



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

**ENVIRONMENTAL ASSESSMENT
SCOPING DECISION**

**DOCKET NO. E012/CN-22-607
DOCKET NO. E015/TL-22-611**

The above matters have come before the Commissioner of the Department of Commerce (Department) for a decision on the scope of the environmental assessment (EA) to be prepared for Minnesota Power to modernize and upgrade the Minnesota terminal of its 465-mile Square Butte High-Voltage Direct Current (HVDC) transmission line and interconnect the upgraded HVDC terminal to the existing alternating current (AC) transmission system near the Arrowhead Substation in Hermantown, Minnesota.

Project Description

On June 1, 2023, Minnesota Power (applicant) filed a combined certificate of need (CN) and a route permit application with the Minnesota Public Utilities Commission (Commission) to modernize and upgrade the Minnesota terminal of its 465-mile Square Butte HVDC transmission line and interconnect the upgraded HVDC terminal to the existing AC transmission system near the Arrowhead Substation in Hermantown, Minnesota.¹ The route permit application was submitted under the alternative review process (Minnesota Statute 216E.04; Minnesota Rule 7850.2800-3900).

The project includes the construction of approximately 40 acres of new terminal facilities and high voltage transmission lines (HVTL) to connect those facilities to each other and the existing electrical grid. The new HVDC terminal is proposed to connect to the existing alternating current system by constructing a new St. Louis County 345 kilovolt (kV)/230 kV substation near the current Arrowhead Substation.² The new HVDC terminal would be connected to the St. Louis County Substation by less than one mile of 345 kV HVTL. The new St. Louis County substation would be connected to the existing Arrowhead Substation by two parallel 230 kV HVTLs less than one mile in length.³ Additionally, a short portion of the existing HVDC line will need to be reconfigured to terminate at the new HVDC terminal.⁴

Updates and expansions are required at the other end of the Square Butte line in North Dakota as well, to be regulated by the North Dakota Public Service Commission.⁵ The project includes enabling bi-directional transmission while maintaining the same voltage and power transfer capability along the Square Butte HVDC line.⁶

¹ Minnesota Power HVDC Modernization Project, Application to the Minnesota Public Utilities Commission for a Route Permit for a Large Electric Generating Facility, June 1, 2023, eDockets Numbers [20236-196333-02](#) (through -16) and [20236-196346-02](#), hereinafter the Route Permit Application.

² Route Permit Application, Section 1.1.

³ Id.

⁴ Id.

⁵ Route Permit Application, Section 1.3.

⁶ Route Permit Application, Section 1.1.

The Project is currently scheduled to be placed in service between 2028 and 2030.⁷

Project Purpose

Minnesota Power indicates that the project is needed to modernize aging HVDC assets, continue to position the transmission grid for clean energy transition, and improve the reliability of the transmission system.⁸ Due to increased HVDC outages and equipment failure, the orderly replacement of the HVDC terminal equipment is prudent to ensure continuous efficient delivery and expansion of Minnesota Power's renewable energy resources into the future.⁹ In addition to the replacement of the existing HVDC terminal, the new HVDC technology would be designed to provide key reliability attributes including voltage regulation, frequency response, blackstart capability, and bidirectional power transfer capability.¹⁰ Minnesota Power purchased the Square Butte HVDC Line in 2010, which has been operating for 45 years, with the Commission's approval.¹¹

Regulatory Process and Procedures

The HVDC Modernization Project requires a certificate of need¹² and a route permit¹³ from the Commission. On June 1, 2023, the applicant submitted a combined application for both approvals. The project qualifies for the alternative permitting process because it is an HVTL in excess of 200 kV and fewer than 30 miles in length.¹⁴ Department of Commerce, Energy Environmental Review and Analysis (EERA) staff is responsible for conducting environmental review for CN and route permit applications submitted to the Commission.¹⁵ As two concurrent environmental reviews are required – one for the CN application and one for the route permit application – the Commission has authorized EERA staff to combine the environmental review for the two applications.¹⁶

An EA will be prepared to meet the requirements of both review processes. An EA contains an overview of the resources affected by the project. It also discusses potential human and environmental impacts and mitigation measures.¹⁷ Under the alternative permitting process, an EA is the only required state environmental review document.¹⁸ The environmental review and permitting process typically takes six to nine months to complete.

Scoping Process

Scoping is the first step in the environmental review process. The scoping process has two primary purposes: (1) to gather public input as to the impacts and mitigation measures to study in the EA and (2) to focus the EA on those impacts and mitigation measures that will aid in the Commission's decisions on the CN and route permit applications.

⁷ Route Permit Application, Section 1.3.

⁸ Route Permit Application, Section 3.1.

⁹ Id.

¹⁰ Id.

¹¹ Docket No. E015/PA-09-526

¹² Minn. Stat. 216B.243

¹³ Minn. Stat. 216E.03, subd. 2.

¹⁴ Minn. Stat. 216E.04, subd. 2.

¹⁵ Minnesota Rule 7849.1200; Minnesota Rule 7850.3700.

¹⁶ Commission Order, August 8, 2023, eDockets Number [20238-198074-02](#).

¹⁷ Minn. R. [7850.3700](#), subp. 4.

¹⁸ Minn. Stat. 216E.04, subd. 5

Staff use the information gathered during scoping to inform the content of the EA. EERA staff gathered input on the scope of the EA through public meetings and an associated comment period. This scoping decision identifies the impacts and mitigation measures as well as alternatives to the project itself that will be analyzed in the EA.

Public Information and Scoping Meetings

On August 29, 2023, the Commission and EERA jointly held a public meeting in Cloquet, Minnesota. Approximately 15 people attended this meeting; six attendees provided public comments, all but one expressing concerns with and requesting mitigation measures for the project.¹⁹ The following evening, August 30, 2023, the Commission and EERA held a remote-access public meeting. Approximately four people attended this meeting, and while no one made an official comment, one person asked several questions on the record.

The purpose of the meetings was to provide information to the public about the proposed project, to answer questions, and to allow the public an opportunity to suggest alternatives and impacts for consideration during preparation of the EA. A court reporter was present at the meetings to document oral statements.

Written Public Comments

A comment period ending on September 13, 2023, provided the public with an opportunity to provide input on the scope of the EA. Written comments were received during this comment period from one community member and the applicant.²⁰

On September 12, 2023, the Commission extended the public comment period through September 23, 2023.²¹ Written comments were received during this comment period from three community members, the applicant, a transmission utility, one state agency, and one local unit of government.

Applicant

During the initial comment period, Minnesota Power submitted a comment letter: (1) expanding their proposed route by a parcel to the north and a parcel to the northeast (Map 1), and (2) requesting that the expanded route be included for analysis in the EA.²²

Minnesota Power followed up during the extended comment period: (1) requesting an extension to provide their reply to additional scoping comments which included alternatives,²³ and (2) submitting their reply to the additional scoping comments and alternatives.²⁴ Their reply requested that the alternative proposed by American Transmission Company LLC not be studied in the EA, and that their commitments in response to the scoping comments from the Minnesota Department of Natural Resources be included in the EA.

¹⁹ Oral Comments on Scope of Environmental Assessment, eDockets No. [20239-198862-01](#).

²⁰ Compiled Public Comments, eDockets No. [202310-199399](#).

²¹ See Notice of Extended Comment Period, September 12, 2023, eDockets No. [20239-198883-02](#).

²² Scoping Comments of Minnesota Power, September 13, 2023, eDockets No. [20239-198914-01](#).

²³ Request to Respond to Scoping Alternatives, September 20, 2023, eDockets No. [20239-199053-02](#).

²⁴ Scoping Comments of Minnesota Power, September 29 and October 2, 2023, eDockets Nos. [20239-199286-01](#) and [202310-199303-01](#) respectively.

Minnesota Department of Natural Resources (DNR)

DNR comments focused on the routing of transmission lines over a designated trout stream.²⁵ DNR requested that the applicant coordinate with the agency regarding the location and number of crossings of the trout stream, and that the EA analyze impacts to the trout stream. DNR expressed concern for mineral resources and a unique natural resource, the northern goshawk, in the project area. DNR also asked for more project details such as decommissioned components and suggested possible mitigation strategies for the project.

American Transmission Company LLC (ATC)

ATC's comments focused on an alternative that would eliminate Minnesota Power's proposed St. Louis County substation and instead connect the applicant's new HVDC terminal to the electrical grid by connecting to ATC's existing Arrowhead substation, which is directly south of the applicant's existing Arrowhead substation (Map 2) (ATC Alternative). The ATC Alternative includes a 150-foot wide right-of-way for the double-circuit 345-kV lines and a variable route width with a maximum of 0.91 miles.

ATC emphasizes that this alternative will meet the same project needs while reducing costs and impacts to the environment and community because a new substation is not needed to achieve the project's purposes. Specifically, ATC recommends the EA study the following:

- Identify impacts that each project facility will have on surrounding resources and land cover types.
- Address cost estimates associated with each project facility.

Other Comments

The Solway Town Board of Supervisors highlighted concerns from residents near the project by requesting that the footprint be minimal and that every effort be made to keep lighting and noise levels as low as possible. The three community members who commented reiterated these concerns.

Commission Review

After close of the public comment period, EERA staff provided the Commission with a summary of the EA scoping process.²⁶ The summary discussed the comments received on the scope of the EA and EERA staff's recommendation to study the applicant's proposed route, including the expanded route width, and the ATC Alternative in the EA. On November 9, 2023, the Commission met to consider the routes to be studied in the EA and ordered that the EA analyze both the applicant's proposed route and the ATC Alternative.

Route Alternatives

The only route alternative proposed during the EA scoping period was the ATC Alternative. This alternative will be included in the scope of EA.

²⁵ Scoping Comments of the Minnesota DNR, September 22, 2023, eDockets No. [20239-199095-01](#).

²⁶ Department of Commerce, Comments and Recommendations on Scoping Process, October 5, 2023, eDockets No. [202310-199409-01](#).

System Alternatives

The only system alternative proposed during scoping was the ATC Alternative. This alternative will be included in the scope of EA.

Beyond system alternatives proposed during scoping, Minnesota Rule 7849.1500 notes alternatives that should be examined during environmental review for all certificate of need applications. These alternatives include, among others, the no-build alternative, purchased power, and generation rather than transmission.²⁷ In its order of February 1, 2023, the Commission approved exemptions requested by the applicant for certain types of CN data.²⁸ However, the Commission did not exempt the applicant from any of the Minnesota Rule 7849.5100 alternatives.²⁹ Thus, the EA will also analyze the applicable system alternatives noted in Minnesota Rule 7849.5100.

HAVING REVIEWED THE MATTER, consulted with EERA staff, and in accordance with Minnesota Rule 7850.3700, I hereby make the following scoping decision:

MATTERS TO BE ADDRESSED

The EA will describe the project and the human and environmental resources of the project area. It will provide information on the potential impacts of the project as they relate to the topics outlined in this scoping decision and possible mitigation measures. It will identify impacts that cannot be avoided and irretrievable commitments of resources, as well as permits from other government entities that may be required for the project. The EA will discuss the relative merits of proposed routes with respect to the routing factors in Minnesota Rule 7850.4100.

Data and analyses will be commensurate with the level of impact for a given resource and the relevance of the information to consider mitigation measures. EERA staff will consider the relationship between the cost of data and analyses and the relevance and importance of the information in determining the level of detail of information to be prepared for the EA. Less important material may be summarized, consolidated, or simply referenced.

If relevant information cannot be obtained within timelines prescribed by statute and rule, the costs of obtaining such information is excessive, or the means to obtain it is unknown, EERA staff will include in the EA a statement that such information is incomplete or unavailable and the relevance of the information in evaluating potential impacts or alternatives.

The EA will include a description and analysis of the human and environmental impacts of the proposed project and alternatives to the project that would have otherwise been required by Minnesota Rule 7849.1500 in an environmental report. This includes evaluating matters of size, type, and timing that would normally be excluded in an EA for a route permit application. The EA will describe and analyze the availability and feasibility of system alternatives.

²⁷ Minn. R. 7849.1500.

²⁸ Commission Order (Approving Requested Exemptions with Modifications), February 1, 2023, eDockets Number [20232-192809-01](#).

²⁹ Id.

The issues outlined below will be analyzed in the EA for the project. This outline is not intended to serve as a table of contents for the document itself.

I. PROJECT OVERVIEW

- A. Description
- B. Purpose
- C. Costs
- D. Schedule

II. REGULATORY FRAMEWORK

- A. Certificate of Need
- B. Route Permit
- C. Environmental Review
- D. Public Hearing
- E. Certificate of Need and Route Permit Decisions
- F. Other Permits and Approvals

III. PROJECT DESIGN

- A. Construction
 - Transmission Line Segments
 - Right-of-Way Requirements
 - Substation
 - Associated Facilities
- B. Operation and Maintenance
 - Restoration and Vegetation Management

IV. AFFECTED ENVIRONMENT, POTENTIAL IMPACTS AND MITIGATIVE MEASURES

- A. Environmental Setting
- B. Human Settlements
 - Noise
 - Aesthetics
 - Displacement
 - Zoning and Land Use Compatibility
 - Cultural Values
 - Transportation and Public Services
 - Radio and Television Interference
- C. Socioeconomics
 - Environmental Justice
 - Local Economies
- D. Public Health and Safety
 - Electric and Magnetic Fields
 - Emergency Services
- E. Land Based Economies

- Agriculture
- Forestry
- Mining
- Recreation and Tourism
- F. Archaeological and Historic Resources
- G. Natural Environment
 - Air Quality (including Greenhouse Gases)
 - Climate Change and Design for Resilience
 - Water Resources
 - Geology and Soils
 - Vegetation
 - Wildlife
 - Threatened / Endangered / Rare and Unique Natural Resources
- H. Use or Paralleling of Existing Right-of-Way
- I. Electric System Reliability
- J. Costs that are Dependent on Design and Route
- K. Adverse Impacts that Cannot be Avoided
- L. Irreversible and Irretrievable Commitments of Resources
- M. Cumulative Potential Effects

V. ROUTE ALTERNATIVES

The EA will analyze the applicant's proposed route (Map 1) and the ATC Alternative (Map 2).

VI. SYSTEM ALTERNATIVES

The EA will analyze the availability and feasibility of the following system alternatives, along with the human and environmental impacts and potential mitigation measures associated with each:

- A. ATC Alternative
- B. No-build alternative
- C. Demand side management
- D. Purchased power
- E. Transmission line of a different size
 - DC alternatives
 - AC alternatives
- F. Upgrading of existing facilities
- G. Generation rather than transmission
- H. Use of renewable energy sources

ISSUES OUTSIDE THE SCOPE OF THE EA

The EA will not address the following topics:

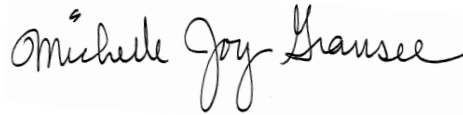
- Any route, route segment, or alignment alternative not specifically identified for study in this scoping decision.
- Any system alternative not specifically identified for study in the final scoping decision.
- Potential impacts of specific energy sources.
- The manner in which landowners are compensated for the project.

SCHEDULE

The EA is anticipated to be completed and available in February 2024. Upon completion, it will be noticed and made available for review. Public hearings will be noticed and held in the project area after issuance of the EA. Comments on the EA may be submitted into the hearing record.

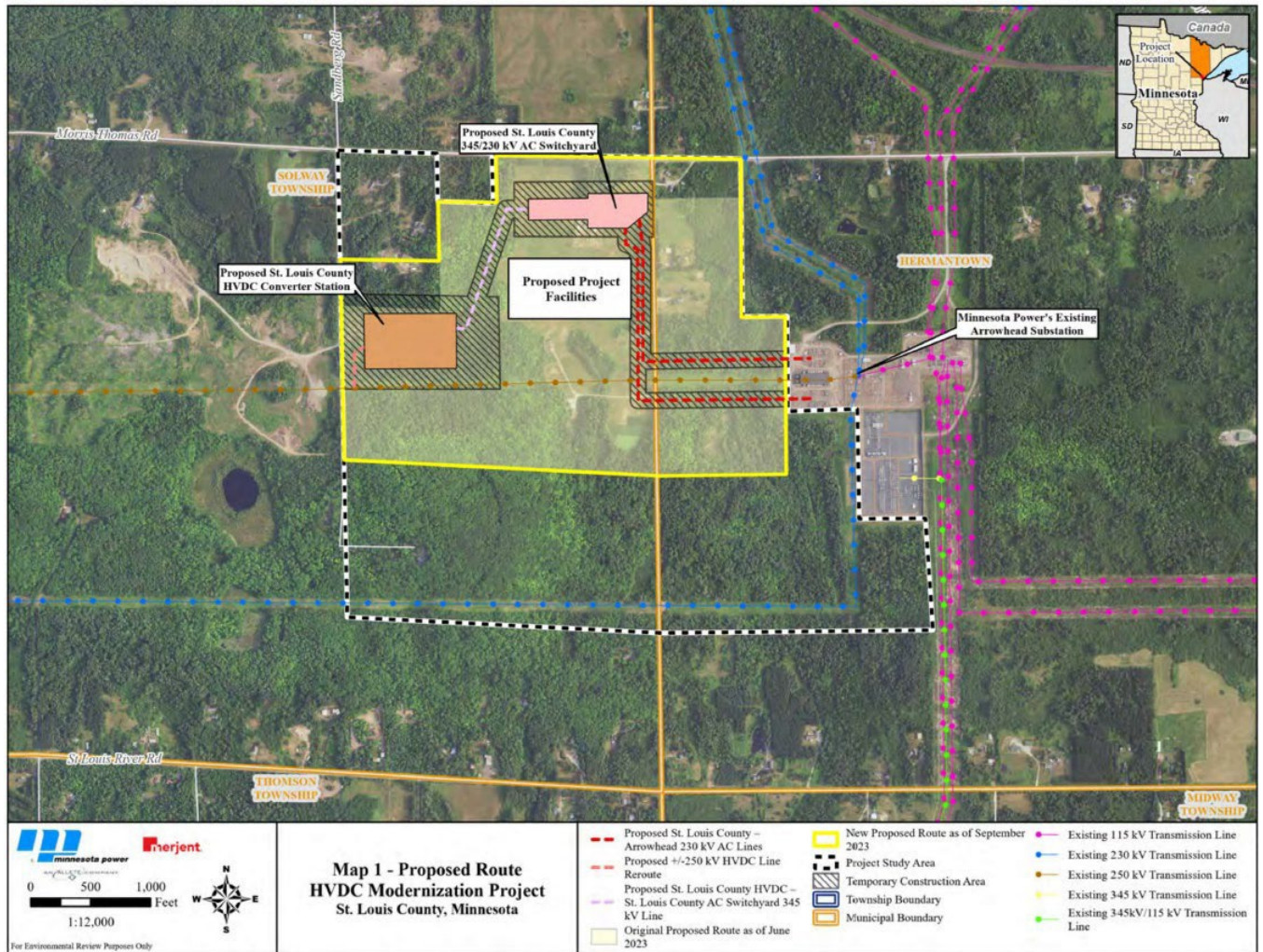
Signed this 30th day of November, 2023

STATE OF MINNESOTA
DEPARTMENT OF COMMERCE

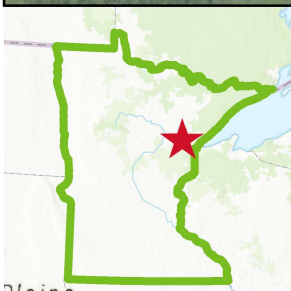
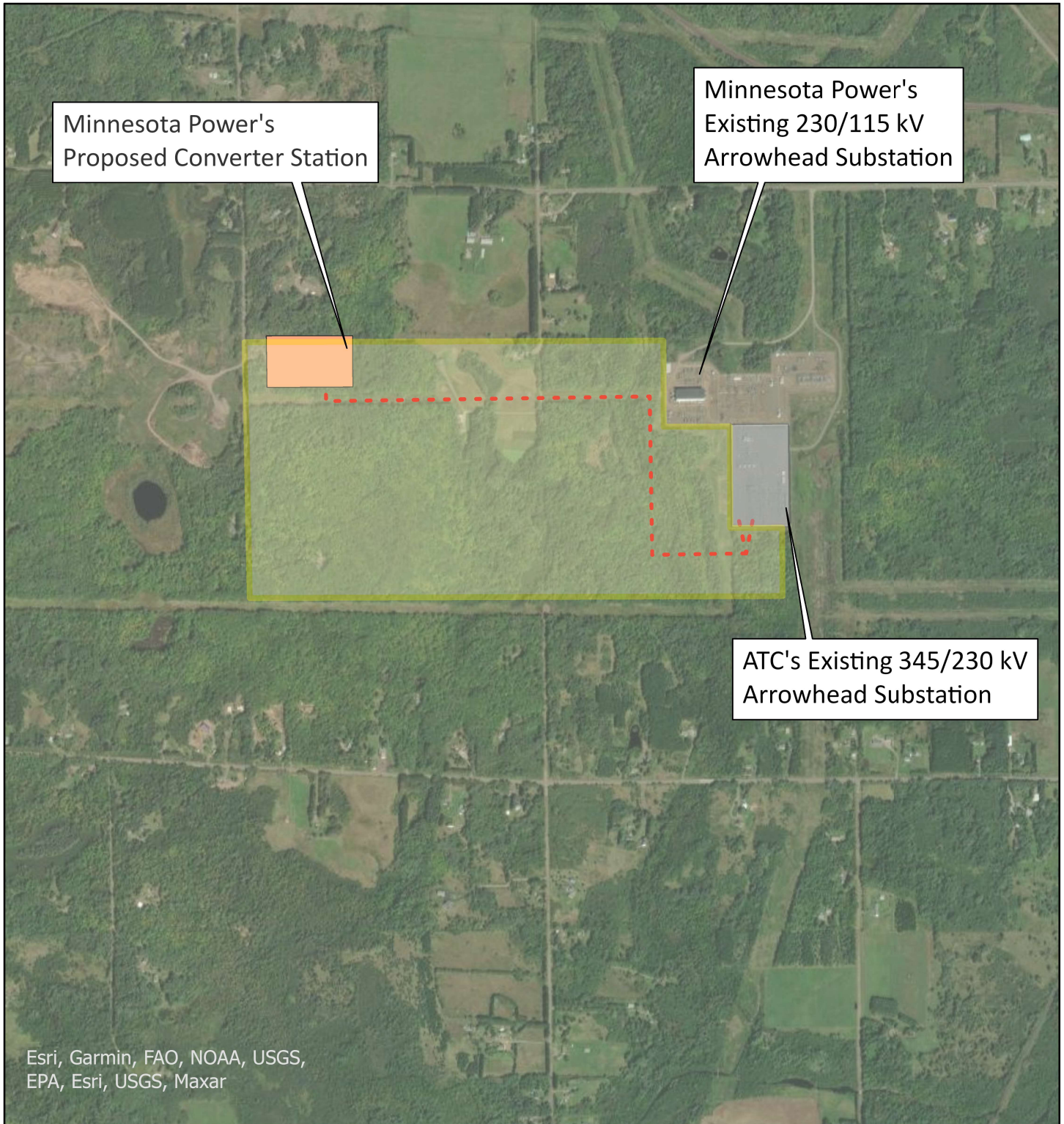
A handwritten signature in black ink that reads "Michelle Joy Gransee". The signature is written in a cursive style with a large, stylized 'M' and 'G'.

Michelle Gransee, Deputy Commissioner

Map 1: Minnesota Power Proposed Project



Map 2 - ATC Alternative



- ATC Arrowhead Substation
- Minnesota Power
Proposed Converter Station

- ATC Alternative Alignment
- ATC Alternative Route Width

