

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

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

OAH Docket No. 5-2500-39600

In the Matter of the Application of Minnesota Power
for a Certificate of Need for the HVDC
Modernization Project in Hermantown, Saint Louis
County

MPUC Docket No. E015/CN-22-607

In the Matter of the Application of Minnesota Power
for a Route Permit for a High Voltage Transmission
Line for the HVDC Modernization Project in
Hermantown, Saint Louis County

MPUC Docket No. E015/TL-22-611

OPENING BRIEF OF THE DEPARTMENT OF COMMERCE

INTRODUCTION

Minnesota Power's (also referred to here as "the Company") High-Voltage Direct Current (HVDC) modernization project is intended to assure the ongoing reliability of a 465 mile-long high-voltage transmission line that carries wind-generated electricity from North Dakota to northeastern Minnesota. No party has disputed the need for the project.

The primary dispute in this case concerns whether to approve Minnesota Power's proposed route or instead approve American Transmission Company's (ATC) alternative route proposal. With respect to the two competing alternative routes, ATC's proposed alternative is less costly in terms of initial construction costs, because it avoids the need to construct a new substation, but gives rise to uncertainties that may reduce the benefits to Minnesota customers of the project. In addition, the Commission may wish to consider concerns raised by Minnesota Power that adopting

ATC's proposal may result in delays that put at risk certain federal grant funding that Minnesota Power is pursuing.

FACTUAL AND PROCEDURAL BACKGROUND

In June 2023, Minnesota Power filed its combined application for a certificate of need and route permit in order to construct modernized HVDC terminals and transmission facilities located near Minnesota Power's existing Arrowhead Substation in Hermantown, Minnesota.¹ The proposed project's stated purpose is to facilitate the continued reliable delivery of wind-generated electricity from North Dakota to northeastern Minnesota via a 465-mile, 250-kV HVDC transmission line (the Square Butte HVDC Line) and allow interconnection with the existing alternating current (AC) transmission system. Although Minnesota Power must obtain siting approval from the North Dakota Public Service Commission, the line will serve Minnesota ratepayers and Minnesota ratepayers will pay for the project, including portions physically located in North Dakota.

In support of its petition, Minnesota Power asserted that the main driver for the modernization project is the age and condition of converter facilities at either end of the Square Butte HVDC Line.² Minnesota Power stated that the existing facilities had been successfully operated for 45 years – 15 years beyond their designed life – but HVDC terminal outages were increasing, due to failures in the control system, power electronics, transformers and other components. As the Company observed, “The orderly replacement of the HVDC terminal equipment is prudent to ensure continuous efficient delivery (and expansion) of Minnesota Power's renewable, carbon-free energy resources in the future.”³ Additionally, the project would

¹ Ex. 104.

² *Id.* at 20.

³ *Id.*

include an upgrade to best-available voltage source converter (VSC) technology that would allow the Company to continue its support for the reliable transition to clean energy.⁴

As proposed, the modernization project's Minnesota portion would include construction of a new HVDC converter station connected to a new substation by less than one mile of 345-kV large high voltage transmission line and two parallel 230 kV high voltage transmission lines less than a mile long connecting to Minnesota Power's existing Arrowhead substation.⁵ According to Minnesota Power's application, the project is scheduled to be placed in service between December 2028 and April 2030.⁶ The cost to construct the project, including both North Dakota and Minnesota portions, is expected to be between approximately \$660 million and \$940 million.⁷

In August 2023, the Commission found the application to be complete.⁸ The Commission further decided to review the applications for certificate of need and route permit jointly, pursuant to the Commission's informal process. The Commission requested that the Department's Energy and Environmental Review Analysis unit (EERA) prepare a combined environmental assessment of the project in lieu of an environmental report for the purpose of evaluating the human and environmental impacts of the project.⁹ Finally, the Commission requested that the Office of Administrative Hearings assign an Administrative Law Judge to preside over the informal

⁴ *Id.* at 25-26.

⁵ *Id.* at 8; Ex. 120, Schedule 1, p. 4 (McCourtney Direct).

⁶ Ex. 104 at 19.

⁷ *Id.* at 12.

⁸ ORDER ACCEPTING APPLICATION AS COMPLETE, AUTHORIZING JOINT REVIEW UNDER INFORMAL PROCEDURE, AND REQUESTING SUMMARY PROCEEDING (Aug. 8, 2023) (e-dockets [20238-198074-01](#)).

⁹ *See also* Minn. R. 7850.3700 (The Commissioner of the Department of Commerce is responsible for preparation of an environmental assessment of each high voltage transmission line reviewed under the Commission's alternative permitting process.)

proceeding and prepare a full report, including Findings of Fact, Conclusions of Law, and Recommendations on the merits of the proposed project.

American Transmission Company filed a petition to intervene in the proceeding on August 9.¹⁰ On September 15, ATC submitted comments asking that EERA study, and that the Commission approve, an alternative route for the project.¹¹ In particular, ATC proposed that, rather than Minnesota Power constructing a new substation, the new HVDC converter facilities interconnect with the AC transmission system via ATC's existing substation located just south of and adjacent to Minnesota Power's Arrowhead substation. ATC argued that its proposed alternative route would satisfy the same needs as Minnesota Power's proposed route, at a lower cost and with less impact on the environment and surrounding communities.

The Commission subsequently agreed that the EERA's environmental review should include ATC's proposed route. The Commission also determined that informal proceedings would not be sufficient to fully develop the record relating to the feasibility of ATC's proposed alternative. Accordingly, the Commission referred the matter for a contested case proceeding. The Commission also granted petitions to intervene by ATC and the Large Power Intervenors (LPI).¹²

The EERA's environmental review provides the Commission with information to consider in determining whether to grant the applicant's request for a certificate of need and route permit and what, if any, conditions to impose.¹³ On December 1, after an opportunity for public comment

¹⁰ Petition to Intervene (Aug. 9, 2023) (e-dockets [20238-198112-01](#)).

¹¹ Scoping Comments on Environmental Assessment (Sept. 15, 2023) (e-dockets [20239-198974-02](#)).

¹² ORDER IDENTIFYING ALTERNATIVE PROPOSAL FOR ENVIRONMENTAL ASSESSMENT SCOPE, GRANTING VARIANCE, AND NOTICE OF AND ORDER FOR HEARING (November 2, 2023) (e-dockets [202311-200811-02](#)).

¹³ See Minn. R. part 7850.4100.

regarding the scope of environmental review, EERA issued its environmental assessment scoping decision to describe the scope of the environmental review that EERA would conduct, including, as the Commission directed, two route alternatives: the Minnesota Power proposal and the ATC alternative. On December 27, EERA issued a revised scoping decision to address ATC's modification of its proposed alternative route.¹⁴

EERA issued its Environmental Assessment (EA) on February 29, 2024.¹⁵ The EA prepared for the project and the record created at the public hearing address the issues identified in the environmental review scoping decision. In its EA, EERA analyzed the environmental impacts of the two route alternatives and measures that could be taken to minimize those impacts. The prehearing order established March 28 as the deadline for public comments and April 15 as the deadline for any response by EERA to comments regarding the EA. In its April 15 comments, EERA addressed public comments received on the environmental assessment for the project, considered suggested corrections to the Environmental Assessment document, recommended special permit conditions to mitigate potential environmental impacts, and recommended route permit modifications consistent with route permits granted in recent cases.¹⁶

APPLICABLE LEGAL STANDARDS

Because the proposed project includes a high voltage transmission line with a capacity of 200 kilovolts or more that is longer than 1,500 feet, it meets the definition of a “large energy facility”¹⁷ requiring a certificate of need issued by the Commission before it can be constructed.¹⁸ The Commission's rules describe four broad criteria that the Commission must consider in

¹⁴ Ex. DOC EERA 511.

¹⁵ Ex. DOC EERA 515.

¹⁶ EERA Hearing Comments (April 15, 2024) (e-dockets [20244-205360-01](#))

¹⁷ Minn. Stat. § 216B.2421.

¹⁸ Minn. Stat. § 216B.243.

determine whether to grant a certificate of need.¹⁹ Consistent with those rules, the Commission must grant a certificate of need if it determines that:

- 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;
- A more reasonable and prudent alternative to the proposed facility has not been demonstrated by a preponderance of the evidence on the record;
- 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; and;
- 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.

In addition, before the Commission can hold any public hearing or render a final decision, it must first receive an environmental report, environmental assessment, or environmental impact statement.²⁰ The Commission's rules describe a process for preparing the environmental report that requires notice to interested parties and one or more public meetings.²¹ Minnesota Rules 7849.1500 specifies what must be included in the environmental report. When the Commission makes its final decision on the certificate of need application, it must also determine whether the environmental report addressed the issues identified for consideration.²²

¹⁹ Minn. R. 7849.0120.

²⁰ Minn. R. 7849.1800, subp. 1.

²¹ Minn. R. 7849.1300.

²² Minn. R. 7849, subd. 1800, subd. 2.

DISCUSSION

I. The Record Establishes the Criteria Necessary for the Commission to Grant a Certificate of Need for the Modernization Project

A. Denial of the Application Would Likely Adversely Affect the Future Adequacy, Reliability, or Efficiency of Energy Supply

The Square Butte HVDC line has, for many years, reliably carried electricity, particularly wind-generated electricity, from North Dakota, to northeastern Minnesota where it has been available to serve Minnesota Power's customers. Thus, the existence of demand for the electricity that the project would transmit is not in dispute. However, the HVDC line is now 15 years beyond its 30-year operational life and Minnesota Power has expressed concern that the lack of replacement parts could cause the aging HVDC converter station to fail irreparably, taking the HVDC line out of service for an extended period of time. Outages of the HVDC line impose costs, including congestion costs, costs to reserve transmission on another party's system, replacement energy costs and lost production tax credits. Assuming current failure rates, estimated outage-related costs are least \$7 million per year and likely substantially more.²³ Further, this estimate does not take into account inflation or the increasing frequency of outages, nor does it take into account the benefits from implementing updated technology as part of the modernization project, which Minnesota Power describes as substantial.

In addition, not implementing the modernization project would likely make it more difficult for Minnesota Power to meet Minnesota's "carbon free by 2050" mandate.²⁴ Currently, the Square Butte line provides Minnesota with access to 600 MW of wind generation. If the line were to go out of service, Minnesota Power would likely be forced to replace the lost wind resources with

²³ Ex. DOC DER 600 at 11 (Zajicek Direct).

²⁴ *Id.* at 12.

more expensive, fossil-fueled generation.²⁵ Alternatively, if Minnesota Power were to attempt to reach its goal by investing in other carbon-free resources or transmission, this could result in other costs and delay.

B. Except for, Possibly, the ATC Alternative, There is No Reasonable and Prudent Alternative Supported by Preponderance of the Evidence

Setting aside the alternative that ATC has proposed, which is addressed in greater detail below, no reasonable and prudent alternative to the proposed project has been demonstrated by a preponderance of the evidence. Although changing HVDC transmission voltages to interconnect with the existing 230-kV system, replacing the HVDC line with an AC line, using different HVDC technologies, replacing the generation assets served by the HVDC line, and a no-build alternatives were considered, none of these represented a reasonable and prudent alternative to the proposed modernization project.²⁶

Minnesota Power asserted that either changing the HVDC transmission voltages or replacing the HVDC line with an AC line would impose substantial additional costs in order to replace additional facilities.²⁷ Further, Minnesota Power states that the proposed 345-kV option better fits MISO's transmission plans and provides for a better, cheaper regional grid.²⁸ Additionally, Minnesota Power notes that replacing the DC line with an AC line would involve significantly higher costs and extended outage times resulting in costs well in excess of the proposed project without providing as much benefit.²⁹

²⁵ *Id.*

²⁶ Ex. DOC DER 602 at 6 (Zajicek Rebuttal).

²⁷ Ex. DOC DER 600 at 17 (Zajicek Direct).

²⁸ *Id.*

²⁹ *Id.*

Minnesota Power also stated that its preferred VSC technology would provide better service and more flexibility to meet future needs. Alternative technologies considered required additional supporting infrastructure that eliminated any cost advantage over the proposed project.³⁰

Because Minnesota Power, as the transmission owner, would be required by MISO's rules to maintain the line's reliability and address transmission congestion that would result in the absence if the modernization project is not completed, the no-build alternative does not offer a more cost-effective solution.³¹ The use of distributed generation to replace the North Dakota wind resources that would become unavailable if the existing line were to be retired would likely require expensive AC upgrades.

In conclusion, Minnesota Power's analysis of potential alternatives is reasonable and that, with the possible exception of the ATC alternative, which is discussed below, there is no reasonably prudent alternative that is supported by a preponderance of the evidence.

C. The Project Will Provide Benefits to Society

For the reasons discussed above, the proposed project will benefit society by enabling the continued availability of wind-generated electricity to serve Minnesota Power's Minnesota customers. Additionally, the Environmental Assessment provides a thorough analysis of impacts on the environment and human health and contains recommended specific actions to mitigate adverse effects.

D. The Proposed Project Complies with All Applicable Local, State, and Federal Legal Requirements and Policies

Minnesota Power's application discusses a comprehensive list of relevant governmental policies, rules, regulations, and requirements and how the proposed project will comply with those

³⁰ *Id.* at 18.

³¹ Ex. DOC DER-602 at 4 (Zajicek Rebuttal).

requirements. Minnesota Power also discussed its plans to take advantage of state and federal financial incentives to help mitigate the rate impact of constructing the project. Finally, as discussed above, the project will help to facilitate Minnesota Power's compliance with Minnesota's carbon free mandate. The record discloses no reason to believe that Minnesota Power will not comply with applicable legal requirements.

E. The Proposed Project Meets Legal Requirements Relating to Renewable Energy

In addition to the criteria set out in the Commission's rules, certain statutes provide additional requirements applicable to an application for a certificate of need, particularly relating to renewable energy. Thus, Minnesota law restricts the Commission from granting a certificate of need for a large energy facility that generates power from a nonrenewable source or transmits power generated by a nonrenewable source.³² Here, the proposed project is more efficient than AC alternatives and primarily connects to bring electricity generated in North Dakota to serve Minnesota customers. Accordingly, these requirements are satisfied.

Further, in considering an application for certificate of need, the Commission must consider whether the applicant is in compliance with requirements relating to renewable energy sources and carbon-free electricity generation.³³ Based on a review of the most recent biennial transmission report, Minnesota Power complies with these requirements.³⁴

³² Minn. Stat. §§ 216B.243, subd. 3(11); 216B.243, subd. 3a; 216B.2422, subd. 4; see also 216H.03 (prohibiting construction of a large energy facility that would contribute to carbon dioxide emissions).

³³ Minn. Stat. §§ 216B.243, subd. 3(10); 216B.1691.

³⁴ Ex. DOC-DER 600 at 28-29 (Zajicek Direct).

II. The Commission Should Carefully Consider All Factors Bearing on the Benefits that the Two Competing Alternatives Offer for Minnesota

The project's cost will inevitably be reflected in rates, so cost is one important consideration. Because the ATC alternative does not require the construction of a new substation and the Minnesota Power proposal does, the ATC alternative offers modestly lower initial construction costs. However, the task before the Commission requires much more than simply comparing the costs of the two alternatives. The Commission should consider a number of factors in determining which of the two alternative route alternatives provides the greatest benefit to Minnesota residents. The ATC alternative also gives rise to certain risks, whose extent is not fully known, that may have the effect of reducing the benefits of the modernization project for Minnesota customers. The Commission must determine whether those risks outweigh the benefits of lower construction costs.

A. Project costs

Regardless of which alternative the Commission selects, the cost of the project will be borne by Minnesota Power's customers. Because Minnesota Power's proposal includes the construction of a new substation and the ATC alternative does not, the initial construction costs will likely be lower if the Commission approves the ATC alternative. However, each party disputes the others party's cost estimate, particularly relating to the issue of land acquisition costs.

With its rebuttal testimony, Minnesota Power provided an updated cost estimate, prepared by a third-party engineering consultant.³⁵ Minnesota Power was particularly critical of ATC's estimate of the project costs of the ATC alternative because ATC had omitted land acquisition costs of \$10 million, which Minnesota Power had already incurred for all parcels required for the project, and costs of \$2 million for the HVDC line entrance, which ATC acknowledged would be

³⁵ Ex. 130 at 37-38 (Winter Rebuttal).

needed under the ATC alternative. Based on input from its consultant, Minnesota Power presented an updated comparison of the two alternatives reflecting a cost for the Minnesota Power proposal of \$65 million and a cost for the ATC alternative (including land acquisition costs and HVDC line entrance costs and assuming no costs for a 230-kV Phase Shifting Transformer (PST) at ATC's Arrowhead substation) of \$61 million, a difference of just \$4 million.³⁶ These estimates do not include costs of outages during construction. The Department DER estimated outage costs for the Minnesota Power alternative as between \$175,000 to \$219,000 for a four to five day outage. However, these costs should be similar for either alternatives and, therefore, do not weigh in favor of either alternative.³⁷

ATC provided its own updated cost estimate.³⁸ This updated estimate included, like Minnesota Power's estimate, \$2 million for the HVDC line entrance, but only \$500,000 for land acquisition costs. This \$500,000 is intended to reflect ATC's cost of obtaining an easement covering 17 acres for the double circuit 345kV line.³⁹ That estimate does not include the cost of land needed for the construction of the converter station that will be required for either alternative. Because these costs will need to be incurred for either alternative, it appears that ATC's estimate understates land acquisition costs.

B. Removal of the 800 Mega Volt Amp limit at ATC's Arrowhead substation

When it granted the permit for the construction of ATC's Arrowhead substation, the Minnesota Environmental Quality Board (EQB) imposed a condition that the substation not be used to transmit power in excess of 800 Mega Volt Amp (MVA).⁴⁰ In order to limit power flows,

³⁶ *Id.* at Schedule 24.

³⁷ Ex. DOC-DER 602 at 35 (Zajicek Direct)

³⁸ Ex. ATC-213 (Johanek Rebuttal) (errata).

³⁹ Transcript at 140 (Johanek).

⁴⁰ Ex. 121 at 67 (Winter Direct).

ATC installed a PST at its Arrowhead substation. ATC's proposed alternative includes removing and decommissioning the PST,⁴¹ an action that would require coordination with MISO and other transmission owners.⁴² ATC argues that there is no legitimate reason for the 800 MVA limit to remain in place and that the PST is obsolete because it no longer serves any useful purpose.⁴³ ATC asserts that, regardless of which alternative the Commission chooses for the modernization project, it should remove the 800 MVA limit.⁴⁴

Although Minnesota Power and ATC vigorously dispute the effect of removing the 800 MVA limit from a technical perspective,⁴⁵ they agree that one practical consequence would be to increase the amount of power flowing from Minnesota to Wisconsin through ATC's Arrowhead substation.⁴⁶ Because this is power that would otherwise be available to serve Minnesota customers, increased power flows from Minnesota to Wisconsin would, at least to some degree, reduce the benefits of the modernization project for Minnesota Power's Minnesota customers.⁴⁷ The Department has had only limited success in trying to quantify the impact, however.

Minnesota Power estimates that ATC's alternative would result in a 7-10% increase in the amount of power flowing from Minnesota to Wisconsin as compared to the Minnesota Power proposed alternative.⁴⁸ This would equate to an increase flow to Wisconsin from Minnesota of

⁴¹ Ex. ATC-228 at 9 (Dagenais Direct); Ex. DOC-DER 602 at 18 (Zajicek Rebuttal).

⁴² Transcript at 109 (Dagenais).

⁴³ Ex. ATC-244 at 40, 45-47 (Dagenais Rebuttal).

⁴⁴ Since the ATC Arrowhead substation was originally permitted, jurisdiction over this issue has been transferred from the EQB to the Commission. Zajicek Rebuttal at 13. To date, ATC has not made a separate request to remove this limitation and it is not clear that the record in this case is sufficient for the Commission to make that decision.

⁴⁵ See Ex. DOC DER 602 at 9-11 (Zajicek Rebuttal).

⁴⁶ Ex. 121 at 69 (Winter Direct); Ex. ATC-228 at 38 (Dagenais Direct).

⁴⁷ Ex. DOC DER 602 at 18 (Zajicek Rebuttal).

⁴⁸ *Id.* at 13; Ex. 121 at 38 (Winter Direct).

38.5 to 55 MWs, enough to power 25,025 to 35,750 homes.⁴⁹ Although there would be costs associated with the flow of power into Wisconsin which could, over the life of the project, be significant, the Department believes that Minnesota Power's estimate is likely overstated.⁵⁰ There is evidence that at least one reason for the 800 MVA limit being imposed was that if power flow to Wisconsin was not restricted, this would likely result in increased production of power from coal facilities in Minnesota and Wisconsin, with associated environmental impacts.⁵¹ Although there are substantially more clean energy resources available now than when the EQB original adopted the 800 MVA limit, it is at least conceivable that increased flows of power from Minnesota to Wisconsin could increase the amount of fossil generation necessary to meet demand.

ATC, however, disputes the total amount of power loss that would result from removal of the 800 MVA limit. ATC contends that the increased flow of power from Minnesota to Wisconsin via ATC's Arrowhead substation would be offset by lower flows on other transmission lines into Wisconsin.⁵² ATC does not provide any detailed analysis that clearly demonstrates the "net" effect of eliminating the 800 MVA limit. ATC points to a study that it contends shows that network flows from Minnesota Power's system to ATC's system would be similar under either alternative.⁵³ However, ATC has not explained the study upon which it relies or how it supports that conclusion. ATC also asserts that its alternative would result in lower line losses than the Minnesota Power proposal. However, the difference between the two proposals – 1 MW less electrical losses compared to Minnesota Power's proposal – is negligible.⁵⁴

⁴⁹ Ex. DOC DER 602 at 14 (Zajicek Rebuttal).

⁵⁰ *Id.* at 16.

⁵¹ *Id.* at 12-13.

⁵² *Id.*, Schedule MZ-R-5.

⁵³ Ex. ATC-228 at 39 (Dagenais Direct).

⁵⁴ *Id.* at 12.

C. Potential for delay and its effect on project funding

Minnesota Power has obtained project funding from the federal government and the Minnesota legislature. The Company has stated that it intends to seek additional state and federal funding.⁵⁵ To date, Minnesota Power has received a \$15 million grant from the Minnesota legislature and is eligible for \$10 million in state matching funds if it receives federal funding. Minnesota Power is also in negotiations to receive \$50 million in federal funding through the Department of Energy's Grid Resilience and Innovation Partnerships (GRIP) program and has applied to receive an additional \$50 million through the second round of GRIP funding. This funding is important because it will reduce the overall cost of the project for the benefit of Minnesota Power's ratepayers.

Minnesota Power has expressed concern that selecting the ATC alternative could delay the project and prevent meeting project milestones, which could put federal funding at risk.⁵⁶ Minnesota Power has also asserted that the ATC alternative would not be compatible with its application for GRIP round 2 funding; accordingly, selecting the ATC alternative would make the project ineligible for that additional funding.⁵⁷ Minnesota Power has not, however, provided detail regarding GRIP round 1 milestones, beyond the requirement that the project must be completed within 60 months and it is not clear whether any delay would risk the entire \$50 million grant or only some portion. Additionally, although Minnesota Power's Notice Plan states that the project is currently scheduled to go in service in 2027,⁵⁸ the certificate of need application states that, the manufacturer's timeline, the guaranteed latest in-service date is April 2030.⁵⁹ The Department has

⁵⁵ Ex. 119 at 13-19 (Gunderson Direct).

⁵⁶ *Id.* at 20; Ex. DOC DER 602 at 20-21 (Zajicek Rebuttal).

⁵⁷ Ex. 119 at 21 (Gunderson Direct).

⁵⁸ Ex. 100 at 2.

⁵⁹ Ex. 104 at 12.

determined that achieving an in-service date earlier than 2030 is possible under Minnesota Power's alternative, although that would require accelerated delivery from their supplier, and thus the deadline might be missed regardless of which alternative is selected. If the ATC alternative is approved it is very unlikely that the project will achieve an in-service data earlier than 2030, as ATC's project timelines all only achieve the 2030 deadline. Additionally, Minnesota Power has expressed concerns with ATC's ability to meet even the 2030 in-service date. Accordingly, if any portion of GRIP funding depends on the project being placed in service by the second quarter 2029, that portion of the funding will be lost.⁶⁰ Minnesota Power has not provided information necessary to determine what portion of the GRIP round one funding might be at risk.

The availability of GRIP round two funding is even more of an unknown. Minnesota Power's eligibility to received GRIP round two funding is still in the pre-application phase, with the final application due in May 2024.⁶¹ The Department does not have information that would enable it to predict how likely it is that Minnesota Power will be approved to receive this funding.⁶² Thus, the Department recommends that the speculative availability of GRIP round two funding should be given very little, if any, weight in analyzing which of the two alternatives to choose.⁶³

D. Expansion

Minnesota Power stated in its application for certificate of need that the new St. Louis County substation to be constructed as part of the project was designed to accommodate future expansion of the HVDC system and regional high voltage AC transmission development.⁶⁴ It appears that ATC's Arrowhead substation has less capacity for expansion, at least as currently

⁶⁰ Ex. DOC DER 602 at 30 (Zajicek Rebuttal).

⁶¹ Ex. 127 at 6-7 (Gunderson Rebuttal).

⁶² Ex. DOC DER 602 at 23 (Zajicek Rebuttal).

⁶³ *Id.* at 24.

⁶⁴ Ex. 104 at 11.

constructed.⁶⁵ However, MISO does not appear to have any present plans to expand the local 345 kV system in northeastern Minnesota. Accordingly, although the ability to accommodate future expansion has some benefit, it is not a high priority for this project.⁶⁶ Further, costs of expansion would be dealt with in a future proceeding.⁶⁷

CONCLUSION

Based upon its review of the record, the Department recommends that:

- A. With respect to Minnesota Power's request for a route permit:
 - 1. That the Commission adopt permit conditions proposed by Minnesota Power and the Department of Natural Resources, as discussed in EERA's April 15 comments, in order to mitigate potential environmental impacts.
 - 2. That the Commission modify the sample route permit filed by Commission staff, as discussed in EERA's April 15 comments, to include language adopted in recent Commission dockets.
- B. With respect to Minnesota Power's request for a certificate of need, that the Commission find that, upon consideration of the Environmental Assessment, the proposed facility "will provide benefits to society in a manner compatible with protecting the natural and socioeconomic environments, including human health" and issue a certificate of need to Minnesota Power for the HVDC Modernization Project.
- C. Regarding whether to approve Minnesota Power's proposed project or ATC's proposed alternative, that the Commission should consider:
 - 1. the construction cost savings of the ATC alternative;

⁶⁵ Ex. DOC DER 602 at 31 (Zajicek Rebuttal).

⁶⁶ *Id.* at 32-33.

⁶⁷ *Id.* at 32.

2. the potential increased power flows into Wisconsin and the associated impact on the benefits Minnesota ratepayers receive from the project;
3. the risks for delays to the project from the ATC alternative due to various studies needing to be redone;
4. the potential impact of delays on state and federal funding and the relative size of that impact;
5. if the Commission believes it to be likely that Minnesota Power is able to obtain an in-service date prior to 2030; and
6. what weight to put on the benefits of the proposed St. Louis County substation's design for future expandability of the local 345 kV transmission system.

D. Require Minnesota Power to provide information regarding the milestones for obtaining federal funds from the GRIP round 1 funding and what portion of those funds might be lost if there are delays that cause the project to not be completed by the 60-month deadline prior to making its decision.

Dated: May 3, 2024

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