" in the Tranche 2.1 dashboard? Does MISO review all cost increases, or does this indicate an ongoing Variance Analysis.
    1. If it indicates MISO is currently performing a Variance Analysis, please explain what occurs during a Variance Analysis, how costs are justified, what resources MISO uses for cost estimation, and whether these cost assumptions will be included in future MISO cost estimating procedures (such as future LRTP).
    2. If a MISO Variance request gets approved, does the updated cost get recalculated for the overall portfolio benefit-cost ratio?
    3. Are there any documented benefits increasing with cost increases?
d) Please provide a breakdown of whether the listed LRTP projects 22-25 are reported in nominal (2025$) for some, or all, of the facilities.
    1. If some, please provide detailed cost estimates for individual components of the proposed project (substation upgrades, labor, construction, raw material, etc.) driving the cost increase.
    2. If all, please provide detailed cost estimates for all components of the proposed project (substation upgrades, labor, construction, raw material, etc.) driving the cost increase.

Responses:

a) After projects are included in an approved MTEP, the transmission developers must perform further engineering and construction work to bring the projects online. This additional work may lead to project

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To be completed by responder

Response Date: August 4, 2026
Response by: Jeanna Furnish, Senior Director of Expansion Planning
Email Address: jfurnish@misoenergy.org
Phone Number: 317.249.5400

Minnesota Department of Commerce
85 7th Place East | Suite 280 | St. Paul, MN 55101
Information Request

Docket Number: ET6675,E002/CN-25-117 ☐Nonpublic ☒Public
Requested From: MISO, Lisa Crum, Max Meyer Date of Request: 7/21/26
Type of Inquiry: General Response Due: 8/4/26

SEND RESPONSE VIA EMAIL TO: Utility.Discovery@state.mn.us as well as the assigned analyst(s).
Assigned Analyst(s): Rock Park, Logan Hicks, Forest Eidbo
Email Address(es): rock.park@state.mn.us, logan.m.hicks@state.mn.us, forest.eidbo@state.mn.us
Phone Number(s): 651-539-2728, 651-539-1014, 651-539-1447

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costs increasing or decreasing. Generally speaking, costs can increase or decrease relative to MISO's original estimate for a variety of reasons including materials used, route distance, labor costs, state regulatory requirements, etc. As required by Section IX.C.1 of Attachment FF to the MISO Tariff, projects will undergo a Variance Analysis due to cost increases if MISO determines that the estimated cost for a project has exceeded the original MISO estimated cost, as stated in an MTEP Report, by twenty-five percent (25%) or more.

b) The "MTEP Approved Costs" listed in the Multi-Value Project Dashboard for the Tranche 2.1 portfolio were developed by MISO. The "Q4 2025 Costs" listed in the Multi-Value Project Dashboard for the Tranche 2.1 portfolio were provided to MISO by the transmission developers for each project.

c) "Cost change under review" does not indicate an ongoing Variance Analysis and MISO does not review all cost increases for projects. Rather, MISO reviews cost increases when the reported costs for a project appear to exceed the original MISO estimated cost, as stated in an MTEP Report, by twenty-five percent (25%) or more, which would trigger a Variance Analysis as required by Section IX.C.1 of Attachment FF to the MISO Tariff. MISO reviews the costs reported by the transmission developers to confirm that the twenty-five (25%) threshold defined in the MISO Tariff has been met.

1. As stated in the response to part (c), MISO is not currently conducting a Variance Analysis for LRTP Project Nos. 22-25.
2. MISO does not reperform the benefit-to-cost ratio analysis for a Multi-Value Project portfolio based on the outcome of a Variance Analysis.
3. MISO has not reperformed the benefit calculations for LRTP Tranche 2.1 since the portfolio was approved by the MISO Board of Directors. MISO will reperform the benefit-cost ratio analysis as part of the triennial review discussed in the response to Information Request 13(b).

d) The "Q4 2025 Costs" listed for LRTP projects 22-25 in the Multi-Value Project Dashboard for the Tranche 2.1 portfolio were reported in 2024$.

To be completed by responder

Response Date: August 4, 2026
Response by: Jeanna Furnish, Senior Director of Expansion Planning
Email Address: jfurnish@misoenergy.org
Phone Number: 317.249.5400

Minnesota Department of Commerce
85 7th Place East | Suite 280 | St. Paul, MN 55101
Information Request

Docket Number: ET6675,E002/CN-25-117 ☐Nonpublic ☒Public
Requested From: MISO, Lisa Crum, Max Meyer Date of Request: 7/21/26
Type of Inquiry: General Response Due: 8/4/26

SEND RESPONSE VIA EMAIL TO: Utility.Discovery@state.mn.us as well as the assigned analyst(s).
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Email Address(es): rock.park@state.mn.us, logan.m.hicks@state.mn.us, forest.eidbo@state.mn.us
Phone Number(s): 651-539-2728, 651-539-1014, 651-539-1447

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1. MISO does not possess detailed cost estimates for the individual components of the proposed project in nominal (2025$).
2. MISO does not possess detailed cost estimates for the individual components of the proposed project in nominal (2025$).

To be completed by responder

Response Date: August 4, 2026
Response by: Jeanna Furnish, Senior Director of Expansion Planning
Email Address: jfurnish@misoenergy.org
Phone Number: 317.249.5400

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Information Request No. 3

Docket No.:	E002/CN-25-117
Response To:	Minnesota Department of Commerce
Requestor:	Daniel Zuckerman, Rock Park, Forest Eidbo
Date Received:	April 27, 2026

Question:

The Applicants state the project will use ACSR Bunting conductor, or a similar performing conductor.

a. Did the Applicants consider alternatives to the ACSR Bunting conductor? If so, please explain the Applicant's plan if the ACSR Bunting conductor is unavailable, and explain any factors impacting the availability of supply for the ACSR Bunting conductor.

b. Can the Applicants also provide examples of similar conductors and the cost differences between them? If alternatives have not been considered, explain why.

c. Have the Applicants performed value engineering (VE), or similar analysis, on conductor types? If so, please provide this analysis. If VE was not considered not, detail why VE was not used to evaluate conductor type.

Response:

a. The Applicants analyzed more than a dozen different conductor types to determine the most suitable conductor for the Project. The analysis not only considered MISO's capacity requirements of 4,000 amps and 2,400 megawatt (MW) surge impedance loading (SIL), but also considered such things as structure geometry, conductor bundle geometry, conductor performance, and cost. Based on this analysis, the Applicants determined 1192.5 45/7 ACSR Bunting conductor met or exceeded the necessary requirements for the Project. The Applicants will continue to "fine tune" conductor selection based on detailed engineering analysis to ensure the conductor selection is economically optimal to meet the required performance specifications.

   The Applicants have engaged numerous conductor vendors, both domestically and internationally, as part of the Applicants' vendor engagement process. Based on these initial discussions, the Applicants does not currently foresee any factors that may impact the availability of Bunting conductor for the Project. Should any such availability concerns arise, the Applicants would consider mitigation options, including, but not limited to,

utilizing multiple conductor suppliers to meet the Project's needs or considering alternate, but similar performing conductor for the Project.

b. The chart below provides the cost information for 17 conductor types that the Applicants evaluated.

Conductor	Price in $/ft.
Redwing 715.5kcmil	2.17
Kettle ACSR/TW 957.2kcmil	2.60
Tern 795kcmil	2.15
Drake 795kcmil	2.76
ACCC Drake	7.95
Ruddy 900kcmil	2.35
Canary 900kcmil	2.95
Rail 954kcmil	2.50
Cardinal 954kcmil	2.90
Ortolan 1033.5kcmil	2.70
Curlew 1033.5kcmil	3.20
Bluejay 1113kcmil	3.00
Finch 1113kcmil	3.50
Bunting 1192.5kcmil	3.15
Grackle 1192.5kcmil	4.15
Bittern 1272kcmil	3.10
Pheasant 1272kcmil	4.40

Note: Pricing based on Q3 2024 estimates.

c. The Applicants conducted a detailed analysis of conductor performance and cost in support of the Application. The Applicants will supplement this response with that analysis.

Preparer: Kyle Oraskovich, Great River Energy
Title: Principal Engineer, Transmission Line Engineering
Email Address: koraskovich@GREnergy.com
Phone Number: 218-766-5611
Department: Transmission Line Engineering and
Date: May 7, 2026

PowerOn Midwest

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Information Request No. 5

Docket No.:	E002/CN-25-117
Response To:	Minnesota Department of Commerce
Requestor:	Daniel Zuckerman, Rock Park, Forest Eidbo
Date Received:	April 27, 2026

Question:

Xcel Energy provides an annual revenue requirement as alternative data to rate impacts and notes that the revenue requirement calculations do not account for future operations and maintenance costs.

a. Did the Applicants consider how they plan on accounting for operations and maintenance costs? If so, please explain how these costs have been considered, including the impact of these costs on the total project cost. If not, please explain why these costs have not been considered.

b. Has Xcel Energy used projected life-cycle operations and maintenance costs in value engineering (VE), or similar cost evaluation methodology, for this project? If so, please share the detailed VE calculations (or similar methodology), for the project including life-cycle operations and maintenance costs. If not, please explain why cost evaluation methodology was not considered.

Response:

a. Xcel Energy provided estimated annual O&M costs in the Certificate of Need Application in section 2.4.2. We determined these estimates based on historical records or industry standard costs for lifecycle operations and maintenance of these facilities.

b. No. Xcel Energy did not employ VE because it is not a requirement of the Certificate of Need Application and it was not otherwise needed for the project at this time.

Preparer:	Tony Wendland, Xcel Energy
Title:	Project Director, Capital Project Development (T&D)
Email Address:	tony.j.wendland@xcelenergy.com
Phone Number:	612-330-5531
Department:	Integrated System Planning
Date:	May 7, 2026

Minnesota Department of Commerce
85 7th Place East | Suite 280 | St. Paul, MN 55101
Information Request

Docket Number: ET6675,E002/CN-25-117 ☐Nonpublic ☒Public
Requested From: MISO, Lisa Crum, Max Meyer Date of Request: 7/21/26
Type of Inquiry: General Response Due: 8/4/26

SEND RESPONSE VIA EMAIL TO: Utility.Discovery@state.mn.us as well as the assigned analyst(s).
Assigned Analyst(s): Rock Park, Logan Hicks, Forest Eidbo
Email Address(es): rock.park@state.mn.us, logan.m.hicks@state.mn.us, forest.eidbo@state.mn.us
Phone Number(s): 651-539-2728, 651-539-1014, 651-539-1447

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Request Number: **13**

Topic: MISO LRTP Tranche 2.1 Cost Benefits Methodology and Value Engineering
Reference(s): Click or tap here to enter text.

Request:

In regards to cost-benefit calculations for Tranche 2.1 projects:

a) Did MISO perform any value engineering (VE) or other comparable methodology related to, or for, LRTP Tranche 2.1?
   1. If not, please explain why cost evaluation methodology such as value engineering was not considered.
   2. If it was considered, please share the VE analysis or similar methodology.
b) Does MISO update its benefits calculation after an LRTP portfolio is approved? If yes, has any preliminary work in updating these benefit calculations been started? Please share any preliminary benefit updates.
c) Does MISO plan on providing any updated information on cost-benefits analysis once the portfolio is completed?

Responses:

a) MISO does not perform value engineering or other comparable methodology.
   1. MISO oversaw the planning process for LRTP Tranche 2.1, but final engineering and design for the projects in LRTP Tranche 2.1 is performed by the transmission developers required to construct the projects following approval of the LRTP Tranche 2.1 portfolio by the MISO Board of Directors.
   2. *See* response to part (a).

To be completed by responder

Response Date: August 4, 2026
Response by: Jeanna Furnish, Senior Director of Expansion Planning
Email Address: jfurnish@misoenergy.org
Phone Number: 317.249.5400

Minnesota Department of Commerce
85 7th Place East | Suite 280 | St. Paul, MN 55101
Information Request

Docket Number: ET6675,E002/CN-25-117 ☐Nonpublic ☒Public
Requested From: MISO, Lisa Crum, Max Meyer Date of Request: 7/21/26
Type of Inquiry: General Response Due: 8/4/26

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Assigned Analyst(s): Rock Park, Logan Hicks, Forest Eidbo
Email Address(es): rock.park@state.mn.us, logan.m.hicks@state.mn.us, forest.eidbo@state.mn.us
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b) Pursuant to Section VII of Attachment FF to the MISO Tariff, MISO performs a triennial review of Multi-Value Projects ("MVPs"), such as the projects in LRTP Tranche 2.1, that have been approved by the MISO Board of Directors. The triennial review is performed during development of the third MTEP following approval of an MVP portfolio. For LRTP Tranche 2.1, which was approved as part of MTEP24, the triennial review will be conducted during the development of MTEP27. The triennial review includes a recalculation of costs and benefits for the approved MVPs. The triennial review for LRTP Tranche 2.1 has not yet begun.

c) *See* response to part (b).

To be completed by responder

Response Date: August 4, 2026
Response by: Jeanna Furnish, Senior Director of Expansion Planning
Email Address: jfurnish@misoenergy.org
Phone Number: 317.249.5400

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Information Request No. 10

Docket No.:	E002/CN-25-117
Response To:	Minnesota Department of Commerce
Requestor:	Logan Hicks, Rock Park, Forest Eidbo
Date Received:	July 20, 2026

Question:

Minn. Stat. § 216B.2422, subd. 4a states:

"The commission must consider local job impacts and give preference to proposals that maximize the creation of construction employment opportunities for local workers, consistent with the public interest, when evaluating any utility proposal that involves the selection or construction of facilities used to generate or deliver energy to serve the utility's customers, including but not limited to an integrated resource plan, a certificate of need, a power purchase agreement, or commission approval of a new or refurbished electric generation facility. The commission must, to the maximum extent possible, prioritize the hiring of workers from communities hosting retiring electric generation facilities, including workers previously employed at the retiring facilities."

a. Please provide a detailed plan into how the Applicants plan on engaging local contractors and the building trades. If this has not been formulated yet, explain why and give examples of previous projects, if any, that engaged local contractors and the building trades, including paying prevailing wages. If there are no previous examples, explain why.

Response: The Applicants' sourcing principles for the Project include a preference for local union labor use to the extent practicable and the Applicants will attempt to contract with local and upper Midwest contractors to the extent available. The Applicants will also comply with Minn. Stat. § 216I.05, subd. 12(d), which requires the Minnesota Public Utilities Commission to include prevailing wage-related requirements in a route permit.

Each of the Applicants in this proceeding has a long history of constructing transmission lines in Minnesota, which includes engagement with local contractors and the building trades. For example, Great River Energy is currently constructing the Northland Reliability Project, together with Minnesota Power. Likewise, Xcel Energy is currently constructing the Minnesota Energy Connection Project. These projects, like many others, include the use of local contractors and the building trades. The Applicants have been soliciting leads for local vendors of all kinds during public open houses.

Preparer:	Derrick Johnson
Title:	Regional Transmission Project Manager
Department:	Great River Energy
Date:	August 3, 2026

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Information Request No. 11

Docket No.:	E002/CN-25-117
Response To:	Minnesota Department of Commerce
Requestor:	Logan Hicks, Rock Park, Forest Eidbo
Date Received:	July 20, 2026

Question:

Please describe whether and how the Applicants are evaluating, pursuing, or incorporating federal financing assistance, grants, loan guarantees, tax credits or other support mechanisms associated with the Inflation Reduction Act (IRA), Infrastructure Investment and Jobs Act (IIJA), Department of Energy Loan Programs Office (LPO), Transmission Facilitation Program, Grid Resilience and Innovation Partnerships (GRIP), or related federal initiatives in connection with planned transmission investments.

a. If any of these programs are in consideration, please explain how they will impact the proposed project. If not, explain why these programs were not considered.

Response:

The Applicants continuously evaluate federal funding, financing, and incentive opportunities associated with transmission infrastructure, including programs authorized under the Infrastructure Investment and Jobs Act (IIJA), Inflation Reduction Act (IRA), Department of Energy (DOE) initiatives, and related federal programs. Each of the Applicants have historically pursued federal funding opportunities where program objectives, eligibility requirements, project characteristics, and expected benefits align with specific transmission needs and provide clear value to customers. For PowerOn Midwest, the Applicants have evaluated several federal support mechanisms and do not currently anticipate utilizing them for project development or financing:

Transmission Facilitation Program (TFP)
The DOE's Transmission Facilitation Program is intended to support transmission projects that face significant financing barriers and may not otherwise move forward without federal participation. The program is designed to help overcome financial hurdles through federal loans, capacity contracts, or public-private partnerships and is generally targeted toward projects that lack a fully allocated revenue stream or other established means of cost recovery. The PowerOn Midwest project does not fit this profile. The project was approved through MISO's regional transmission planning process and is supported by MISO's established Multi-Value Project (MVP) cost-allocation framework. Because the project has an approved regional cost-recovery mechanism and is expected to proceed under that framework, it does not align with the type of project the TFP

was designed to support.

DOE Loan Programs Office (LPO) – Section 1706
Section 1706 is intended to support projects that repower, repurpose, replace, or modernize existing energy infrastructure, particularly where federal financing is needed to facilitate investment. While PowerOn Midwest involves significant transmission infrastructure investment, the project was approved through MISO's regional transmission planning process and is supported by MISO's established MVP cost-allocation framework. Because the project has an approved regional cost-recovery mechanism and is expected to proceed under that framework, it does not present the type of financing challenge that the Section 1706 program was designed to address.

SPARK Program (formerly known as GRIP Program)
The Applicants also evaluated the DOE's SPARK Program. The SPARK program is intended to accelerate deployment of advanced transmission technologies, grid modernization measures, resilience improvements, automation, storage, and other innovative grid solutions. The PowerOn Midwest project is a regionally planned transmission expansion project approved through MISO's transmission planning process rather than a grid modernization or technology demonstration initiative. Accordingly, the Applicants did not identify SPARK as a suitable funding mechanism for PowerOn Midwest.

Inflation Reduction Act (IRA) Tax Incentives
The Applicants also reviewed potential federal tax incentives associated with the IRA. Most IRA tax incentives are directed toward generation resources, energy storage, manufacturing, or other technology deployments. The Applicants have not identified any material tax credit opportunities applicable to the proposed PowerOn Midwest transmission facilities that would meaningfully affect project costs or implementation.

In summary, the Applicants evaluate federal funding and financing opportunities on a program-by-program basis. Based on current program requirements, project characteristics, and financing structures, the Applicants do not anticipate that federal grants, loan guarantees, financing assistance, tax credits, or other support mechanisms associated with the IIJA, IRA, DOE Loan Programs Office, Transmission Facilitation Program, GRIP/SPARK, or related federal initiatives will materially affect development of the PowerOn Midwest project.

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