

# 1.0 Introduction and Regulatory Framework

On April 15, 2014, Minnesota Power, a regulated utility division of ALLETE, Inc. (Applicant) applied to the U.S. Department of Energy (DOE) for a Presidential permit to construct, operate, maintain, and connect an approximately 220-mile long, 500-kilovolt (kV) overhead, single-circuit, alternating current (AC) electric transmission system crossing the international border between the Canadian Province of Manitoba and Roseau County, Minnesota. On the same date, the Applicant also applied to the Minnesota Public Utilities Commission (MN PUC) for a Route Permit under the Minnesota Power Plant Siting Act (PPSA). The proposed transmission line would run from the Applicant's proposed international border crossing in Roseau County, Minnesota to the **new Iron Range 500 kV Substation** near Grand Rapids, Minnesota.

On October 29, 2014, the Applicant submitted an amendment to their Presidential permit and Route Permit applications to DOE and the MN PUC, respectively, for the proposed Great Northern Transmission Line (GNTL) Project (proposed Project). The amended Presidential permit application changed the location of the proposed international border crossing under DOE's consideration **approximately 4.3 miles to the east to cross the U.S./Canadian border at latitude 49° 00' 00.00" N and longitude 95° 54' 50.49" W, which is approximately 2.9 miles east of Highway 89 in Roseau County.**<sup>11</sup> The proposed Project, as amended, is described in detail below in Chapter 2.

In addition to the federal Presidential permit and the state Route Permit, the proposed Project will require a variety of state, federal, and local permits. **In May 2015, the MN PUC granted a certificate of need to the Applicant for the proposed Project.** This chapter of the Environmental Impact Statement (EIS) summarizes these permits, the joint federal and state EIS process, and the responsible regulatory agencies

DOE is acting as federal joint lead agency with the Minnesota Department of Commerce-Energy Environmental Review and Analysis (DOC-EERA) acting as state joint lead agency per 40 Code of Federal Regulations (CFR) 1501.5(b). In order to avoid duplication with state environmental review procedures, DOE and Minnesota Department of Commerce—Energy Environmental Review and Analysis (DOC-EERA) have prepared a single EIS to comply with environmental review requirements under National Environmental Policy Act (NEPA) and the Minnesota PPSA.

<sup>11</sup> Available at: <http://www.greatnortherneis.org/Home/documents>.

## 1.1 Organization of this EIS

This joint federal/state EIS analyzes the environmental impacts of the proposed Project, a range of reasonable action alternatives, and the No Action alternative. The EIS is organized into the following eight chapters, followed by appendices.

**Chapter 1 – Regulatory Framework:** Describes the regulatory framework associated with the proposed Project, including the purpose and need for agency action, major federal permits (including the U.S. DOE Presidential permit), federal consultation requirements, state permitting requirements (including the MN PUC Route Permit), other state and local permits, and a summary of agencies, tribes, and persons consulted.

**Chapter 2 – Proposed Project:** Describes the project as proposed by the Applicant including proposed routes, structures, objectives, route selection process, estimated costs, and proposed schedule. Chapter 2 also describes the Applicant's engineering, design, and construction plans, land acquisition processes, and Applicant proposed measures to avoid and minimize environmental impacts.

**Chapter 3 – No Action Alternative:** Describes the "No Action alternative," in which the DOE would not issue a Presidential permit and the proposed Project would not be built. The analysis of the No Action alternative summarizes the impacts of not constructing the project and provides a baseline for analyzing and comparing potential environmental impacts from DOE's proposed action and alternatives.<sup>12</sup>

**Chapter 4 – Route and Alignment Alternatives Proposed during Scoping:** Describes the four border crossing alternatives, 22 route variations, and nine alignment modifications that were proposed by agencies and the public during scoping. Chapter 4 also summarizes the process used by DOE in coordination with the DOC-EERA to jointly determine which border crossings and routes to include in the scope of this EIS. Chapter 4 also describes how the selected routes, route variations, and alignments are analyzed by dividing the 220-mile long project area into the three major sections: the West Section, the Central Section, and the East Section.

**Chapter 5 – Affected Environment and Potential Impacts:** Describes the affected environment for the proposed Project, including descriptions of each resource, the region of influence (ROI)

<sup>12</sup> Potential alternative means of meeting the Applicant's objectives, however, are addressed in the separate State of Minnesota's certificate of need process.

of the proposed Project on the resource, and impacts expected from the construction, operation, maintenance, and connection of the proposed Project. Chapter 5 first describes the impacts of the proposed Project that are common to all geographic sections and do not vary by route or route variation. Chapter 5 then describes the resources that do vary by geographic section and for which impacts vary by route and route variation—the impacts and resources are carried forward for detailed analysis and comparison in Chapter 6.

**Chapter 6 – Comparative Environmental Consequences:** Presents detailed analysis and comparison of the potential human and environmental impacts of the proposed Project and alternative route variations, and describes mitigation measures by geographic section, route, and route variation.

**Chapter 7 – Cumulative and Other Impacts:** Describes reasonably foreseeable projects in the proposed Project area and assesses impacts of the proposed Project in the context of these reasonably foreseeable projects along with other past and present projects in the same area. Chapter 7 also describes unavoidable, irretrievable, and other impacts as required by federal and state regulations.

**Chapter 8 – List of Preparers:** Provides a list of the preparers of this EIS.

**Chapter 9 – References:** Provides references for resources used in development of this EIS.

**Chapter 10 – Acronyms and Abbreviations:** Lists of the acronyms and abbreviations used in this EIS.

**Chapter 11 – Index:** Provides an index of terms used in this EIS.

**Appendices –** Provide information to support the analysis in this EIS:

- **Appendix A – Tribal Consultations:** Provides documentation of and correspondence for the DOE's government-to-government consultation under Section 106 of the National Historic Preservation Act (NHPA) and in accordance with Executive Order 13175.
- **Appendix B – Route Permit Generic Template and Example:** Provides MN PUC's generic Route Permit template and an example of a Route Permit recently issued by the MN PUC, which include a permitted route and anticipated alignment, as well as standard and special conditions specifying construction and operation standards.

- **Appendix C – Narrative of the Scoping Summary Report:** Provides the narrative from the EIS Scoping Summary Report summarizing the joint scoping process and associated public and agency comments provided during the public scoping period for the proposed Project.
- **Appendix D – DOC-EERA Scoping Decision:** Provides the DOC-EERA scoping decision issued for this EIS on January 8, 2015.
- **Appendix E – Route Analysis Data Tables:** Provides detailed data for the right-of-way (ROW), route, and ROI for the proposed routes and variations analyzed in this EIS.
- **Appendix F – Rare Species Data Tables:** Provides detailed Minnesota Department of Natural Resources (MnDNR) Natural Heritage Information System rare species data for the ROW, route, and ROI for the proposed routes and variations analyzed in this EIS.
- **Appendix G – Rare Communities Data Tables:** Provides detailed Minnesota Biological Survey native plant community rare communities data for the ROW, route, and ROI for the proposed routes and variations analyzed in this EIS.
- **Appendix H – Noise Supplement:** Provides terminology and regulations for noise and project-specific noise information.
- **Appendix I – Applicant's Audible Noise and EMF Calculations:** Provides the Applicant's modelling results for audible noise, electric and magnetic field (EMF), and corona effects from the proposed Project.
- **Appendix J – Property Values Supplement:** Provides information and literature regarding the effect of transmission lines on property values.
- **Appendix K – EMF Supplement:** Provides information regarding EMFs.
- **Appendix L – Stray Voltage Supplement:** Provides information regarding stray voltage.
- **Appendix M – MPCA What's In My Neighborhood Sites:** Provides a list of sites in the proposed Project area identified by the Minnesota Pollution Control Agency (MPCA) program – "What's In My Neighborhood" – that may have environmental permits or registrations, or are potentially contaminated sites.
- **Appendix N – Photo Simulations:** Provides photo simulations developed for sensitive viewsheds identified in public comments

during the public scoping period for the proposed Project.

- **Appendix O** – Agricultural Impact Mitigation Plan (AIMP) Example: Provides an example of a AIMP prepared for a high-voltage transmission line project.
- **Appendix P** – Cultural Resources Consultations and Report: Provides the Phase IA cultural resources survey report for the proposed Project.
- **Appendix Q** – USFWS and DOE Section 7 Consultation: Provides the USFWS letter initiating informal consultation with the DOE under Section 7(a)(2) of the Endangered Species Act (ESA) for the proposed Project.
- **Appendix R** – Biological Assessment: Provides the report which reviews the proposed Project in sufficient detail to determine if the proposed action may affect any federally threatened or endangered species and/or critical habitat.
- **Appendix S** – Detailed Map Books: Provides maps with detailed information for the ROWs and routes for the proposed routes and variations discussed in this EIS.
- **Appendix T** – NEPA Disclosure Statements: Provides signed copies of the NEPA Disclosure Statements.
- **Appendix U** – USFWS Recommended Route: Provides the USFWS recommended route.
- **Appendix V** – Draft Programmatic Agreement (PA): Provides the draft Programmatic Agreement as part of the Section 106 Consultation.
- **Appendix W** – Air Emission Technical Memorandum: Provides the air quality analysis for construction emissions requested by the U.S. Environmental Protection Agency (EPA).
- **Appendix X** – Relative Merits Table: Provides the details for the tables at the end of Sections 6.2.6 (West Section), 6.3.6 (Central Section), and 6.4.6 (East Section) of this EIS. These tables provide the information on the 14 factors (identified in Minnesota Rules, part 7850.4100) that the Minnesota Public Utilities Commission must take into account when making a decision on a Route Permit.
- **Appendix Y** – Comment Response Document: Provides the public comments received on the

Draft EIS and DOE and DOC-EERA's responses to those comments.

- **Appendix Z** – EIS Distribution List: Provides a list of the 14 local libraries where the EIS is available for public review.

## 1.2 Federal Permits, Approvals, and Consultations

### 1.2.1 United States Department of Energy – Presidential permit

Transmission lines that cross an international border require a Presidential permit from the DOE.<sup>13</sup> DOE's National Electricity Delivery Division, in the Office of Electricity Delivery and Energy Reliability (OE), is responsible for issuing Presidential permits for electric transmission facilities. Before issuing a Presidential permit for the construction, operation, maintenance, or connection of facilities for the transmission of electric energy at the U.S. international border, DOE must determine that such a permit is consistent with the public interest and must obtain favorable recommendations from the Secretary of State and the Secretary of Defense.<sup>14</sup>

#### 1.2.1.1 Factors Considered

In determining consistency with the public interest, DOE considers the potential environmental impacts of the proposed Project under the NEPA, determines the Project's impact on electric reliability (including whether the proposed Project would adversely affect the operation of the U.S. electric power supply system under normal and contingency conditions), and considers any other factors that DOE may find relevant to the public interest. In making its reliability determination, DOE considers the operation of the electrical grid with a specified maximum amount of electric power transmitted over the proposed transmission line. DOE will review the interconnection studies conducted by the Applicant and the Midcontinent Independent System Operator (MISO) to determine whether a reliability finding should be issued for the proposed Project. The regulations implementing DOE's Presidential permit program have been codified at 10 CFR Part 205. DOE's issuance of a Presidential permit indicates that there is no federal objection to the proposed international border crossing and project, but does not mandate that the project be undertaken.

<sup>13</sup> Pursuant to Executive Order (EO) 10485 of 1953, as amended by Executive Order 12038, and 10 Code of Federal Regulations (CFR) Section 205.320.

<sup>14</sup> Executive Order 10485, Section 1.

**Table 1-1 Major Federal Authorizations**

Issue	Authorization	Jurisdiction
Construction and water quality	Section 10 Permit	U.S. Army Corps of Engineers (USACE)
	Section 404 Permit	USACE
	Section 402 National Pollutant Discharge Elimination System (NPDES) Permit (assigned to state of Minnesota)	EPA/MPCA
Land use and natural resources	Special Use Permit	U.S. Forest Service (USFS); U.S. Bureau of Land Management (BLM)
	Right-of-way (ROW) Grant	
	Right-of-way permit to cross USFWS Interest Lands	USFWS
Transportation and safety	Permit to Cross Federal Aid Highway	U.S. Federal Highway Administration (FHWA)
	Obstruction Evaluation	Federal Aviation Administration (FAA)

### 1.2.2 DOE Purpose of and Need for Agency Action

The purpose of and need for DOE action is to decide whether to or not to grant the Applicant a Presidential permit. If granted, the Presidential permit for the U.S. portion of the proposed Project (OE Docket Number PP-398) would authorize the Applicant to construct, operate, maintain, and connect the U.S. portion of the proposed Project that would cross the international border between the U.S. and Canada. **If granted, there would be no expiration date for the Presidential permit.**

DOE does not, however, determine the underlying need for or the route of the proposed transmission line. These two decisions are the responsibility of the MN PUC. Therefore, portions of this EIS pertain solely to the DOE’s determination; other portions pertain solely to the MN PUC’s determination, while some portions pertain to both the federal and state processes.

#### 1.2.2.1 DOE’s Proposed Federal Action

DOE’s preferred alternative is to grant a Presidential permit to Minnesota Power’s proposed international border crossing at latitude 49° 00' 00.00" N and longitude 95° 54' 50.49" W, roughly 2.9 miles east of Highway 89 in Roseau County, Minnesota.

If the MN PUC issues a permit for a route with a different border crossing than that currently requested by the Applicant, the Applicant could submit an amended Presidential permit application to DOE that is consistent with the MN PUC route permit decision. DOE would then need to decide

what, if any, further environmental review would be necessary, and whether to grant a Presidential permit for the proposed Project at the amended border crossing.

### 1.2.3 Other Federal Approvals

In addition to the Presidential permit, the proposed Project requires other federal permits, approvals, and decisions before construction and operation can begin. These permits and approvals are listed in Table 1-1. The two formal federal consultations required (Section 106 of NEPA and Endangered Species Act (ESA), Section 7) are summarized in Section 1.2.4.

The Applicant is working with federal agencies to obtain these potentially necessary authorizations and/or to comply with the regulations listed below.

**Section 10 of the Rivers and Harbors Act of 1899 Permit** – USACE regulates impacts on navigable waters of the U.S. pursuant to Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. Section 403). USACE classifies the Big Fork River as a navigable water of the U.S. and the Applicant will apply for a Section 10 permit to allow the proposed Project to cross it.

**Section 404 of the Clean Water Act Permit** – USACE regulates discharges of dredged or fill material into waters of the U.S. under Section 404 of the Clean Water Act (33 U.S.C. Section 1344). The Applicant has held multiple pre-application conferences with the USACE and will apply for a Section 404 permit. The Applicant has also

coordinated prospective wetland compensatory mitigation plans with the USACE.

**Section 402 of the Clean Water Act Permit** – EPA requires a construction discharge permit; federal authority is assigned to the MPCA. Additional details are provided in Section 1.3.

**Special Use Permit, ROW Grant, or Easement** – USFWS and USFS require a Special Use Permit or a ROW Permit/Easement if the proposed Project crosses land under their jurisdictions. USFWS and USFS are authorized but not required to issue land use grants for transmission lines per Section 503 of Federal Land Policy and Management Act of 1976 and individual agency regulations. USFWS requires a transmission line ROW permit to cross USFWS Interest Lands. USFWS general authority for granting ROW permits is the National Wildlife Refuge System Administration Act (16 U.S.C. 668dd(d)). Regulations covering the granting of permits for ROW across USFWS Interest Lands (including easements) are promulgated in 50 CFR 29.21 and 29.22. The U.S. Department of Agriculture (USDA) oversees special use permits for the USFS under 36 CFR 214 Subpart B. The Applicant will work with these agencies to obtain the required permit if a crossing is required.

**Bald and Golden Eagle Protection Act** – USFWS oversees compliance with the Bald and Golden Eagle Protection Act (16 U.S.C. 668-668c), which prohibits anyone from “taking” (including disturbance) birds, nests, or eggs without a permit from the Secretary of the Interior. The Applicant is working with USFWS to avoid, minimize, and mitigate potential impacts to bald eagles. Golden eagles are non-breeding residents throughout Minnesota, so may occur in the proposed Project area.<sup>15</sup> Currently no take permit exists for the eastern population of golden eagles, so take will need to be completely avoided through applicant proposed mitigation measures.

**Permit to Cross Federal Aid Highway** – Transmission lines that cross a federal highway require a use and occupancy agreement. (23 CFR Section 645.213). The Applicant is working with the MnDOT, which is responsible for administering the agreements, to obtain the required approvals.

**FAA Obstruction Evaluation** – FAA requires proponents of projects that may affect navigable airspace to notify the Administrator of the FAA by filing a Notice of Proposed Construction or Alteration (FAA Form 7460-1) per 14 CFR Section 77.9. The FAA conducts aeronautical studies based on information provided by proponents on

**Table 1-2 Federal Consultations**

Consultation	Jurisdiction
Section 106 Consultation	DOE in consultation with Minnesota State Historical Society( SHPO) and Tribal Historic Preservation Offices (THPOs)
ESA Section 7 Consultation	USFWS

an FAA Form 7460-1 to protect air safety and the efficient use of the navigable airspace.

### 1.2.4 Federal Consultations

Prior to issuing the Presidential permit, the DOE must also complete formal consultations with state, tribal, or federal agencies, shown in Table 1-2.

#### 1.2.4.1 Section 106 of the National Historic Preservation Act (NHPA)

Section 106 of NHPA (16 U.S.C. 470) requires that federal agencies take into account the potential effects of their proposed actions (undertakings) on historic architectural properties, and to develop measures to avoid, minimize, or mitigate any adverse effects.<sup>16</sup> NHPA also requires federal agencies to consult with Indian Tribes that may be affected by the proposed Project, the SHPO, and other appropriate parties as defined in 36 CFR Section 800.2. DOE and USACE have developed a Memorandum of Understanding that, among other things, designates DOE as the lead agency implementing Section 106 compliance for the proposed Project. DOE requested initiation of Section 106 Consultation under the NHPA for the proposed Project in a November 19, 2014, letter to the Minnesota SHPO. DOE also notified the Advisory Council on Historic Preservation (ACHP) about DOE’s intent to develop a Programmatic Agreement (PA) for a phased approach for Section 106 identification and evaluation efforts under 36 CFR Section 800.14, and asked for ACHP’s participation as a consulting party. The ACHP accepted this invitation in a March 26, 2015 letter to DOE. **The Draft PA is provided in Appendix V.** DOE invited all potential Section 106 Consulting Parties, including Indian tribes, via email and letter on January 14-15, 2015, to participate in consultation over historic architectural properties and traditional cultural resources that may be affected by the

<sup>15</sup> Available at: [http://www.sdakotabirds.com/species/maps/golden\\_eagle\\_map.htm](http://www.sdakotabirds.com/species/maps/golden_eagle_map.htm)

<sup>16</sup> Section 106 of the National Historic Preservation Act (NHPA), 16 United States Code Section 470f, and its implementing regulations, 36 CFR Sections 800.1-800.16

proposed undertaking.<sup>17</sup> Section 106 consultation efforts for the proposed undertaking are on-going **and consultation records are provided in Appendix A and P. It is anticipated that the PA will be signed before the Record of Decision is issued.**

As proposed, the proposed Project would not cross tribal reservation lands; however, each route could have the potential to affect cultural resources of significance to tribes. For example, some tribes and tribal members consider eagle nests sacred sites provided for in the American Indian Religious Freedom Act (42 U.S.C. 1996) (some are frequently referred to as traditional cultural properties (TCPs)), and as potential historic properties of religious and cultural importance under the NHPA. Such sites are not limited to currently-recognized Indian lands, and they occur across the entire aboriginal settlement area. In addition, some tribes may consider all eagles and eagle nests as TCPs or sacred sites, and potential historic properties of religious and cultural significance which must be considered under Section 106 of NHPA.

DOE initiated its government-to-government tribal consultation efforts in a June 27, 2014 letter to potentially affected tribes, and held consultation meetings July 15 and 22, 2014 in the proposed Project area in northern Minnesota. DOE held further tribal consultation meetings on March 24-26, 2015 in Prior Lake, Minnesota in support of its on-going efforts to identify archaeological sites, historic architectural structures, and any other properties or resources of traditional religious and cultural importance to tribes and known to occur in or near the proposed Project area (Appendix A). DOE's government-to-government consultation efforts with potentially affected tribes for the proposed undertaking are on-going.

### 1.2.4.2 Section 7 of the Endangered Species Act

The USFWS oversees compliance with the ESA (16 U.S.C. Section 1536), which requires that federal agencies "insure that any action authorized, funded, or carried out by such agency is not likely to jeopardize the continued existence of any listed species or result in the destruction or adverse modification of critical habitat of such species." DOE, as the lead federal agency for the proposed

<sup>17</sup> In addition to the State Historic Preservation Office (SHPO), Indian tribes, and the Advisory Council on Historic Preservation (ACHP), Section 106 consulting parties may include certain individuals and organizations with a demonstrated interest in the undertaking due to the nature of their legal or economic relation to the undertaking or affected properties, or their concern with the undertaking's effects on historic properties (36 CFR Section 800.2)

Project, prepared a Biological Assessment in accordance with the ESA to analyze potential Project-related impacts on federally-listed threatened and endangered species, candidate species, species proposed for listing, and their designated critical habitats (Appendix R). **Formal consultation under Section 7 of ESA was initiated by DOE's submission of the BA and its determination of findings letter to USFWS and this consultation process is on-going (Appendix R). USFWS will issue a Biological Opinion and Incidental Taking Permit statement, if necessary.**

### 1.2.4.3 Migratory Bird Treaty Act (MBTA)

The USFWS oversees compliance with the MBTA (16 USC 703-712), which regulates the taking, selling, transporting, and importing of migratory birds, their nests, eggs, parts, or products. Although not formally subject to or part of an agency consultation process, take permits are not available under the MBTA. **The Applicant, therefore, has proposed measures to avoid and minimize impacts on migratory birds. The Applicant must continue to work with USFWS to determine any further appropriate avoidance, minimization, and conservation measures intended to address potential impacts to migratory bird habitat. Any such measures determined through these discussions would be addressed in a DOE Presidential permit, if issued.**

## 1.3 State Permits and Approvals

### 1.3.1 Minnesota Public Utilities Commission – Route Permit

The PPSA provides that no person may construct a high-voltage transmission line without a Route Permit from the MN PUC. Under the PPSA<sup>18</sup>, a high-voltage transmission line includes a transmission line of 100 kV or more and greater than 1,500 feet in length, with associated facilities.<sup>19</sup> As part of the Route Permit, the MN PUC will also list any conditions it will require for constructing, operating, and maintaining the proposed Project. Details of the state route permit process are provided in Minnesota Rules, chapter 7850, including the major factors that the MN PUC must use to evaluate routes.<sup>20</sup>

The Applicant's Route Permit application and associated filings can be viewed on the state's eDockets website.<sup>21</sup> The MN PUC found the Route Permit application complete on July 2, 2014.

<sup>18</sup> Minnesota Statutes, section 216E.03, subdivision 2

<sup>19</sup> Minnesota Statutes, section 216E.01; subdivision 4

<sup>20</sup> Minnesota Rules, part 7850.4100

<sup>21</sup> Minnesota Public Utilities Commission (MN PUC) Docket No. E015/TL-14-21 available at: <https://www.edockets.state.mn.us/EFiling/edockets/searchDocuments.do?method=eDocketsResult&userType=public>

### 1.3.1.1 Factors and Elements Considered

The MN PUC is charged with selecting routes that minimize adverse human and environmental impacts while ensuring continuing electric power system reliability and integrity. Route Permits issued by the MN PUC include a permitted route and anticipated alignment, as well as conditions specifying construction and operation standards. The MN PUC's generic Route Permit template and an example Route Permit previously issued by the MN PUC are included in Appendix B.

Minnesota Statutes, section 216E.03, subdivision 7 identifies considerations that the MN PUC must take into account when designating transmission line routes, including minimizing environmental impacts, and minimizing conflicts with human settlement and other land uses. Minnesota Rules, part 7850.4100 lists 13 factors<sup>22</sup> for the MN PUC to consider when making a decision on a Route Permit:

- Effects on human settlement, including, but not limited to, displacement, noise, aesthetics, cultural values, recreation and public services;
- Effects on public health and safety;
- Effects on land-based economies, including, but not limited to, agriculture, forestry, tourism and mining;
- Effects on archaeological and historic resources;
- Effects on the natural environment, including effects on air and water quality resources and flora and fauna;
- Effects on rare and unique natural resources;
- Application of design options that maximize energy efficiencies, mitigate adverse environmental effects, and could accommodate expansion of transmission or generating capacity;
- Use or paralleling of existing ROW, survey lines, natural divisions lines and agricultural field boundaries;
- Use of existing transportation, pipeline and electrical transmission systems or ROWs;
- Electrical systems reliability;

- Costs of constructing, operating and maintaining the facility which are dependent on design and route;
- Adverse human and natural environmental effects which cannot be avoided; and
- Irreversible and irretrievable commitments of resources.

The analysis in Chapter 5, Chapter 6, and Chapter 7 of this EIS addresses each of these factors by evaluating the potential impacts to individual components or "elements" of each factor. For example, effects on human settlement (the first factor in Minnesota Rules, part 7850.4100) are assessed by evaluating potential impacts to 12 different components or "elements" of human settlement including displacement, noise, property values, air quality, electronic interference, transportation and public services, environmental justice, socioeconomics, aesthetics, land use compatibility, cultural values, and recreation and tourism. Similarly, effects on the natural environment (the fifth factor in Minnesota Rules, part 7850.4100) from the proposed Project are assessed by evaluating potential impacts to three distinct components or "elements" of natural environment including, water resources, vegetation, and wildlife.

For each element, a number of "indicators"—data sources that provide an indication of potential impacts—have been analyzed in Chapter 5 and Chapter 6. For example, proximity to residences is used as one "indicator" of potential aesthetic impacts that residents may experience. Similarly, the evaluation of the water resources element of the natural environment relies on data about the acres of wetland impacted by a proposed route. The acres of wetland impact is used as one "indicator" of potential impacts on water resources.

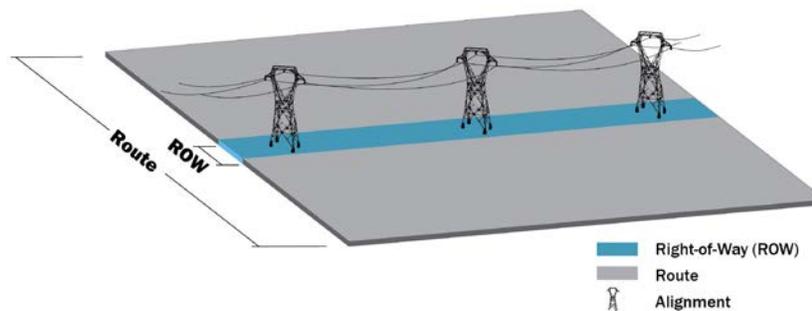
A general analysis of indicators and impacts is provided in Chapter 5 for the elements of each factor, with the exception of "irreversible and irretrievable commitments of resources", which is covered in Chapter 7. Chapter 6 provides a geographically refined analysis of all the elements for which the available indicators suggest variability in impacts between the alternative routes.

### 1.3.1.2 Minnesota Route Permit Content Requirements

Applications for transmission line route permits are subject to environmental review conducted by DOC-EERA staff (Minnesota Rules, part 7850.2500). Projects proceeding under the full permitting process, such as this one, require the preparation of

<sup>22</sup> One additional factor is included in Minnesota Rules, part 7850.4100— "Use of existing large electric power generating plant sites" —however, it is not relevant to the decision on a transmission line route.

Figure 1-1 Typical Route and ROW Schematic



a state EIS. An EIS is a document which describes the potential human and environmental impacts of the project and possible mitigation measures, including route, alignment, and site alternatives. DOC-EERA determines the scope of the EIS. DOC-EERA may include alternatives suggested by the public in the scope of the EIS if such alternatives are otherwise permissible and will assist in the MN PUC’s decision on the Route Permit.

### 1.3.1.3 Minnesota Route Permit Scope of Review

Under Minnesota law, the Route Permit process does not determine whether the proposed Project is needed. That decision is made as part of a separate process: the certificate of need. The certificate of need process is described in Section 1.3.2.

However, under the PPSA, the MN PUC needs to determine whether to issue a Route Permit for the proposed Project and must also review any alternative routes or route segments proposed according to the applicable rules,<sup>23</sup> and then needs to determine the final route. The MN PUC must make specific findings that it has considered locating a route for a new transmission line along an existing high voltage transmission line ROW or parallel to existing highway ROW and, to the extent these are not used for the route, the MN PUC must state the reasons why (Minnesota Statutes, Section 216E.03, subdivision 7). Also, before the MN PUC makes a final decision on a route permit, the MN PUC must determine whether the EIS for the project is adequate (Minnesota Rules, part 7850.2700).

Therefore, the MN PUC is not only determining whether to issue a Route Permit for the proposed Project, but it is also responsible for assessing and selecting the final route. As part of the Route Permit, the MN PUC will also list any conditions it will require for constructing, operating, and maintaining

the proposed Project. Therefore, the underlying need for MN PUC action in the Route Permit docket is to decide what route to approve for the proposed Project and under what conditions. **Once the route permit is issued, the permittee needs to start construction and improvement of the proposed Project within four years or the MN PUC will suspend the route permit. If the permittee decides to construct the proposed large electric power generating facility or high voltage transmission line after four years, the permittee must certify to the MN PUC that there have been no significant changes in any material aspects of the conditions or circumstances existing when the permit was issued (Minnesota Rule 7850.4700).**

### 1.3.1.4 Route Width, Right-of-Way, and Anticipated Alignment

When it issues a Route Permit, the MN PUC approves a route, a route width, and an anticipated alignment within that route (Figure 1-1). As described below, the transmission line must be constructed within the MN PUC’s designated route unless subsequent permissions are requested and approved by the MN PUC.

The applicable regulations allow the Applicant to request a route that is wider than the actual ROW needed for the transmission line.

A “**right-of-way**” is defined in the regulations as “the land interest required within a route for the construction, maintenance, and operation of a high voltage transmission line.”<sup>24</sup>

A “**route**” is defined as “the location of a high voltage transmission line between two end points. A route may have a variable width of up to 1.25 miles within which a ROW for a high voltage transmission line can be located.”<sup>25</sup>

<sup>23</sup> Minnesota Rules, part 7850

<sup>24</sup> Minnesota Rules, part 7850.1000, subpart 15

<sup>25</sup> Minnesota Rules, part 7850.1000, subpart 16

Therefore, the ROW is the area required for the safe construction and operation of the transmission line, where such safety is defined by the National Electricity Safety Code (NESC) and North American Electric Reliability Corporation (NERC) reliability standards (see part 4.8.1 in the MN PUC generic Route Permit template in Appendix B). The ROW must be within the designated route and is the area for which the Applicant obtains rights from landowners to construct and operate the transmission line.

For the proposed Project, as described in Section 2.5.9, the Applicant has requested a 200-foot ROW, with route widths that vary from 650 feet up to 3,000 feet in some limited areas. The larger route width allows applicants to work with landowners to address their concerns and address local engineering issues that may arise after a permit is issued. The MN PUC could also designate a route width narrower than 650 feet if necessary to avoid a site-specific constraint such as a residence or a protected land use or designation. The route width, in combination with the anticipated alignment, is intended to balance flexibility and predictability during final design and construction.

The MN PUC may include conditions in a Route Permit that address the route width, ROW width, or anticipated alignment in a specific area of the project. For example, the Route Permit could require the alignment for a specific portion of the route to be north, rather than south, of a road or requiring that the route width be narrower in a certain area.

Once a Route Permit is issued by the MN PUC, the permittee would conduct detailed survey and engineering work, including, for example, soil borings. Additionally, the permittee would contact landowners to gather information about their property and their concerns and discuss how best the ROW for the project might proceed across the property. Permission to use a ROW for a transmission line across private property is typically obtained by an easement agreement. Permission to cross state property or federal interest lands, however, must be obtained through a permit or license as summarized above in Section 1.2.3.

The MN PUC Route Permits typically include a condition stating that at least 30 days before ROW preparation begins on any segment of a project, the Permittee must provide a plan and profile of the ROW that includes the specifications and drawings for ROW preparation, access roads, construction, structure specifications and locations, cleanup, and restoration for the transmission line. The plan and profile must be approved as a compliance filing

before any construction can begin. Any proposed modifications to the permitted anticipated alignment within the designated route would be required to be specifically identified and approved as part of this MN PUC plan and profile approval process.

### Minor Alteration

In order to construct any portion of a permitted transmission line outside of the approved route width, the Permittee would need to either reapply for a new Route Permit or request a minor alteration under Minnesota Rules, part 7850.4800.<sup>26</sup> A minor alteration is “a change in a large electric power generating plant or high voltage transmission line that does not result in significant changes in the human or environmental impact of the facility.” The application for a minor modification would be provided in writing and would describe the alteration and explain why the alteration is minor.

Under Minnesota Rules, part 7850.4800, subpart 3,<sup>27</sup> the MN PUC must determine whether the requested changes are minor, whether to authorize the alteration, and whether to apply conditions. The MN PUC may also determine that the alteration is not minor and needs to be considered under the full permitting process. The MN PUC uses the routing factors of Minnesota Rules, part 7850.4100 to help make their determination, including the proposed alteration’s impacts to natural resources and human settlement.

### 1.3.2 Minnesota Public Utilities Commission – Certificate of Need

Minnesota Statutes, section 216B.243 dictates that a certificate of need is required for a “large energy facility” as that term is defined in Minnesota Statutes, section 216B.2421. A large energy facility includes “any high-voltage transmission line with a capacity of 200 kilovolts or more and greater than 1,500 feet in length” (Minnesota Statutes, section 216B.2421, subdivision 2 (2)).

The Applicant filed its certificate of need application for the proposed Project with the MN PUC on October 22, 2013. **In reviewing that application, the MN PUC considered whether there is a need for a transmission line and established the size, type, and required end points of the proposed Project.** Following a formal contested case hearing, the Administrative Law Judge (ALJ) issued her report on March 31, 2015, which concluded that the Applicant satisfied the certificate of need requirements and recommended the MN PUC grant a certificate of

<sup>26</sup> Available at: <https://www.revisor.mn.gov/rules/?id=7850.4800>

<sup>27</sup> Available at: <https://www.revisor.mn.gov/rules/?id=7850.4100>

**Table 1-3 State and Local Permits**

Issue	Minnesota State Reviews/Approvals	
Cultural resources	Cultural and Historic Resources Review and Section 106 Consultation	Minnesota Historical Society, State Historic Preservation Office (SHPO)
Conservation easement	Easement Renegotiation	MnDNR Forestry
Transportation	Utility Permit	MnDOT
Natural resources	Endangered Species Consultation/Wildlife Take Permits	MnDNR Ecological Services
Construction and water quality	License to Cross Public Lands and Waters	MnDNR Lands and Minerals
	Public Waters Work Permit	MnDNR Waters
	Water Appropriation/Dewatering Permit	MnDNR Waters
	Wetland Conservation Act Permit	Board of Water and Soil Resources (BWSR) and/or Local Government Units
	Section 401 Water Quality Certification	MPCA (delegated federal authority)
	Section 402 National Pollutant Discharge Elimination System Permit	MPCA (delegated federal authority)
Agriculture	Agricultural Impact Mitigation Plan Permit	Minnesota Department of Agriculture (MDA)
	Noxious Weed Management Plan	MDA
<b>Local Coordination</b>		
Transportation and safety	Road Crossing/Right-of-Way	County, Township, City
	Public Lands	County, Township, City
	Overwidth Load	County, Township, City
	Driveway Access	County, Township, City

need to the Applicant for the construction of the proposed Project and associated facilities. The MN PUC granted the certificate of need on June 30, 2015. **As part of that process, the MN PUC reviewed various non-transmission line alternatives and found that the proposed Project is the Applicant’s best option to meet its existing and future energy demand.** The certificate of need application, ALJ recommendations, and MN PUC Order can be viewed on the MN PUC website.<sup>28</sup>

**1.3.3 Other State and Local Permits**

In addition to the state certificate of need and Route Permit, other state and local permits, approvals, and decisions that may be required for the proposed Project are listed in Table 1-3.

The Applicant is working with state agencies to obtain the potentially necessary approvals and/or to comply with the regulations listed below.

**Cultural and Historic Resources Review** – Minnesota Statutes designate the director of the Minnesota Historical Society as the SHPO (Minnesota Statutes, section 138.081) and places responsibility for the historic preservation program with the Minnesota Historical Society. As noted in Section 1.2.4.1. DOE is leading coordination with Minnesota SHPO on the proposed Project and Section 106 consultation efforts for the proposed undertaking are on-going.

**Conservation Easement** – An easement is a legally binding contract between the State of Minnesota and a private land owner that is an encumbrance on the forest land parcel. The purpose of the easement is to prevent fragmentation and provide economic value to the region through the use of forest management to maintain and improve the timber resource for multiple markets and provide wildlife habitat for the public’s enjoyment. The private landowner retains ownership and can continue activities such as timber management, recreation, and hunting as long as they do not conflict with the terms of the easement. Each easement is individually negotiated. A high voltage transmission line crossing of a conservation easement requires renegotiating the easement agreement. Renegotiation of conservation

<sup>28</sup> MN PUC Docket No. E015/CN-12 1163, “Certificate of Need Application” is available at: <https://www.edockets.state.mn.us/EFiling/edockets/searchDocuments.do?method=showPoup&documentId={65F60020-4419-41F0-AB43-E4D7F22A6E28}&documentTitle=20153-108775-01>

easements funded by the Minnesota Outdoor Heritage Fund (Minnesota Statutes 97A.056) also require approval from the Lessard-Sams Outdoor Heritage Council.

**Utility Permit** – A permit from MnDOT is required under Minnesota Rules, part 8810.3300, for construction, placement, or maintenance of utility lines adjacent or across highway ROWs. The Applicant is working with the MnDOT to obtain the required approvals.

**Minnesota’s Endangered Species Act Consultation/Wildlife Take Permits** – The MnDNR is responsible for overseeing the regulations and permitting for development projects under Minn. Stat. § 84.0895 and associated rules govern the taking (including killing, capturing, collecting, and/or possessing) of state endangered or threatened species in Minnesota. The Applicant is working with the MnDNR to obtain any take permits, as appropriate.

**License to Cross Public Lands and Waters** – MnDNR Division of Lands and Minerals regulates utility crossings over, under, or across any state land or public water identified in the Public Waters Inventory maps. A license to cross public waters is required under Minnesota Statutes, section 84.415 and Minnesota Rules, chapter 6135. The Applicant is coordinating with MnDNR to determine necessary crossing permits.

**Public Waters Work Permit** – The MnDNR Public Waters Work Permit Program regulates development activities below the ordinary high water mark of wetlands, streams, and lakes identified in the Public Waters Inventory maps. Under Minnesota Statutes, section 103G.245, Subdivision 1, a Public Waters Work Permit is required for any action taken by the state, political subdivision of the state, or corporation or person that alters or develops any obstruction to public waters or changes the course, current, or cross-section of wetlands, streams, and lakes identified in the Public Waters Inventory maps. The Applicant will apply for this permit as necessary.

**Water Appropriation/Dewatering Permit** – During construction, temporary impacts may occur if dewatering is necessary to install the transmission structures or if pumping wells are installed to supply water for concrete batch plant operations. If dewatering or pumping is necessary, the Applicant will obtain water appropriations permits from the MnDNR.

**Wetland Conservation Act Approval** – Minnesota BWSR administers the state Wetland Conservation Act pursuant to Minnesota Rules, chapter 8420. The

transmission line portion of the proposed Project would be expected to be exempt under Minnesota Rules, part 8420.0420, subpart 6.<sup>29</sup> The Applicant anticipates that impacts related to the proposed **Iron Range 500 kV Substation** will require an approval. The Applicant will apply for this approval (which is applied for jointly with a Section 404 Clean Water Act Permit from USACE), as necessary.

**Section 401 Water Quality Certification** – MPCA regulates water quality under Section 401 of the Clean Water Act (33 U.S.C. Section 1344). The Applicant will apply for this Certification (which is applied for jointly with a Section 404 Clean Water Act Permit from USACE).

**Section 402 National Pollutant Discharge Elimination System (NPDES) Permit** – MPCA has been delegated federal authority to issue a NPDES permit for stormwater discharges associated with construction activities disturbing an area of one acre or more (Minnesota Rules, part 7090.0030). The permit requires the Applicant to develop and implement a Stormwater Pollution Prevention Plan (SWPPP), which includes best management practices (BMPs) to minimize discharge of pollutants from the site. **If a project disturbs more than 50 acres of land, MPCA staff review of the SWPPP is required.** The Applicant will apply for this permit once the design is complete, prior to initiation of construction.

**Agricultural Impact Mitigation Plan** – MDA requires an agricultural impact mitigation plan to identify measures that can be taken to avoid, mitigate, repair, and/or provide compensation for impacts caused by the transmission line construction on agricultural lands (Minnesota Statutes, section 216B.243, subdivision 7). The Applicant will develop this plan as necessary.

**Noxious Weed Management Plan** – MDA has the responsibility for eradication, control, and abatement of nuisance plant species (Minnesota Statutes, section 18G.04). The local County Agricultural Inspector administers the program. The Applicant will develop a vegetation maintenance and management plan for the proposed Project.

**Local Coordination** – Minnesota has exclusive authority to designate the route for the proposed Project (Minnesota Statutes, section 216E.10) which supersedes and preempts all zoning, building,

<sup>29</sup> Minnesota Rules, part 8420.0420, subpart 6 Utilities. A. A replacement plan is not required for impacts resulting from: (1) installation, maintenance, repair, or replacement of utility line, including pipelines, if: (a) the impacts have been avoided and minimized to the extent possible; and (b) the proposed project significantly modifies or alters less than one-half acres of wetlands.

or land use rules, regulations, or ordinances promulgated by regional, county, local, and special purpose government.

The Applicant has provided notice to local government units (LGUs) in compliance with Minnesota Statutes, section 216E.03, subdivision 3a and anticipates coordination with LGUs regarding the following issues listed below.

- *Road Crossing/ROW* – Coordination may be required to cross or occupy county, township, and city road ROWs.
- *Public Lands* – Coordination would be required to occupy county, township, and city lands such as forest lands, park lands, watershed districts, and other properties owned by these entities.
- *Overwidth Load* – Coordination may be required to move over-width or heavy loads on county, township, or city roads.
- *Driveway Access* – Coordination may be required to construct access roads or driveways from county, township, or city roads.

### 1.4 Joint Federal and State EIS Process

#### 1.4.1 Joint Process

Pursuant to the NEPA, when evaluating an application for a Presidential permit, DOE must take into account potential environmental impacts of the proposed facility. DOE determined that an EIS is the appropriate level of environmental review for the proposed Project, and this EIS is prepared in compliance with the Council on Environmental Quality's (CEQ) NEPA implementing regulations at 40 CFR Parts 1500-1508 and DOE's NEPA implementing regulations at 10 CFR Part 1021. Further, in accordance with DOE regulations at 10 CFR Part 1022, *Compliance with Floodplain and Wetland Environmental Review Requirements*, DOE will develop a floodplain and wetland statement of findings for the proposed Project.

In addition, under the PPSA, the MN PUC must also determine the route for the proposed line and any conditions it will require for construction, operation, and maintenance. As part of this MN PUC Route Permit decision-making process, a state EIS must be prepared.<sup>30</sup>

To avoid duplication, DOE and the DOC-EERA are preparing a single EIS to comply with environmental review requirements under NEPA and the PPSA. DOE

is acting as federal joint lead agency with DOC-EERA acting as state joint lead agency per 40 CFR 1501.5(b).

DOE and DOC-EERA have implemented a joint planning and scoping process to encourage agency and public involvement in reviewing the proposed Project, and to identify the range of reasonable alternatives. The first phase of the formal agency public outreach process was designed to facilitate public discussion of the scope of appropriate issues to be addressed in the EIS.

DOE and DOC-EERA will continue to jointly implement public involvement and the public comment process on the Draft EIS by holding joint federal and state public hearings and informational meetings on the Draft EIS in various locations in the project area in northern Minnesota.

#### 1.4.2 Issues Outside the Scope of this EIS – Impacts in Canada

A few scoping comments focused on the potential effects of the Project on Canadian resources.

This issue is outside of the scope of this EIS because DOE determined that an analysis of environmental and socioeconomic issues in Canada is not appropriate. While implementation of the proposed Project would require construction of a transmission line and other infrastructure in Canada, NEPA does not require an analysis of environmental impacts that occur within another sovereign nation that result from actions approved by that sovereign nation. For that reason, potential environmental impacts in Canada are not addressed in this EIS.

This approach is consistent with Executive Order 12114, *Environmental Effects Abroad of Major Federal Actions* (January 4, 1979), which requires federal agencies to prepare an analysis of potentially significant impacts from a federal action in certain defined circumstances and exempts agencies from preparing analyses in others. Section 2-3[b] of the Executive Order does not require federal agencies to evaluate impacts outside the U.S. when the foreign nation is participating with the U.S., or is otherwise involved in the action.

**Manitoba Hydro is developing the proposed transmission line on the Canadian side of the border. The Manitoba section of the proposed transmission line requires a Class 3 License under The Environment Act (Manitoba) and Canadian federal authorization through the National Energy Board (NEB). Manitoba Hydro has submitted their environmental review of potential impacts**

<sup>30</sup> Minnesota Statutes, section 216E.03, subdivision 5.

(Canadian EIS) for the portion of the proposed transmission line project in the Province of Manitoba for regulatory approval.

Based on their July 30, 2015 comment letter on the Draft EIS (See Comment document 51 in Appendix Y), Manitoba Hydro can only support the border crossing developed in their planning process and agreed upon with the Applicant. The Proposed Border Crossing-Blue/Orange Route, is located at latitude 49° 00' 00.00" N and longitude 95° 54' 50.49" W. According to Manitoba Hydro, the Proposed Border Crossing was jointly selected because it balances environmental, technical and stakeholder impacts on both sides of the border.

Manitoba Hydro determined that other border crossings are not feasible for reasons stated in its July 30, 2015 comment letter (see Appendix Y). These reasons include, but are not limited to, the fact that other border crossings traversed areas of high biological diversity that were noted by government agencies and environmental non-government organizations. Furthermore, on the Canadian side of the border, the areas immediately to the east of the Proposed Border Crossing are primarily composed of Crown (public) lands, which support traditional Aboriginal use. First Nations therefore noted significant concerns in regards to route alternatives in this area. Also, according to Manitoba Hydro's comment letter, the Border Crossing 500 kV Variation and the Border Crossing 230 kV Variation are outside of the agreed upon crossing areas and thus were not analyzed in their planning process, but those border crossings would pose many of the same challenges as those just to the east of the Proposed Border Crossing.

**National Energy Board (NEB) - Federal** – This proposed Project is an international transmission line and will require authorization from the NEB. The NEB will include a public comment period. For more information, visit [www.hydro.mb.ca/mmtp](http://www.hydro.mb.ca/mmtp). In both cases, Manitoba Hydro would provide an EIS to all necessary authorities with the filings for the project approval. See Section 2.2.1 for information about Manitoba Hydro.

**Manitoba Conservation and Water Stewardship (MCWS) - Provincial** – The Canadian EIS will be submitted to MCWS for review as a Class 3 development under The Environment Act (Manitoba). Following submission to MCWS, a public review period will begin and the EIS will be open for review and comment.

### 1.4.3 Cooperating Agencies and Coordination

DOE invited other federal agencies to participate in the preparation of this EIS as cooperating agencies to ensure that it satisfies those agencies' environmental requirements and/or to engage their specialized expertise. **These other agencies consist of other federal agencies and federally recognized Indian tribes.** The federally recognized Indian tribes are the Red Lake Band of Chippewa Indians, Minnesota, and the Bois Forte Band of the Minnesota Chippewa Tribe, Minnesota. The Red Lake Band of Chippewa Indians, Minnesota accepted DOE's invitation and is a cooperating agency for the preparation of this EIS. The Bois Forte Band (Nett Lake) of the Minnesota Chippewa Tribe, Minnesota declined DOE's invitation to participate as a cooperating agency in the preparation of this EIS, although they were actively consulted under Executive Order 13175 in the preparation of this EIS and are a consulting party in DOE's compliance process for Section 106 of NHPA.

The federal cooperating agencies are the St. Paul District of the USACE, Region 5 of the EPA, the Twin Cities Ecological Field Office (Region 3) of USFWS, and the Red Lake Band of Chippewa Indians, Minnesota. These federal agencies and American Indian tribe accepted DOE's invitation and are considered cooperating agencies for the preparation of this EIS.

The following outlines each agency's requirements and/or specialized expertise for this EIS:

**USACE.** USACE will use this EIS in their decision making for the permits that would be required under Section 10 of the Rivers and Harbors Act of 1899 and Section 404 of the Clean Water Act. In accordance with 33 CFR Part 325 Appendix B (8)(c), USACE will coordinate with DOE to ensure this EIS supports USACE's decision-making requirements on the Applicant's Section 10 and Section 404 permit application.

**EPA.** Under Section 309 of the Clean Air Act, the EPA is required to review and publicly comment on the environmental impacts of major federal actions. EPA also has responsibilities under the Clean Water Act. In addition, the EPA administers various statutes and regulations, including, but not limited to, the Safe Drinking Water Act; the Pollution Prevention Act; the Resource Conservation and Recovery Act; and the Comprehensive Environmental Response, Compensation, and Liability Act.

EPA's involvement as a cooperating agency includes (1) participation in relevant project meetings and calls and (2) review and comment on preliminary documents to the extent that staff resources allow.

**USFWS.** USFWS's role includes evaluating general environmental impacts on fish and wildlife. They also evaluate potential environmental impacts on federally-listed threatened and endangered species and designated critical habitat, and may issue a Biological Opinion based on a Biological Assessment prepared for the proposed Project, as appropriate. An incidental take statement (along with reasonable and prudent measures) may be issued if appropriate. USFWS also has responsibility for enforcing the Migratory Bird Treaty Act and the Bald and Golden Eagle Protection Act. Coordination for any necessary eagle permits will be conducted with USFWS. USFWS will also coordinate any special use permit if ROW access is requested and granted on USFWS interest properties. **The USFWS provided a recommended route that avoids USFWS Interest Lands, as described in their August 10, 2015 comment letter in Appendix U.**

**Red Lake Band of Chippewa Indians, Minnesota.** The role of the Red Lake Band of Chippewa Indians, Minnesota, as a cooperating agency in the preparation of this EIS is to provide specialized expertise in the identification of resources of concern to the tribe and the evaluation of general environmental impacts on resources of concern to the tribe. The tribe's involvement as a cooperating agency includes: (1) participation in relevant project meetings and calls, (2) identification of resources of concern to the tribe that may be potentially impacted, including, but not necessarily limited to, natural resources (such as water resources), biological resources (such as wildlife, including game species, fish, and plants), cultural resources (such as archaeological sites, properties of traditional religious and cultural importance, and traditional cultural properties), and socioeconomic resources (such as environmental justice or game species such as walleye), and (3) review and comment on preliminary documents. Separately, the tribe will exercise its independent review and comment responsibilities as a consulting party to DOE's compliance process for Section 106 of the NHPA.

### 1.4.4 Public Involvement

On June 20, 2014, MN PUC issued a Notice of Public Information and EIS Scoping Meeting. The notice described the proposed Project and provided an overview of the MN PUC process and opportunities

for public comment. The notification lists for the notice included individuals on the MN PUC's general service list and MN PUC's project contact list for the proposed Project (Minnesota Rules, part 7850.2100, subpart 1). Per Minnesota Rule 78520.2300 Subpart 2, notice of the public meeting was provided by the Applicant on MN PUC's behalf via advertisements in 11 local and regional newspapers along the proposed Project routes. Issuance of the notice commenced the state public scoping period that ended on August 15, 2014. The Applicant also provided the notice to its landowner list of potentially affected landowners.

On June 27, 2014, DOE published its Notice of Intent (NOI) to Prepare an EIS and to Conduct Public Scoping Meetings; Notice of Floodplains and Wetlands Involvement for the Great Northern Transmission Line (79 Federal Register (FR) 36493). The NOI explained that DOE would be assessing potential environmental impacts and issues associated with the proposed Project and the no-action alternative. The NOI was sent to interested parties including federal, state, and local officials; agency representatives; stakeholder organizations; local libraries, newspapers, and radio and TV stations; and private individuals in the vicinity of the proposed transmission line. Issuance of the NOI commenced a 45-day federal (NEPA) public scoping period that ended on August 11, 2014, however, DOE continued to accept scoping comments through August 15, 2014, in order to align the federal and state scoping period.

During the public scoping period, DOE and DOC-EERA conducted eight joint scoping meetings. A summary of the joint scoping process and associated public and agency comments are in the EIS Scoping Summary Report, the body of which is provided in Appendix C.<sup>31</sup> In short, five border crossing alternatives were suggested by the public and agencies for detailed study in the EIS during the public scoping period. Four of these border crossing alternatives were determined by DOE as potentially reasonable alternatives and are included in the scope of the EIS.

In addition, the MN PUC requested the DOC-EERA to conduct a minimum of two citizen Workgroup meetings and consult directly with LUGs within the project area. The purpose of the Workgroup

31 The full text of the Scoping Summary Report is available at: <http://www.greatnortherneis.org> (<http://www.greatnortherneis.org/Files/Scoping%20Summary%20Report%20NOV2014%20v2.pdf>) and on e-Dockets (eDockets Numbers: 201411-104621-01 to 10, 104622-01 to 09, 104623-01 to 10, 104624-01 to 08, 104625-01 to 07, and 104626-01 to 03) at: <http://mn.gov/commerce/energyfacilities/Docket.html?Id=33847#edocketFiles>

is primarily to provide an additional opportunity for local government representatives to discuss their concerns, develop potential alternative route segments, review potential zoning conflicts, and ensure local input necessary for informed decision-making. The DOC-EERA held two four-hour Workgroup meetings in Grand Rapids, Minnesota, on September 30 and October 29, 2014. In addition to the two meetings, Workgroup members were provided a scoping questionnaire designed to assist Workgroup members in identifying ordinances, land use planning, or zoning issues.

The major issues identified during public scoping focused on ways to minimize unavoidable conflicts with forested areas and the associated natural resources, avoiding potential conflicts with airports or seaplane-landing areas on nearby lakes, or proposed alternatives to reduce or eliminate visual, health, or other impacts on quality of life or use of a specific property.

Based on the scoping comments received, the DOC-EERA issued the scoping decision for this EIS on January 9, 2015 (Appendix D). The scoping decision identifies matters to be addressed in this EIS, including resources potentially impacted by the project and alternative route segments and alignment modifications – beyond those proposed routes and associated facilities proposed by the Applicant.

### 1.4.4.1 Draft EIS Comment Period

Federal NEPA implementing regulations require a minimum 45-day public comment period following publication of the Notice of Availability (NOA) by EPA in the FR. CEQ and DOE NEPA implementing regulations also require DOE to hold at least one public hearing on the Draft EIS in order to obtain comments from the public (40 CFR 1506.6(c) and 10 CFR 1021.313(b)). State regulations also require mailed notices and publication of the notice of Draft EIS availability and the opportunity for the public to comment in the Environmental Quarterly Bulletin (EQB) Monitor.

Publication of the joint EIS also requires DOC-EERA to hold an informational meeting to obtain comments on the Draft EIS (Minnesota Rules, part 7850.2500, subpart 8). The federal public hearings and state informational meeting on the Draft EIS were held jointly. State regulations require the public comment period be held open for at least ten days following the close of these joint public hearing/information meetings. The dates and times

of these public comment meetings were made available on the agency project websites.<sup>32</sup>

Comments on the Draft EIS were accepted during the 45-day period following publication of the EPA's NOA in the Federal Register on June 26, 2015 (80 FR 36795) and ending August 10, 2015. The DOC-EERA also issued its Notice of Availability of Draft EIS, State Public Information Meetings and Federal Public Hearings on June 19, 2015. In preparing this Final EIS, DOE and DOC-EERA solicited comments during the scoping period (June 27, 2014, through August 11, 2014) and public comment period on the Draft EIS (June 26, 2015 through August 10, 2015). Late comments on the Draft EIS that were received or postmarked after the scoping comment period and the Draft EIS comment period were also considered in preparation of this Final EIS.

During the 45-day public comment period, DOE and DOC-EERA held nine federal public hearings/state information meetings on the Draft EIS in the following locations: Red Lake, Minnesota, on July 14, 2015; Roseau and Baudette, Minnesota, on July 15, 2015; Littlefork and International Falls, Minnesota, on July 16, 2015; Kelliher and Bigfork, Minnesota, on July 21, 2015; and two meetings in Grand Rapids, Minnesota on July 22, 2015.

DOE and DOC-EERA responded to written and verbal comments from 208 letters and comments provided orally in public hearings/information meetings on the Draft EIS. This included five comments from federal government officials or agencies, seven from federally recognized tribes, 12 from state government officials or agencies, 21 from local government officials, agencies, or planning boards, 12 from commercial companies, one from a non-governmental organization, four from the Applicant, one from a Manitoba Justice, and 145 from private citizens. The comments letters and more detailed responses are included in Appendix Y. The major issues identified during the Draft EIS comment period, including late comments, include:

**Regulatory Process/Public Involvement**—Several comments noted that landowners did not receive appropriate public notice, that the meetings were not publicized property, or that there was not enough opportunity to provide meaningful input into the route selection process.

<sup>32</sup> Available at: <http://energy.gov/oe/downloads/application-presidential-permit-oe-docket-no-pp-398-minnesota-power-great-northern> and <http://mn.gov/commerce/energyfacilities/Docket.html?Id=33847>

DOE/DOC response: Notification of the proposed Project was provided in a manner consistent with DOE and MN PUC requirements and outlined in Section 1.4.4 of the EIS. Additionally, as described in Section 2.3.1, the Applicant hosted numerous public involvement meetings throughout the route selection process to provide Project information and solicit feedback from the public.

**Purpose and Need**—Several comments questioned the need for the proposed Project from an electrical reliability standpoint and said that the document did not adequately address the need for the Project.

DOE/DOC-EERA response: The purpose and need for DOE's action and decision is described in Section 1.2.2, and the MN PUC certificate of need process is discussed in Section 1.3.2 of the EIS. The MN PUC determined that there is a need for the proposed Project by the Applicant in eDocket #12-1163 (certificate of need).

**Project Description/Project Design**—Several comments questioned various aspects of the project description and project components including the proposed compensation station, substation, access roads, capacity of the line, and other design criteria.

DOE/DOC-EERA response: As discussed in Section 2.9.7 of the EIS, once a route is selected the Applicant will identify the locations for all permanent and temporary access roads, laydown areas, stringing areas, fly-in sites, and structure locations. They will work with the federal and state agencies to develop survey plans, conduct fieldwork, and determine the wetland and other resource impacts for the project. This information will be needed in order to complete the federal and state permitting processes. Until a route is selected, the exact locations of these project components cannot be known

**Alternatives**—Several comments suggested that alternative routes or other system and non-transmission alternatives should be evaluated in the Final EIS.

DOE/DOC-EERA response: DOE and DOC-EERA determined that the Draft EIS covered a range of reasonable alternatives and none of the route alternatives presented warranted expanding that range. Non-transmission alternatives were considered but eliminated from detailed analysis because they are outside the scope of the purpose of and need for DOE's federal action, which is to decide whether to issue a Presidential permit.

Non-transmission alternatives that are out of scope for this EIS were handled under the state's certificate of need process.

**No Action Alternative**—Other comments challenged the adequacy of the No Action Alternative analysis and suggested it was slanted in the applicant's favor.

DOE response: The No Action Alternative is discussed in full in Chapter 3 of the EIS. DOE's Federal Action is to decide whether to grant the Applicant a Presidential permit for the international border crossing that is a part of the proposed Project. The no action alternative is to not issue the requested Presidential permit.

**Human Settlement**—Several comments expressed concern for displacement and impacts to private farmland and homes near proposed routes and variations. Several comments expressed a preference for the proposed Project to utilize public lands instead of private property. Other comments expressed concerns about the proximity of community spaces, such as fire departments, churches, and parks, to proposed routes and variations.

DOE/DOC-EERA response: As discussed in Section 1.3.1.4 of the EIS, once a route is selected and a permit is issued, the Applicant would contact landowners to gather information about their property and their concerns and discuss how the ROW would best proceed across the property.

**Noise and Vibration**—Several comments expressed concern regarding audible noise from operation of the proposed Project, including noise from corona discharges. Another comment requested that the predicted noise levels for the compensation station be provided in the EIS along with a discussion of infrasound and explanation of whether additional modeling is necessary. One comment provided additional noise modeling for operation of the proposed Project.

DOE/DOC-EERA response: Noise is discussed in Section 5.2.1.2 of the EIS, which provides an analysis of audible noise from operation of the proposed Project, particularly in rainy conditions, when corona noise would be at its highest. This analysis of operational noise also provides estimates for the proposed substation, compensation station, and associated sources (transformers, reactors, and capacitor banks). No additional noise modeling was performed because it was not deemed necessary to adequately characterize impacts.

**Air quality/GHG**—A comment requested that the EIS include an estimate of total emissions from construction, operation, maintenance, and emergency repair of the proposed Project and that the Applicant pursue more opportunities to use clean diesel equipment and other emission reduction strategies. A comment also requested quantification of the greenhouse gas emission reductions as result of operation of the proposed Project and subsequent reduction of fossil fuels.

DOE/DOC-EERA response: Employment of additional emission reduction strategies during construction of the proposed Project will be dependent on the Applicant to implement as the proposed Project is not expected to result in long-term adverse criteria pollutant or climate change and GHG emissions which would allow for regulatory agency enforcement of emission reduction strategies. Additional emissions estimates are provided in Section 5.2.1.3.

**Socioeconomics**—Several comments expressed concern about the proposed Project's potential negative impacts on property values and requested more information. Two comments expressed concern about the validity of the property value impact analysis in the EIS.

DOE/DOC-EERA response: A discussion about the potential effects of transmission lines on property values is included in the EIS in Section 5.2.1.4. This includes a summary of the potential range of property value effects attributed to transmission lines. Further, Appendix J, Property Values Supplement provides a summary of the literature regarding the relationship between transmission lines and property values used to develop the property values analysis in Section 5.2.1.4.

**Recreation and Tourism**—Several comments expressed concern that the proposed Project would negatively impact recreation and tourism activities such as hunting. One comment expressed concerns that if the Cedar Bend WMA Variation is selected, a recreational business could be affected.

DOE/DOC-EERA response. Discussion of impacts on Recreation and Tourism resulting from the proposed Project is in Section 5.2.1.9. The EIS discussion for Recreation and Tourism is limited to activities on public lands. Impacts to landowners as a result of the proposed Project are discussed relative to Displacement in Section 5.2.1.1 and Land Use Compatibility in Section 5.3.1.2.

**Public Health and Safety**—Several comments expressed concern regarding the impacts of

induced voltage on workers and recreational hunting. One comment expressed concern that the effects of induced voltage were incorrectly reflected in the EIS. Other comments expressed concern for high voltage transmission lines and the unknown potential effects on humans. A comment also expressed concern regarding the potential effect of the proposed Project on implantable medical devices. One comment expressed concern if the proposed Project is in proximity to gravel pits, that corona discharges could result in the Henshaw effect, affecting human health. Several comments expressed concern for health impacts due to EMF. One comment provided updated magnetic field calculations for the proposed Project.

DOE/DOC-EERA response: Section 5.2.2.4 in the EIS discusses induced voltage. Section 5.2.1.2 of the EIS presents the estimated audible noise levels from the proposed 500 kV transmission lines under rainy conditions (worst case scenario for noise generated from corona effect). Section 5.2.2.8 of the EIS discusses public safety hazards associated with the proposed Project including electrical shocks.

**Aesthetics**—One comment requested viewshed maps be prepared and viewshed analyses be conducted for Bass Lake Park, Larson Lake Campground, Wolf Lake-Wasson Lake Bog, and established campgrounds and trails in these areas. A few comments expressed concern for the adequacy of using the 1,500-foot distance for the buffer as the ROI to assess aesthetic impacts. One comment requested analyses of visual impacts at each proposed crossing of a scenic byway, identification of any specific mitigation to reduce visual impacts, and investigation of any scenic easements in the vicinity of scenic byways.

DOE/ DOC-EERA response: Chapters 5 and 6 in the EIS provide analyses sufficient to characterize aesthetic impacts from the proposed Project to sensitive receptors, which are fully enumerated and accounted for in the analysis. Photo simulations for key observation points are provided in Appendix N and provide sufficient simulations to adequately characterize aesthetic impacts from the proposed Project.

**Land Use and Ownership**—Comments expressed general concerns about the amount of private land impacted by the proposed Project routes and variations and the evaluation of those impacts. Other comments expressed concern about potential impacts on existing uses and potential future uses of private land. Several comments

expressed preference for avoiding conservation lands and USFWS Interest Lands. One comment requested that all impacts to USFWS Interest Lands be avoided or minimized by selecting a route that does not impact USFWS Interest Lands, using other areas within the ROW to avoid USFWS Interest Lands, and alternative routes be investigated to avoid impacts to USFWS Interest Lands, and after a thorough evaluation, if USFWS Interest Lands are impacted, unavoidable impacts to USFWS Interest Lands may require mitigation.

DOE/DOC-EERA response: As discussed in Section 1.3.1.4 of the EIS, once a route is selected and a permit is issued, the Applicant would contact landowners to gather information about their property and their concerns and discuss how the ROW would best proceed across the property. The Applicant will work with USFWS to determine if permits can be obtained to cross USFWS interest lands. The need for these permits will be determined once the final route is selected by the MN PUC.

**Land Use**—Agricultural resources and airstrips. Several comments expressed concern regarding potential impacts to agricultural land and farming operations including those outside the ROW. One comment requested that an Agricultural Impact Mitigation Plan (AIMP) be included as part of the EIS. Several comments expressed concern for potential proposed Project impacts to aerial spraying operations. Other comments expressed concern that transmission lines in close proximity to airstrips and public airports could pose potential hazards to take-offs and landings.

DOE/DOC-EERA response: Impacts to agricultural land use are addressed in Sections 5.3.2.1, 6.2.2.2, and 7.3.3.1. Impacts to airports and airstrips are discussed in Section 5.2.1.6 and alternatives are not expected to impact either public airports or private airstrips.

**Cultural resources**—Comments requested that cultural resources investigations are conducted for all disturbance areas for the proposed Project and that cultural resources and historic properties are evaluated with respect to effects from the proposed project. Comments requested that DOE consider the perspectives of federally recognized Indian tribes and include traditional cultural properties (TCPs) when conducting cultural resources investigations and involve federally recognized Indian tribes in the identification and evaluation efforts of TCPs, as well as consult with federally recognized Indian tribes to ensure that visual impacts on visually sensitive lands owned by

the tribes are mitigated adequately or measures are taken to reduce those visual impacts.

DOE/DOC-EERA response: DOE has conducted government-to-government consultation with federally recognized Indian tribes pursuant to Section 106 of the NHPA of 1966, as amended. The discussion of DOE's tribal consultation is presented in Section 5.3.3.1 Archaeology and Historic Architectural Resources of the EIS. Further documentation of ongoing consultation with the federally recognized Indian tribes is provided in Appendix A of the EIS.

**Wetlands and Water Quality**—Several comments requested that the proposed Project avoid, minimize, and mitigate wetland impacts. A few comments expressed concern that the proposed Project could impact water resources.

DOE/DOC-EERA response: Specific wetland impacts will be quantified upon selection of a project alignment and project design. A mitigation plan for unavoidable wetland impacts is not available at this time. Once DOE and MN PUC issue permits for the Project, a wetland mitigation plan will be developed by the Applicant in coordination with USACE, BWSR, and appropriate local units of government as part of the environmental permitting process.

**Biological Resources**—Several comments requested that the proposed Project avoid and minimize impacts to a number of biological resources including vegetation, wildlife, rare species, and rare communities. Several comments expressed concern that the proposed Project could increase the spread of noxious weeds and invasive species. Several comments expressed concern that the proposed Project may impact migratory birds and/or that the Applicant should develop an Avian Protection Plan. Several comments expressed concern and requested that the selected alternatives avoid adverse and unnecessary impacts to wildlife habitats and rare communities.

DOE/DOC-EERA response: As discussed in Section 2.11.1 of the EIS, the Applicant would incorporate industry best practices to minimize impacts to migratory birds, which are consistent with the Avian Powerline Interaction Committee (APLIC's) 2012 guidelines. In addition, the MN PUC route permit could require that the Applicant develop and implement an Avian Protection Plan. The Applicant would coordinate with the MnDNR and other appropriate agencies in the development of an Avian Protection Plan. Impacts to vegetation are discussed in Chapters 5 and 6 of the EIS. Chapter

6 of the EIS identifies that the MN PUC Route Permit could also require the development of a Vegetation Management Plan as a permit condition, which could include plant surveys along the permitted ROW, incorporate vegetation clearing, and management of invasive species. The MN PUC typically requires the Applicant to prepare a vegetation management plan in coordination with the MnDNR as a condition of the Route Permit.

All comments, including late comments, were considered during the preparation of this Final EIS. Appendix Y in Volume II of this EIS contains the comments received on the Draft EIS and DOE's and DOC-EERA's responses to these comments. This Final EIS contains revisions and new information based in part on comments received on the Draft EIS.

DOE will announce its decision on its Proposed Action in a Record of Decision (ROD) in the Federal Register no sooner than 30 days after EPA publishes the NOA of the Final EIS, and not before the MN PUC's Route Permit decision. MN PUC's decision on a final route determination is expected in the first quarter of 2016.

The Minnesota Office of Administrative Hearings (OAH) conducted Public Hearings on the Applicant's route permit application. These hearings were held on August 5, 2015 in Roseau, Minnesota; on August 6, 2015 in Baudette, Minnesota and Littlefork, Minnesota; on August 12, 2015 in Kelliher and Bigfork, Minnesota; and on August 13, 2015 in Grand Rapids, Minnesota. The hearings were presided over by Administrative Law Judge Ann C. O'Reilly from the OAH. Notice of the hearings were published in local newspapers and mailed to persons on the project mailing list.

Judge O'Reilly will submit a report to the MN PUC following publication of the Final EIS, which will include findings of fact, conclusions of law, and recommendations on the Applicant's Route Permit application (Minnesota Statutes, section 216E.03, subdivisions 6 and 9 and Minnesota Rules, part 7850.2600). MN PUC will consider the ALJ's report and recommendation and determine which route alternative to permit and what conditions to include in the permit.

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