BEFORE THE MINNESOTA PUBLIC UTILITIES COMMISSION

Beverly Jones Heydinger	Chair
Nancy Lange	Commissioner
Dan Lipschultz	Commissioner
Matthew Schuerger	Commissioner
John A. Tuma	Commissioner

In the Matter of the Joint Application of Great River Energy and Minnesota Power for a Certificate of Need for the Motley-Area 115 kV Transmission Line Project in Morrison, Cass, and Todd Counties

In the Matter of the Joint Application of Great River Energy and Minnesota Power for a Route Permit for the Motley-Area 115 kV Transmission Line Project in Morrison, Cass, and Todd Counties

ISSUE DATE: March 23, 2016

DOCKET NO. ET-2,E-15/CN-14-853;
ET-2,E-15/TL-15-204

ORDER GRANTING CERTIFICATE OF NEED AND ISSUING ROUTE PERMIT

PROCEDURAL HISTORY

I. Initial Filings and Order

On March 19, 2015, Great River Energy and Minnesota Power (Applicants) filed applications for a certificate of need and a route permit to construct approximately 15.5–16.5 miles of 115 kilovolt (kV) transmission line and associated facilities in the Motley area (the project). Applicants stated that the project was needed to address power-system overload issues in the area and to serve a new oil-pipeline pumping station.

On May 27, the Commission found the applications complete and referred them to the Office of Administrative Hearings (OAH) for joint public hearings, requesting that an administrative law judge file a report summarizing the public comments received on both applications. The Commission also ordered combined environmental review of the applications.

II. Environmental Assessment

On July 15, the Minnesota Department of Commerce (the Department) issued a scoping decision identifying potential alternatives and mitigation measures to be addressed in an environmental assessment of the project.

On November 16, the Department issued an environmental assessment analyzing the project's potential impacts and examining several alternatives to the project.

III. Public Comments

On November 19, Administrative Law Judge (ALJ) Jeffery Oxley held a public hearing on the certificate-of-need and route-permit applications at the Motley Staples Middle School. Some 20 members of the public testified.

After the hearing, the record remained open for 11 days to allow interested persons to submit written comments. Nine individuals or couples submitted written comments to the ALJ.

On December 29, the ALJ filed a summary of the oral and written public comments. A number of commenters stated that people residing in the project area did not want or need the project. Others proposed alternative routes or alignments that would minimize the project's impact on their property.

IV. Additional Filings

On November 30, 2015, the Applicants filed comments responding to a route alternative that some landowners had advanced at the public hearing and noting for the record several minor corrections to the environmental assessment. On the same date, the Minnesota Department of Natural Resources filed comments recommending permit conditions to mitigate the project's environmental impact.

On December 18, the Applicants filed Proposed Findings of Fact and Conclusions of Law (proposed findings) applying the route-permit criteria in Minn. Stat. § 216E.03 and Minn. R. 7850.4100.

On January 13, 2016, the Department filed comments responding to public comments and recommending several revisions to the Applicants' proposed findings.

On February 18, the Applicants filed comments recommending several revisions to the route-permit template filed by Commission staff on February 11.[1] The Department agreed to the revisions.

On February 19, the Commission met to consider the matter.

FINDINGS AND CONCLUSIONS

I. Summary of Commission Action

In this order the Commission takes the following actions:

- Finds that the Department's environmental assessment and the record in this case are complete and that they address the issues identified in the environmental-assessment scoping decision;

[1] The recommended revisions related to limiting nighttime construction noise, minimizing wetland impacts, and northern long-eared bat protections.

- Adopts the proposed Findings of Fact and Conclusions of Law with modifications; and

- Grants a certificate of need and a route permit with revisions agreed upon by Applicants and the Department.

II. The Proposed Project

Applicants propose to build the Motley-Area 115 kV Transmission Line Project to meet existing electric load and future electric load requirements in the Motley Area. In addition, Applicants stated that Great River Energy needs the project to provide electric service to Minnesota Pipe Line Company's proposed Fish Trap pumping station. Applicants anticipate that construction would start in fall 2016 and that the line would be energized in summer 2017.

Construction of the project will involve several steps, summarized below:

- Building a new single-circuit 115 kV transmission line between Minnesota Power's "24 Line" transmission line and a new Crow Wing Power[2] Fish Trap Lake Substation;

- Converting the 34.5 kV Motley Substation to 115 kV and adding a three-way switch;

- Building the Fish Trap Lake Substation to serve the new Fish Trap pumping station;

- Adding breakers to Minnesota Power's existing Dog Lake Substation using a more reliable ring bus design and building a one-half-mile transmission line between the substation and the "24 Line" 115 kV transmission line; and

- Installing a three-way switch to allow for the future construction of a Crow Wing Power substation near Shamineau Lake.

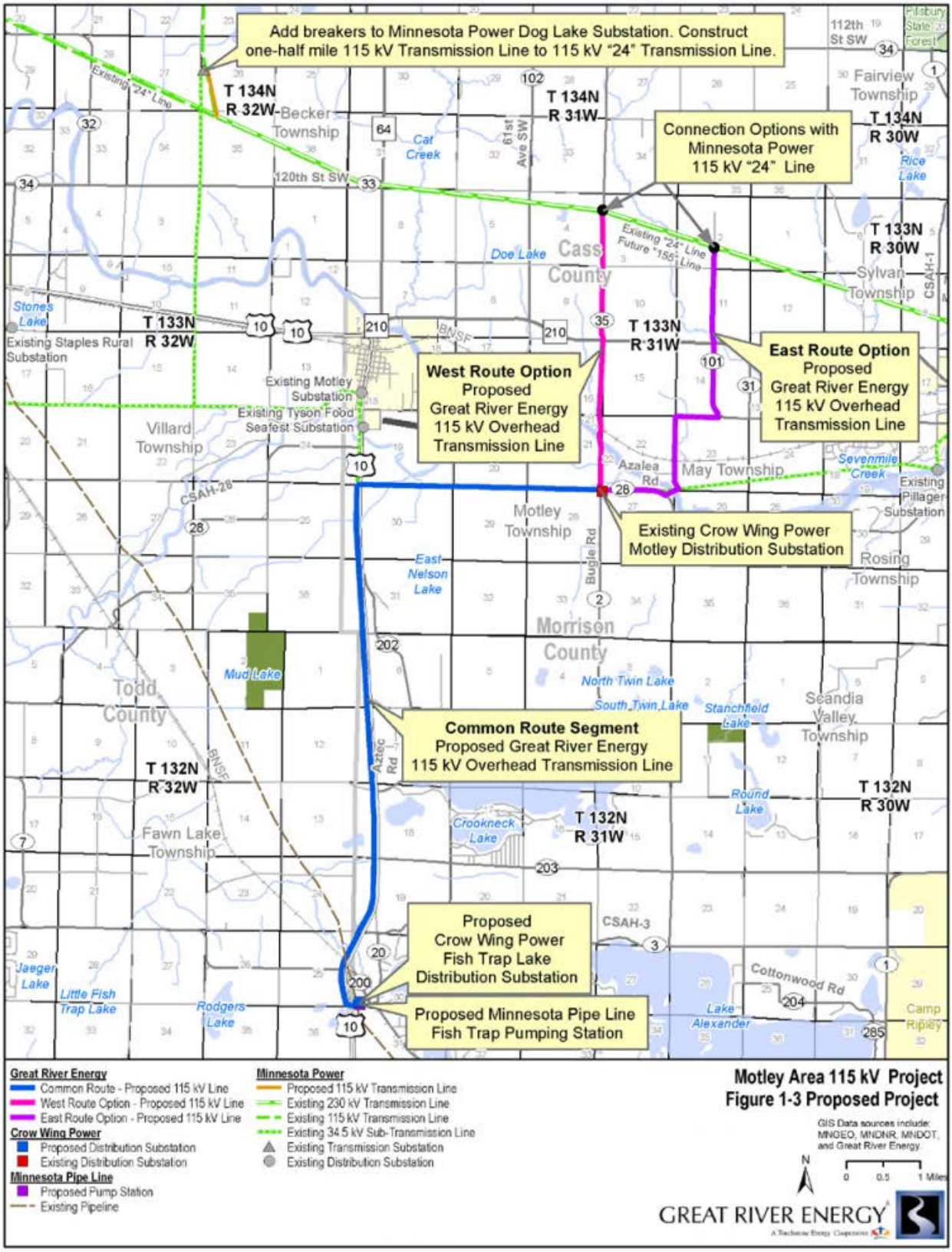
The project's proposed route is shown in Figure 1 below. For the northern portion of the project, Applicants propose two alternative routes, the West and East Route Options, which begin at Minnesota Power's "24 Line" 115 kV line and run south for approximately four miles to Crow Wing Power's existing Motley Substation southeast of Motley.

From the Motley Substation, the route runs west for approximately three miles along County Road 28 to U.S. Highway 10. The route continues south along Highway 10 for approximately seven miles and ends at Crow Wing Power's proposed Fish Trap Lake Substation. Applicants refer to this approximately ten-mile segment as the "Common Route."

Applicants' preferred route consists of the East Route Option and the Common Route, including an alignment along the west side of Highway 10 and an alignment along the south side of County Road 28, with a slight deviation to avoid an old American elm tree.

[2] Crow Wing Power is the distribution cooperative serving the area proposed to be supplied by the new transmission line.

Figure 1: Applicants' Initial Motley Project Map



III. Environmental Assessment

At the time of a final decision on certificate-of-need and route-permit applications, the Commission must determine whether the environmental assessment and the record created at the public hearing address the issues identified in the scoping decision.[3]

The Department's scoping decision states that the environmental assessment will describe the project and the human and environmental resources in the area; provide information on the potential impacts of the project, including possible mitigation measures; identify impacts that cannot be avoided; identify permits that may be required from other government entities; discuss the relative merits of route alternatives; and describe and analyze the human and environmental impacts of the proposed project and alternatives to the project.

The environmental assessment addresses each of these topics. In particular, it discusses the potential impacts of the project and measures to avoid, minimize, or mitigate those impacts; analyzes the relative merits of several route alternatives; and describes and the feasibility, availability, and potential impacts of the following alternatives to constructing the project: (1) a "no build" alternative, (2) demand-side management, (3) purchased power, (4) facilities of a different size, (5) facilities with different endpoints, (6) new generation, (7) upgrading existing facilities, and (8) renewable generation. It concludes that none of these alternatives are feasible and available or meet the stated need for the project.

Having examined the environmental assessment and the record in this case, the Commission finds that the assessment and the record are complete and address the issues identified by the scoping decision.

IV. Certificate of Need

In Minnesota, anyone seeking to build a transmission line longer than 10 miles with a capacity of 100 kV or more must obtain a certificate of need from the Commission.[4] Because the Motley-Area Transmission Line Project would involve building 15.5–16.5 miles of 115 kV transmission line, a certificate of need is required.

A. Legal Standard

1. The Original Statutory Factors

As initially enacted, the certificate-of-need statute identified eight factors for the Commission to consider in evaluating the need for a proposed large energy facility[5] and directed the Commission to "adopt assessment of need criteria to be used in the determination of need for large energy facilities pursuant to the section."[6]

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[3] Minn. R. 7849.1800, subp. 2, 7850.3900, subp. 2.

[4] *See* Minn. Stat. §§ 216B.243, subd. 2 (requiring a certificate of need for a "large energy facility"), .2421, subd. 2(3) (defining "large energy facility" as, *inter alia*, a transmission line longer than ten miles with a capacity of 100 kV or more).

[5] Minn. Stat. § 216B.243, subd. 3.

[6] *Id.*, subd. 1.

The statute also prohibited the Commission from granting any certificate of need unless the application demonstrated that the need for electricity could not be met more cost effectively through energy conservation and load management.[7]

2. The Commission's Rules

In 1983, the Commission, in compliance with its statutory obligation to establish assessment-of-need criteria, adopted the certificate-of-need rules, Minn. R. ch. 7849. One of those rules, Minn. R. 7849.0120, addresses the eight factors identified in the statute and directs the Commission to issue a certificate of need when the applicant demonstrates that

> A. the probable result of denial would be an adverse effect upon the future adequacy, reliability, or efficiency of energy supply to the applicant, to the applicant's customers, or to the people of Minnesota and neighboring states;
>
> B. a more reasonable and prudent alternative to the proposed facility has not been demonstrated by a preponderance of the evidence on the record;
>
> C. by a preponderance of the evidence on the record, the proposed facility, or a suitable modification of the facility, will provide benefits to society in a manner compatible with protecting the natural and socioeconomic environments, including human health; and
>
> D. the record does not demonstrate that the design, construction, or operation of the proposed facility, or a suitable modification of the facility, will fail to comply with relevant policies, rules, and regulations of other state and federal agencies and local governments.

3. Additional Statutory Requirements

After the Commission adopted these rules, the Legislature amended the statute to add four more factors for the Commission to evaluate in assessing need:

> (9) with respect to high-voltage transmission lines, the benefits of enhanced regional reliability, access, or deliverability to the extent these factors improve the robustness of the transmission system or lower costs for electric customers in Minnesota;[8]

[7] *Id.*, subd. 3.

[8] *Id.*, subd. 3(9).

> (10) whether the applicant or applicants are in compliance with applicable provisions of sections 216B.1691 and 216B.2425, subdivision 7, and have filed or will file by a date certain an application for certificate of need or for certification as a priority electric transmission project under section 216B.2425 for any transmission facilities or upgrades identified under section 216B.2425, subdivision 7;[9]
>
> (11) whether the applicant has made the demonstrations required under subdivision 3a;[10] and
>
> (12) if the applicant is proposing a nonrenewable generating plant, the applicant's assessment of the risk of environmental costs and regulation on that proposed facility over the expected useful life of the plant, including a proposed means of allocating costs associated with that risk.[11]

B. The Department's Comments

In comments filed August 7, 2015, the Department examined the certificate-of-need application in light of the criteria established in statute and rule and explained why it believed the application met those criteria. An itemization of the criteria and the Department's recommendations regarding the criteria follows:

[9] *Id.*, subd. 3(10).

[10] *Id.*, subd. 3(11).

[11] *Id.*, subd. 3(12).

Regulatory criteria: Minn. R. 7849.0120	Where addressed in Department's August 7, 2015 comments	The Department's statement
Subpart A(1)	Section III.A.1.a	Actual load for the area exceeds the level at which reliable service can be provided.
Subpart A(2)	Section III.B.2	Conservation will not be able to address issues related to meeting existing demand at the levels indicated by Applicants.
Subpart A(3)	Section III.E.2	The Department is not aware of any promotional activities that may have triggered the need for the proposed project.
Subpart A(4)	Section III.C.1.a	A lower-voltage 34.5 kV rebuild could not meet the claimed need due to engineering considerations; a distributed-generation alternative would have far higher costs.
Subpart A(5)	Section III.D	Addressed in environmental assessment
Subpart B(1)	Section III.C.1.b	This subcriterion has been met.
Subpart B(2)	Section III.C.1.c	The internal cost of the proposed project and the internal cost of energy to be supplied by the proposed project are less than the alternatives.
Subpart B(3)	Section III.C.1.d	In reply comments, Applicants should add the Commission's externality costs and internal cost of CO_2 regulation values to the economic analysis of alternatives.[12]
Subpart B(4)	Section III.C.2	The proposed project is designed to improve reliability; each of the alternatives would result in equivalent or inferior reliability.
Subpart C(1)	Section III.A.1.b	The proposed project is not directly related to overall state energy needs; it is necessary to restore reliable service in the local area.
Subpart C(2)	Section III.D	The Department relies on the environmental assessment for its analysis of impacts on the socioeconomic and natural environments.
Subpart C(3)	Section III.D	The Department relies on the environmental assessment for its analysis of impacts on the socioeconomic and natural environments.
Subpart C(4)	Section III.D	The Department relies on the environmental assessment for its analysis of impacts on the socioeconomic and natural environments.
Subpart D	Section III.E.1	The record does not demonstrate that Applicants will fail to comply with relevant policies, rules, and regulations of other state and federal agencies and local governments.

[12] After Applicants provided further information in reply comments, the Department concluded that they had addressed the requirements of Minn. R. 7849.0120(B)(3). *See* Department's October 2, 2015 Supplemental Comments in Docket No. ET-2,E-015/CN-14-853.

Statutory criteria	Where addressed in Department's August 7, 2015 comments	The Department's statement
Minn. Stat. § 216B.243, subd. 3(9)	III.A.2	The proposed line would have little further impact, positive or negative.
Minn. Stat. § 216B.243, subd. 3a, and § 216B.2422, subd. 4	Section III.B.1	These renewable-preference statutes do not apply.
Minn. Stat. § 216B.2426	Section III.C.3	The question of whether and how much distributed generation might be certified by the Commissioner of Commerce in the future is not relevant to this petition.
Minn. Stat. § 216B.1694, subd. 2(a)(5)	Section III.C.4	This statute does not apply.
Minn. Stat. § 216B.243 subd. 3(10) and § 216B.1691	Section III.E.3.a	Applicants complied with the Renewable Energy Standard (RES) in 2015.
Minn. Stat. § 216B.1612(c)	Section III.E.3.b	Applicants have met this statutory criterion.
Minn. Stat. § 216B.243, subd. 3(12)	Section III.E.4	This statute does not apply.
Minn. Stat. § 216B.243, subd. 3(10) and § 216B.2425, subd. 7	Section III.E.5	There is sufficient time to allow events to develop before certificate-of-need petitions are necessary for RES-related transmission projects.
Minn. Stat. § 216H.03	Section III.E.6	The proposed project will not contribute to, and in fact will reduce, statewide power-sector carbon-dioxide emissions.

Having analyzed the standards established in Minn. Stat. § 216B.243 and Minn. R. 7849.0120, the Department recommended that the Commission grant Applicants a certificate of need for the project.

C. Commission Action

The Commission has reviewed the Department's comments and will accept the Department's findings and recommendations. The Commission has considered the factors identified in statute and rule and will grant Applicants a certificate of need. Based on the record, the Commission makes findings on four points:

First, based on a consideration of the factors set forth in Minn. R. 7849.0120(A), the Commission concludes that denying the application would likely harm the future adequacy, reliability, or efficiency of the energy supply to Applicants' customers.

Second, based on a consideration of the factors set forth in Minn. R. 7849.0120(B), the Commission concludes that a more reasonable and prudent alternative to the project has not been demonstrated by a preponderance of the evidence in the record.

Third, based on a consideration of the factors set forth in Minn. R. 7849.0120(C), the Commission concludes that the preponderance of the evidence in the record demonstrates that the project will provide benefits to society in a manner compatible with protecting the natural and socioeconomic environments, including human health.

Finally, based on a consideration of the factors set forth in Minn. R. 7849.0120(D), the Commission concludes that the record does not demonstrate that the design, construction, or operation of the project, or a suitable modification of the project, will fail to comply with relevant policies, rules, and regulations of other state and federal agencies and local governments.

V. Route Permit

Anyone seeking to build a transmission line in Minnesota longer than 1,500 feet with a capacity of 100 kV or more must obtain a route permit from the Commission establishing the line's route.[13] Because the Motley Project involves building several miles of 115 kV transmission line, a route permit is required.

A. Legal Standard

The Commission's route-permit determinations are guided by Minnesota's goals to conserve resources, minimize environmental impacts, minimize human settlement and other land-use conflicts, and ensure the state's electric-energy security through efficient, cost-effective power supply and transmission infrastructure.[14] The routing statute requires the Commission to consider the following non-exclusive factors in deciding whether to issue a route permit:

- evaluation of research and investigations relating to the effects on land, water and air resources of high-voltage transmission lines and the effects of electric and magnetic fields resulting from such facilities on public health and welfare, vegetation, animals, materials, and aesthetic values;
- environmental evaluation of routes proposed for future development and expansion and their relationship to the land, water, air, and human resources of the state;
- evaluation of the effects of new power-generation and -transmission technologies;

[13] Minn. Stat. §§ 216E.03, subd. 2 (requiring route permit to construct a "high-voltage transmission line"), .01, subd. 4 (defining "high-voltage transmission line" as "a conductor of electric energy and associated facilities designed for and capable of operation at a nominal voltage of 100 kilovolts or more and . . . greater than 1,500 feet in length").

[14] Minn. Stat. § 216E.03, subd. 7(a). *See also* Minn. Stat. § 216E.02, subd. 1 (providing that it is state policy to "locate large electric power facilities in an orderly manner compatible with environmental preservation and the efficient use of resources").

- analysis of the direct and indirect economic impact of proposed routes including, but not limited to, productive agricultural land lost or impaired;
- evaluation of adverse direct and indirect environmental effects that cannot be avoided should the proposed route be accepted;
- evaluation of alternatives to the applicant's proposed route;
- evaluation of potential routes that would use or parallel existing railroad and highway rights-of-way;
- evaluation of governmental survey lines and other natural division lines of agricultural land so as to minimize interference with agricultural operations;
- evaluation of the future needs for additional high-voltage transmission lines in the same general area as any proposed route, and the advisability of ordering the construction of structures capable of expanding transmission capacity through multiple circuiting or design modifications;
- evaluation of irreversible and irretrievable commitments of resources should the proposed route be approved; and
- when appropriate, consideration of problems raised by other state and federal agencies and local entities.[15]

Under its rules, the Commission must also consider the following factors in determining whether to issue a permit for a high-voltage transmission line:

> A. effects on human settlement including, but not limited to, displacement, noise, aesthetics, cultural values, recreation, and public services;
>
> B. effects on public health and safety;
>
> C. effects on land-based economies including, but not limited to, agriculture, forestry, tourism, and mining;
>
> D. effects on archaeological and historic resources;
>
> E. effects on the natural environment, including effects on air and water quality, flora, and fauna;
>
> F. effects on rare and unique natural resources;
>
> G. application of design options that maximize energy efficiencies, mitigate adverse environmental effects, and could accommodate expansion of transmission or generating capacity;
>
> H. use or paralleling of existing rights-of-way, survey lines, natural division lines, and agricultural field boundaries;
>
> I. use of existing large electric power generating plant sites;
>
> J. use of existing transportation, pipeline, and electrical transmission systems or rights-of-way;

[15] Minn. Stat. § 216E.03, subd. 7(b).

K. electrical-system reliability;

L. costs of constructing, operating, and maintaining the facility that are dependent on design and route;

M. adverse human and natural environmental effects which cannot be avoided; and

N. irreversible and irretrievable commitments of resources.[16]

Any route permit issued by the Commission must specify the design, routing, right-of-way preparation, and facility construction, along with any other conditions the Commission deems appropriate.[17]

B. Commission Action

Having carefully examined the record, the Commission finds that the Motley-Area 115 kV Transmission Line Project satisfies the routing criteria in Minn. Stat. § 216E.03 and Minn. R. 7850.4100 and is consistent with the state policy set forth in Minn. Stat. § 216E.02 to locate large electric power facilities in an orderly manner compatible with environmental preservation and the efficient use of resources.

The Applicants' proposed findings, as revised by the Department, contain more than 200 findings of fact and conclusions of law supporting granting a route permit for Applicants' preferred route. The proposed findings describe the procedural history of the case, including comments received from government agencies and the public; Applicants' proposed route and the project's technical specifications; alternative routes, including routes proposed by members of the public; and project schedule and costs.

The proposed findings recite the permitting criteria and apply those criteria to the proposed route and route alternatives. And they list several conditions that should be included in the route permit to mitigate the project's impacts. The Commission concurs in the proposed findings and will adopt them with the modifications shown in Attachment A.

Finally, the Commission is mindful that many members of the public took the time to share their perspectives with the ALJ and the Commission—in particular, with regard to the East and West Route Options and the alignment along Highway 10. The Commission has weighed their comments and the other evidence in the record and concludes that Applicants' preferred route is most consistent with the routing criteria set forth in statute and rule, as more fully explained in the attached findings.

[16] Minn. R. 7850.4100.

[17] Minn. Stat. § 216E.03, subd. 10(b).

For all these reasons, the Commission will issue a route permit to the Applicants for the Motley-Area 115 kV Transmission Line Project in the form attached (Attachment B). The permit includes the revisions recommended by Applicants in their February 18 comments and agreed to by the Department.[18]

ORDER

1. The Commission hereby grants the Applicants a certificate of need for the Motley-Area 115 kV Transmission Line Project.

2. The Commission approves and adopts the proposed Findings of Fact and Conclusions of Law, in the form attached (Attachment A).

3. The Commission hereby issues the attached high-voltage transmission line route permit (Attachment B).

4. This order shall become effective immediately.

BY ORDER OF THE COMMISSION

Daniel P. Wolf

Daniel P. Wolf
Executive Secretary

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[18] As previously noted, these revisions relate to limiting nighttime construction noise, minimizing wetland impacts, and northern long-eared bat protections. They are summarized in Commission staff's February 22 filing in this docket.

Attachment A

PUC Docket No. ET2, E015/TL-15-204

STATE OF MINNESOTA
PUBLIC UTILITIES COMMISSION

In the Matter of the Application of Great River Energy and Minnesota Power for a Route Permit for the Motley Area 115 kV Transmission Line Project in Morrison, Cass and Todd Counties, Minnesota

FINDINGS OF FACT AND CONCLUSIONS

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PUC Docket No. ET2, E015/TL-15-204

STATE OF MINNESOTA
PUBLIC UTILITIES COMMISSION

In the Matter of the Application of Great River Energy and Minnesota Power for a Route Permit for the Motley Area 115 kV Transmission Line Project in Morrison, Cass and Todd Counties, Minnesota

FINDINGS OF FACT AND CONCLUSIONS

A public hearing was held before Administrative Law Judge (ALJ) Jeffrey Oxley on November 19, 2015, at the Motley Staples Middle School in Motley, Minnesota.

Mark Strohfus, Environmental Project Lead; Rick Heuring, Senior Field Representative; Chuck Lukkarila, Project Manager; Paul Woodruff, Transmission Line Engineer; Eric Messerich, Transmission Planning Engineer; Marsha Parlow, Transmission Permitting Analyst; and Jenny Guardia, Communications Coordinator, of Great River Energy, 12300 Elm Creek Boulevard, Maple Grove, MN 55369, attended on behalf of Great River Energy and Minnesota Power (Applicants).

Richard Davis, Environmental Review Manager, 85 7th Place East, Suite 500, St. Paul, MN 55101 appeared on behalf of the Department of Commerce, Energy Environmental Review and Analysis (EERA).

Tricia DeBleeckere, Minnesota Public Utilities Commission (Commission) Staff, 121 Seventh Place East, Suite 350, St. Paul, MN 55101, appeared on behalf of the Commission.

STATEMENT OF ISSUE

Have Applicants satisfied the factors set forth in Minnesota Statutes Section 216E.03 and Minnesota Rules Chapter 7850 for a Route Permit for a 115 kilovolt (kV) transmission line project in Morrison, Cass, and Todd Counties, Minnesota (the Project)?

SUMMARY

The Commission concludes that the Applicants have satisfied the criteria set forth in Minnesota law for a Route Permit and the Commission grants the Applicants a Route Permit.

Based on information in the Application, the Environmental Assessment (EA), the testimony at the public hearing, written comments, and exhibits received in this proceeding, the Commission makes the following:

FINDINGS OF FACT

I. Applicants

1. Great River Energy (GRE) is a not-for-profit generation and transmission cooperative based in Maple Grove, Minnesota. GRE provides electrical energy and related services to 28 member cooperatives, including Crow Wing Power distribution cooperative, which serves the Project area. GRE's distribution cooperatives, in turn, supply electricity and related services to more than 660,000 residential, commercial, and industrial customers in Minnesota and Wisconsin. Crow Wing Power provides electricity and related services to approximately 37,000 residential, commercial, and industrial customers in Minnesota. Approximately 1,500 residential, commercial, and industrial members of this cooperative would benefit from the proposed high voltage transmission line during normal system operation and up to 600 more would benefit during contingency conditions. GRE's transmission network is interconnected with the regional transmission grid to promote reliability, and GRE is a member of the Midwest Reliability Organization (MRO) and the Midcontinent Independent System Operator, Inc. (MISO).[1]

2. Minnesota Power (MP) is an investor-owned public utility headquartered in Duluth, Minnesota. MP supplies retail electric service to 143,000 retail customers and wholesale electric service to 16 municipalities in a 26,000-square-mile electric service territory located in northeastern Minnesota. MP generates and deliveries electric energy through a network of transmission and distribution lines and substations throughout northeastern Minnesota. MP's transmission network is interconnected with the regional transmission grid to promote reliability, and MP is a member of the MRO and MISO.[2]

II. Procedural History

3. On March 5, 2015, Applicants filed with the Commission a Notice of Intent to Submit a Route Permit Application under the Alternative Permitting Process.[3]

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[1] Ex. 2, at 1-1 to 1-2 (Application).
[2] Ex. 2, at 1-2 (Application).
[3] Ex. 1 (Alternative Process Notification).

4. On March 19, 2015, Applicants submitted their Application for a Certificate of Need and Route Permit ("Application") for the Project.[4] The Application included two route alternatives—the West and East Route Options—extending south from the existing MP "24 Line" 115 kV line to Crow Wing Power's existing Motley Substation, and then a single route extending west and south from the Motley Substation to Crow Wing Power's proposed Fish Trap Lake Substation (collectively, the "Common Route" the West and East Route Options are referred to as the "Proposed Routes").[5]

5. On March 23, 2015, the Commission issued a Notice of Comment Period on Completeness of the Certificate of Need and Route Permit Application.[6]

6. On April 6, 2015, EERA filed its comments and recommendations regarding completeness of the Application and recommended the Application be found complete.[7]

7. On April 17, 2015, the Commission issued a Notice of Commission Meeting for April 30, 2015.[8]

8. On April 20, 2015, Applicants filed affidavits indicating that they provided notice of the Application to the General List, persons who own land on or adjacent to the Proposed Routes, local officials, and agencies.[9]

9. On April 30, 2015, the Commission met and found the Application complete.[10]

10. On May 1, 2015, the Commission and EERA issued a Notice of Public Information and Environmental Assessment Scoping Meeting.[11] This notice was published in the *Morrison County Record* on May 10, 2015, *The Brainerd Dispatch* on May 7, 2015, and the *Staples World* on May 7, 2015, as required under Minnesota Statutes §§ 216E.03, subdivision 4, and 216E.04, subdivision 4, and Minnesota Rule 7850.2100, subpart 2.[12]

11. On May 19, 2015, the Commission and EERA held a Public Information and EA Scoping Meeting at Motley Staples Middle School, Motley, Minnesota, at 6:00 p.m.[13]

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[4] Ex. 2 (Application).
[5] Ex. 2, at 1-7, 1-10 (Application).
[6] Ex. 3 (Notice of Comment Period on Completeness and Certificate of Service).
[7] Ex. 4 (Comments and Recommendations on Application Completeness).
[8] Ex. 5 (Notice of Commission Meeting – April 30, 2015 and Certificate of Service).
[9] Ex. 6 (Compliance Filing – Confirmation of Notice).
[10] Ex. 9 (Order Accepting Application as Complete, Directing the Use of Alternative Process, and Granting Variance and Certificate of Service).
[11] Ex. 7 (Notice of Public Information and Environmental Assessment Scoping Meeting and Certificate of Service).
[12] Ex. 8 (Affidavit of Publication – Scoping Meeting Newspaper Notices).
[13] Ex. 7 (Notice of Public Information and Environmental Assessment Scoping Meeting and Certificate of Service).

12. On May 27, 2015, the Commission issued its Order Accepting the Application as Complete, Directing Use of Alternative Permitting Process, and Granting Variance.[14]

13. On May 27, 2015, Applicants filed newspaper affidavits of publication for the May 19, 2015 Public Information and EA Scoping Meeting.[15]

14. On June 3, 2015, the scoping comment period ended.[16]

15. The Minnesota Department of Natural Resources (DNR) filed a comment during the scoping period regarding the scope of the EA.[17]

16. The Minnesota Pollution Control Agency (MPCA) filed a comment during the scoping period generally concerning applicable permits and best management practices for the Project.[18]

17. The Minnesota Department of Transportation (MnDOT) filed a comment during the scoping period regarding the scope of the EA, erosion control measures, and vegetation management for the Project.[19]

18. The United States Fish and Wildlife Service (USFWS) provided comments during the comment period for the EA scoping period. USFWS comments were primarily focused on the potential Project impacts on the northern long-eared bat (NLEB), a federally protected threatened species.[20]

19. Seventeen public comments were also received during the EA scoping period. Public comments received focused on various concerns: potential impacts to wildlife, potential human aesthetic impacts, recommendations to utilize the West Route Option, recommendations to utilize the East Route Option, recommendations to place the Common Route on the east side of U.S. Highway 10, property values, and the recommendation of potential alternatives.[21]

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[14] Ex. 9 (Order Accepting Application as Complete, Directing the Use of Alternative Process, and Granting Variance and Certificate of Service).
[15] Ex. 8 (Affidavit of Publication – Scoping Meeting Newspaper Notices).
[16] Ex. 7 (Notice of Public Information and Environmental Assessment Scoping Meeting and Certificate of Services).
[17] Ex. 11 (DNR – Scoping Comments).
[18] Ex. 12 (MN Pollution Control Agency – Scoping Comments).
[19] Ex. 10 (MN DOT – Scoping Comments).
[20] DOC-EERA, Written Public Comments Received on the Scope of the EA, eDocket #20156-111508-01,June 17, 2015.
[21] Ex. 13 (PUB – Public Comment (Scoping)); Ex. 14 (Other – Motley Area Written Public Comments).

20. On June 19, 2015, the Commission issued a Notice of Commission Meeting noting that it would consider what action to take concerning route alternatives to be evaluated in the EA.[22]

21. On June 22, 2015, EERA issued comments and recommendations on the EA Scoping Process and Alternative Routes to the Commission.[23]

22. On July 1, 2015, the Commission made the decision to take no action with respect to EERA's recommended alternative routes to include in the EA.[24]

23. On July 15, 2015, EERA issued its EA Scoping Decision.[25]

24. On September 23, 2015, Applicants submitted reply comments regarding CO2 externality and regulatory costs.[26]

25. On November 2, 2015, the Commission issued a Notice of Public Hearing to be held on November 19, 2015 at 6 pm at the Motley Staples Middle School Cafeteria, 132 1st Avenue South, Motley, Minnesota, 56466.[27]

26. On November 9, 2015, the Commission issued a Notice to State Agency Representatives Regarding Participation in Record Development and Public Hearings.[28]

27. On November 16, 2015, EERA issued the EA for the Project and its Notice of Availability of the EA.[29]

28. On November 19, 2015, the ALJ held a Public Hearing at the Motley Staples Middle School in Motley, Minnesota, at 6:00 p.m.[30]

29. On November 25, 2015, Applicants filed affidavits of publication of the Notice of Public Hearings, confirming that notice for the November 19, 2015, public hearing was published in *The Brainerd Dispatch*, the *Morrison County Record*, and the *Staples World*.[31]

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[22] Ex. 16 (PUC Notice of Commission Meeting, Certificate of Service and Corrected Version – July 1,2015).
[23] Ex. 17 (Comments and Recommendations); Ex. 18 (Alternatives Analyzed by DOC EERA Staff).
[24] Commission, Minutes – July 1, 2015 Agenda, eDocket #201511-115672-02, November 12, 2015
[25] Ex. 19 (Environmental Assessment Scoping Decision); Ex. 20 (Notice of Environmental Assessment Scoping Decision.
[26] Ex. 21 (Reply Comments – CO_2 Externality and Regulatory Costs).
[27] Commission, Notice of Public Hearing, eDocket #201511-115321-01, November 2. 2015.
[28] Ex. 22 (Notice of Public Hearing and Certificate of Service and Memo to State Agency Reps and Certificate of Service).
[29] Ex. 23 (EA); Ex. 24 (Notice of EA Availability).
[30] Ex. 22 (Notice of Public Hearing and Certificate of Service and Memo to State Agency Reps and Certificate of Service.
[31] Newspaper Affidavits of Publication, Public Hearing (Nov. 25, 2015), eDocket Document No. 201511-115973-01.

30. On November 30, 2015, Applicants submitted comments regarding the public hearing.[32]

31. On November 30, 2015, DNR submitted comments regarding the Project.[33]

32. On November 30, the public hearing comment period ended. The public provided 14 comments via Speak up, and 11 comments were provided via mail.[34,35]

33. One additional public comment was received by the Commission outside of the Public Hearing comment period on December 9, 2015.[36]

III. Description of the Project

34. The Project, set forth on the attached **Exhibit A**, includes new 115 kV electric facilities needed to meet existing electric load and future electric load requirements in Morrison, Cass, and Todd counties, Minnesota. GRE has an additional need to provide electric service to the Crow Wing Power substation that will serve the proposed Minnesota Pipe Line Company ("MPL") Fish Trap pump station.[37]

35. The Project consists of the following facilities:

- **"24 Line" transmission line – Motley Substation transmission segment (West and East Route Options)** – The Applicants propose two route options for this transmission line segment. Either segment would connect with Minnesota Power's "24 Line" 115 kV transmission line[38] northeast of Motley, Minnesota, and extend to the existing Crow Wing Power 34.5 kV Motley Substation. A motor-operated three-way switch would be installed to interconnect the new transmission line to the "24 Line." The West Route Option would require constructing approximately four miles of new 115 kV transmission line. The East Route Option would require constructing approximately five miles of new 115 kV transmission line.

- **Motley Substation – Fish Trap Lake Substation transmission segment (Common Route)** – This transmission line segment would be common to the Project for either the

[32] Applicants' Comments – On ALJ Hearing (Nov. 30, 2015), eDocket Document No. 201511-116031-01.
[33] DNR's Comments (Nov. 30, 2015), eDocket Document Nos. 201511-116029-02, 201511-116029-04.
[34] Commission, Public Hearing Comments from Speak Up, eDocket #201512-116060-02, December 1, 2015.
[35] Commission, Public Hearing Comments received via Mail, eDocket #201512-116230-01, December 7, 2015.
[36] Commission, Public Comment Received Outside of Comment Period, #201512-116359-01, December 10,2015.
[37] Ex. 2, at 1-5 to 1-6 (Application).
[38] Ex. 2, at 1-5 to 1-6 (Application). The existing Minnesota Power "24 Line" transmission line segment between the Dog Lake Substation and the Verndale Substation, including where the Motley project will interconnect, will be renamed the "155 Line" transmission line upon completion of the Project.

West Route Option or the East Route Option. It would require constructing a new single circuit 115 kV transmission line totaling approximately 10.5 miles from the existing Crow Wing Power Motley Substation to the proposed Crow Wing Power Fish Trap Lake Substation.

- **Dog Lake Substation ring bus conversion** – This component would require converting MP's existing Dog Lake Substation to a more reliable ring bus design.

- **"24 Line" transmission line – Dog Lake Substation segment** – As part of the new ring bus design, Applicants propose constructing a new 115 kV transmission line segment extending approximately one-half mile to loop MP's "24 Line" 115 kV transmission line into and out of the Dog Lake Substation.

- **Motley Substation conversion** – Converting Crow Wing Power's Motley Substation from 34.5 kV to 115 kV. A manual three-way switch would be installed to provide the 115 kV service to the substation.

- **Fish Trap Lake Substation** – Constructing the new Crow Wing Power Fish Trap Lake 115 kV Substation to serve the electric load of MPL's proposed Fish Trap pump station.

- **Shamineau Tap Switch** – Installing a manual three-way switch along Highway 10 to allow for the future Shamineau Substation to interconnect to the proposed 115 kV transmission line without having to take an outage on the 115 kV transmission line.

36. The majority of the new 115 kV line will consist of single-pole wood structures spaced approximately 250 feet to 400 feet apart. Transmission structures will typically range in height from 60 to 90 feet above ground, depending on the terrain and environmental constraints. The average diameter of the wood structures at ground level is 20 inches.[39]

37. Some sections of the Project will have distribution lines attached to the transmission structures, which is commonly called underbuild. If underbuild is included in a segment of the Project, the spacing of the transmission line structures would be approximately 250 to 350 feet.[40]

38. H-Frame design structures may be used in areas with rugged topography and where longer spans are required to avoid or minimize impacts to wetlands or waterways. Span lengths average 600 to 800 feet, with 1,000-foot spans possible with certain topography. Structure heights typically range from 60 to 90 feet above ground, with taller structures required for exceptionally long spans and in circumstances requiring additional vertical

[39] Ex. 2, at 4-8 (Application).
[40] Ex. 2, at 4-8 (Application).

clearance exceeding the National Electrical Safety Code ("NESC") and other agency requirements.[41]

39. The new section of line that would be constructed by MP from the Dog Lake Substation to the existing "24 Line" transmission line would be an H-Frame design.[42]

40. For most segments of the Project, Applicants proposed a right-of-way (ROW) of 100 feet in width. The Applicants have indicated that in physically limiting areas a reduced ROW of 70 feet in width may be possible.[43]

IV. Need Overview

41. The Project is designed to meet multiple needs. First, the Project is needed by 2017 to meet the in-service date for the proposed MPL Fish Trap pump station that will be served by the new Crow Wing Power Fish Trap Lake Substation. Second, the Project is needed to address circuit overloads that currently exist on the Dog Lake-Baxter 34.5 kV system and alleviate capacity issues identified on the lines between Dog Lake and Baxter by creating 115 kV connections between MP's "24 Line" 115 kV transmission line and the existing Crow Wing Power Motley Distribution Substation and by upgrading the Motley Substation.[44] Third, the Project is also needed to provide a reliable power source for a future substation to meet Crow Wing Power load-serving requirements.[45]

V. Routes Evaluated

A. Routes Proposed by Applicants

42. The Project is located in the Minnesota counties of Morrison, Cass, and Todd and would be approximately 15.5-16.5 miles in length. A portion of the Project is located in Becker Township in Cass County at, and south of, the existing Dog Lake Substation. Both the East and West Route Options proposed by Applicants travel south through May Township in Cass County, and into Motley Township in Morrison County. The Proposed Routes then extend westerly and southerly, following to the east of the Morrison and Todd County lines, going through Scandia Valley Township in Morrison County. The Proposed Routes cross into Fawn Lake Township in Todd County just north of the proposed Fish Trap Lake Substation.[46]

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[41] Ex. 2, at 4-8 (Application).
[42] Ex. 2, at 4-8 (Application).
[43] Ex. 2, at 4-8 (Application).
[44] Ex. 2, at 5-1 (Application); Hearing Tr., at 113-114, 122, 124) (Crow Wing Power representatives noting need to upgrade Motely Substation and need for future new Shamineau Substation connection).
[45] Ex. 2, at 1-8, 5-3 (Application); Hearing Tr., at 113-114, 122, 124.
[46] Ex. 2, at 1-10 (Application); Ex. 23, at 15 (EA).

43. Applicants evaluated and rejected three alternative routes:[47]

- **Dog Lake Substation – Fish Trap Lake Substation** – This route is approximately 15.5 miles long extending from MP's existing Dog Lake Substation to the proposed Fish Trap Lake Substation. Applicants rejected this route because of its impact on existing and proposed urban development in the City of Motley, because it necessitates a second river crossing, and because of the operational challenges to obtain an extended outage on MP's existing 34.5 kV "503 Line" to facilitate the construction of the new 115 kV transmission line. This route was also rejected because it does not facilitate the upgrade of Crow Wing Power's Motley Substation from 34.5 kV to 115 kV.

- **Dog Lake Substation – Ward Substation – Fish Trap Lake Substation** – This route is 23 miles long, extending from MP's Dog Lake Substation to Todd-Wadena Electric Cooperative's Ward Substation and continuing to the proposed Fish Trap Lake Substation. Applicants rejected this route because of its additional length, resulting in additional costs and overall impacts. This route also necessitates a second river crossing. The route was further rejected because it does not facilitate the upgrade of Crow Wing Power's Motley Substation from 34.5 kV to 115 kV or the construction of the future Shamineau Substation.

- **"47" Transmission Line – Ward Substation – Fish Trap Lake Substation** – This route is approximately 20 miles extending from MP's "47 Line" 115 kV transmission line located in the northernmost part of Section 5 in Eagle Valley Township, Todd County, to the proposed Fish Trap Lake Substation. Applicants rejected this route due to its additional length and resultant additional cost. Additional cost would also result from the need to underbuild nearly 12 miles of 34.5 kV 3-phase sub-transmission line. This route also necessitates a second river crossing. This route was also rejected because it does not facilitate the upgrade of Crow Wing Power's Motley Substation from 34.5 kV to 115 kV or the construction of the future Shamineau Substation.

B. Routes Proposed Through Public Participation.

44. Several alternative routes and sites were introduced during the EA Scoping Decision:

1. <u>Common Route – East of U.S. Highway 10 Alignment Alternatives.</u>

[47] Ex. 2, at 7-1 to 7-2 (Application).

45. There are two alignment alternatives that could be used to extend the Project's Common Route: East of U.S. Highway 10 Alternative (Common Route from Azalea Road to Holt Road) and the East of U.S. Highway 10 Alternative (Common Route from Ridge Road to Holt Road). These alternatives would be used in place of Applicants' Proposed Routes for the portion of the Common Route extending south from Azalea Road to Holt Road, which was proposed on the west side of the U.S. Highway 10 right-of-way.[48]

2. MP Land East River Crossing Alternative.

46. The MP Land East River Crossing Alternative locates the East Route Option Crow Wing River crossing further south than the Applicants' proposed crossing location, which would place the proposed East Route Option on land currently owned by MP once the Crow Wing River crossing is completed. The MP Land East River Crossing Alternative would turn north on Minnesota Power's land and rejoin Applicants' proposed East Route Option.[49]

3. Old Tree Avoidance Alternative.

47. The Project's Common Route extends east along the South Side of Azalea Road, and an old large American elm is located within the Proposed Routes. The Old Tree Avoidance Alternative shifts the Proposed Routes south of the old large American elm tree, which would avoid impacts to the large tree during construction and maintenance of the Project. Applicants accounted for potential to avoid the large tree in the Application; Section 4.1.1 of the Application specifically requests additional route width consideration near the large tree south of Azalea Road.[50]

48. The EA evaluated the Old Tree Avoidance Alternative identified by EERA staff. Any depiction of Old Tree Avoidance Alternative alignment in the EA is strictly intended to illustrate the potential location of the alternative alignment, and should not be viewed as a final design or alignment location. Final design of the Old Tree Avoidance Alternative alignment is the responsibility of the Applicants, and will occur within the Proposed Route area analyzed in the EA.[51]

49. The EA evaluated the Proposed Routes, as well as these alternatives. Maps of the alternatives described above, including Applicants' revised Old Tree Avoidance Alternative, are provided in Exhibits B.1, B.2, and B.3.

VI. Transmission Line Structure Types and Spans

[48] Ex. 23, at 120 (EA).
[49] Ex. 23, at 128 (EA).
[50] Ex. 23, at 133 (EA).
[51] Hereinafter, references to the "Old Tree Avoidance Alternative" shall include the alternative evaluated in the EA, as well as Applicants' revised alternative, unless specifically noted.

50. Applicants propose to use overhead construction with wood structures. Applicants primarily propose to use single-pole structures. H-Frame structures will be used in the new section of line that would be constructed by MP from the Dog Lake Substation to the existing "24 Line" transmission line. H-Frame structures may also be used in areas with rugged topography and where longer spans are required.[52]

VII. Transmission Line Conductors

51. GRE's single-circuit structures will have three single-conductor phase wires and one shield wire. It is anticipated that the phase wires will be 477 thousand circular mil aluminum conductor steel-supported ("ACSR") with seven steel core strands and 26 outer aluminum strands. The shield wire will be 0.528 optical ground wire.[53]

52. MP's single-circuit structure will have three single-conductor phase wires and two shield wires. It is anticipated that the phase wires will be 636 ACSR with seven steel core strands and 24 outer aluminum strands.[54]

53. The engineering evidence in the record establishes that the conductors are sufficient to meet the Project's need.

VIII. Transmission Line Route Widths

54. Applicants are requesting approval of different route widths depending on the existing land uses of the adjacent properties. Total route widths will vary between 250 feet and 995 feet, as follows:[55]

- Where the route extends across open land that does not follow existing roadways, a 250-foot route width is requested.

- Where the route follows rural roads or county highways, a 300-foot route width is requested, extending 150 feet perpendicular from the road centerline in each direction.

- Where the route follows U.S. Highway 10, the requested route extends 250 feet west of the outside road edge of southbound Highway 10, 250 feet east of the outside road edge of northbound Highway 10, and encompasses the entire roadway and median area between these outer edges. The total route width for the Project segment along U.S. Highway 10 ranges between 975 and 995 feet due to non-parallel centerline alignments

[52] Ex. 2, at 4-8 (Application).
[53] Ex. 2, at 4-8 (Application).
[54] Ex. 2, at 4-8 (Application).
[55] Ex. 2, at 4-1 to 4-2 (Application).

of the northbound and southbound traffic lanes which results in some variation in the width of the median.

- Additional route width is requested at the points where the new transmission line segments interconnect with MP's "24 Line" transmission line; where both the East and West Option route segments cross the Crow Wing River; in the area of the Motley Substation; near a large native elm tree located on the south side of Azalea Road; along the East Route Option in Cass County where County Road 31 intersects 132nd Street SW; in the area of the proposed MPL pump station and Crow Wing Power Fish Trap Lake Substation; and, in specific areas to allow for the use of guy wires.

IX. Transmission Line Right-of-Way

55. For most segments of the new transmission line, a 100-foot-wide permanent right- of-way (50 feet on each side of the transmission line centerline) will be acquired. In special restrictive or physically limiting areas, Applicants may consider a reduced right-of-way width of 70 feet (35 feet each side of the transmission centerline). Where the transmission line follows along existing distribution lines or roadways, a portion of the proposed transmission line right- of-way would overlap and be common with the existing distribution line right-of-way and/or the existing road right-of-way.[56]

X. Project Schedule

56. Provided Applicants obtain a certificate of need and route permit by early 2016, GRE plans to commence construction of the Project late in 2016 and complete it in late summer 2017. GRE anticipates that construction will take approximately eight months and that the entire Project will be energized in August 2017.[57]

XI. Project Costs

57. Total Project costs are estimated to be approximately $16-17 million, depending on which route option is approved. Total costs are summarized below in Table 1:[58]

Table 1: Estimated Project Costs

	West Route Cost ($)	East Route Cost ($)
Great River Energy		
115 kV Transmission Line	$9,079,000	$10,101,000
Switches, Meter	$960,000	

[56] Ex. 2, at 4-8 (Application).
[57] Ex. 2, at 4-15 (Application).
[58] Ex. 2, at 4-12 (Application).

Motley Substation Upgrade	$1,000,000	
Fish Trap Substation	$1,000,000	
Great River Energy Total	$12,039,000	$13,061,000
Minnesota Power		
115 kV Transmission Line (Dog Lake Substation to "24 Line")	$1,140,000	
Dog Lake Substation Upgrade	$2,680,000	
Distribution	$100,000	
Communications	$10,000	
Minnesota Power Total	$3,930,000	
Total:	**$15,969,000**	**$16,961,000**

XII. Permittees

58. The permittees for the Project are Great River Energy and Minnesota Power.

XIII. Public and Local Government Participation

A. Public Comments.

59. Approximately 50 people attended the joint public information and EA scoping meeting held by Commission staff and EERA on May 19, 2015. In addition, EERA received comments from 11 members of the public during the EA scoping comment period.[59]

60. Alternative routes to the Proposed Routes were also discussed during the scoping meeting and in written comments received during the scoping period.[60]

61. Multiple members of the public spoke at the public hearing on November 19, 2015. Several landowners urged consideration of a new partial route alternative that would avoid properties located on U.S. Highway 10.[61] Most of the landowners who expressed support for this partial route alternative appear to live on the east side of U.S. Highway 10.[62] The alternative route crosses properties that are not located within or adjacent to any of the routes included in the EA. As a result, the alternative route segment would impact landowners who did not have notice of the proceeding in general or the public hearing specifically.

[59] Ex. 17, at 4 (Comments and Recommendations).
[60] Ex. 17, at 4 (Comments and Recommendations).
[61] *See* Hearing Tr., at 2-3.
[62] *See, e.g.*, Hearing Tr., at 80-88.

62. At the public hearing, landowners also generally expressed concerns about impacts to U.S. Highway 10 and adjacent properties.[63] In general, landowners expressed concerns about an alignment on the east side of U.S. Highway 10.[64] In addition, a representative from Pine Ridge Golf Club spoke against the East of U.S. Highway 10 Alternatives and described the potential negative impacts of those alternatives on the golf course.[65]

63. On November 30, 2015, Applicants submitted comments regarding the partial route alternative presented by landowners at the November 19, 2015 hearing.[66] Applicants stated that the partial alternative had not been reviewed in the EA. Applicants further noted that the alternative does not provide connections at either the future Shamineau Substation or the existing Motley Substation and therefore does not meet Project needs. Applicants also identified several areas where this alternative would have greater environmental impacts than the Proposed Routes. For these reasons, it is not a feasible or reasonable alternative. Multiple members of the public provided written comments during the public hearing comment period. Comments generally related to route alternatives and mitigation of the Project's environmental impacts.[67]

64. One of the written comments received during the public hearing comment period was from Patrick and Laurie Humphrey. The Humphreys requested that, in the event the East Route Option were selected, that it be modified to run along the west side of their property using an abandoned roadbed, formerly known as Cass County 101.[68] Applicants are committed to work with the Humphreys and any additional impacted landowners to see if this request can be accommodated in the post-permit process, which would require all impacted landowners to agree with the route and alignment changes.

B. Local Government and State Agency Participation

65. During the EA scoping comment period, EERA received written comments from three state agencies and one federal agency.[69]

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[63] *See* Hearing Tr. At 27-32 (Mark Frisk Comments); 47-49 (Melissa Moulton Comments).
[64] *E.g.*, Hearing Tr., at 27-32 (Mark Frisk Comments).
[65] *See* Hearing Tr., at 80-82.
[66] Applicants' Comments – On ALJ Hearing (Nov. 30, 2015), eDocket Document No. 201511-116031-01,at 1-3.
[67] *See* Exs. A – I; *see also* Public Comment – Public Comment Outside of Open Comment Period (Dec. 10, 2015), eDocket Document No. 201512-116359-01; Public Comment (Dec. 7, 2015), eDocket Document No. 201512-116230-01; Public Comment (Dec. 1, 2015), eDocket Document No. 201512-116060-02.
[68] *See* Public Comment (Dec. 7, 2015), eDocket Document No. 201512-116230-01, at 6.
[69] Ex. 17, at 4 (Comments and Recommendations).

66. During the public hearing and subsequent comment period, written comments were received from DNR.[70] In addition, Applicants have received comments from the following agencies, as detailed below:[71] [72]

- On November 21, 2014, the United States Army Corps of Engineers ("USACE") notified Applicants that the Project would be subject to USACE jurisdiction if it involved activity in navigable waters of the United States or deposition of dredged or fill material into waters of the United States.

- On October 16, 2014, the Minnesota State Historic Preservation Office ("SHPO") notified Applicants that it recommended a Phase I archeological survey be completed for the Project.

- On March 30, 2015, DNR provided Applicants with information about DNR review of the Project for potential impacts to rare features.

- On October 15, ~~2015~~2014, the United States Fish and Wildlife Service ("USFWS") notified Applicants that Applicants correctly identified the listed and proposed to be listed species in the counties crossed by the Project; however, there were no known occurrence records in close proximity to the Project area. USFWS further noted that, if removal of suitable summer roosting habitat for the Northern Long-Eared Bat between April 1 and September 30 was anticipated, further consultation with USFWS could be required.

FACTORS FOR A ROUTE PERMIT

67. The Power Plant Siting Act ("PPSA"), Minnesota Statutes Chapter 216E, requires that route permit determinations "be guided by the state's goals to conserve resources, minimize environmental impacts, minimize human settlement and other land use conflicts, and ensure the state's electric energy security through efficient, cost-effective power supply and electric transmission infrastructure."[73]

68. Under the PPSA, the Commission must be guided by the following responsibilities, procedures, and considerations:

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[70] *See* Ex. 11; DNR's Comments (Nov. 30, 2015), eDocket Document Nos. 201511-116029-02, 201511-116029-04.

[71] *See* Ex. 2, at Appendix J.

[72] [72] Ex. 11; DNR's Comments (Filed June 3, 2015, Dated March 30, 2015), eDocket Document No.20156-111128-02

[73] Minn. Stat. § 216E.03, Subd. 7.

(1) evaluation of research and investigations relating to the effects on land, water and air resources of large electric power generating plants and high-voltage transmission lines and the effects of water and air discharges and electric and magnetic fields resulting from such facilities on public health and welfare, vegetation, animals, materials and aesthetic values, including baseline studies, predictive modeling, and evaluation of new or improved methods for minimizing adverse impacts of water and air discharges and other matters pertaining to the effects of power plants on the water and air environment;

(2) environmental evaluation of sites and routes proposed for future development and expansion and their relationship to the land, water, air and human resources of the state;

(3) evaluation of the effects of new electric power generation and transmission technologies and systems related to power plants designed to minimize adverse environmental effects;

(4) evaluation of the potential for beneficial uses of waste energy from proposed large electric power generating plants;[74]

(5) analysis of the direct and indirect economic impact of proposed sites and routes including, but not limited to, productive agricultural land lost or impaired;

(6) evaluation of adverse direct and indirect environmental effects that cannot be avoided should the proposed site and route be accepted;

(7) evaluation of alternatives to the applicant's proposed site or route proposed pursuant to subdivision 1 and 2;

(8) evaluation of potential routes that would use or parallel existing railroad and highway rights-of-way;

(9) evaluation of governmental survey lines and other natural division lines of agricultural land so as to minimize interference with agricultural operations;

(10) evaluation of future needs for additional high-voltage transmission lines in the same general area as any proposed route, and the advisability of ordering the construction of structures capable of expansion in transmission capacity through multiple circuiting or design modifications;

[74] Factor 4 is not applicable because Applicants are not proposing to site a large electric generating plant.

(11) evaluation of irreversible and irretrievable commitments of resources should the proposed site or route be approved; and

(12) when appropriate, consideration of problems raised by other state and federal agencies and local entities.[75]

69. In addition, Minnesota Statutes Section 216E.03, Subdivision 7(e), provides that the Commission "must make specific findings that it has considered locating a route for a high- voltage transmission line on an existing high-voltage transmission route and the use of parallel existing highway right-of-way and, to the extent those are not used for the route, the [C]ommission must state the reasons."

70. In addition to the PPSA, the Commission and the ALJ are governed by Minnesota Rule 7850.4100, which mandates consideration of the following factors when determining whether to issue a route permit for a high voltage transmission line:

A. effects on human settlement, including, but not limited to, displacement, noise, aesthetics, cultural values, recreation, and public services;
B. effects on public health and safety;
C. effects on land-based economies, including, but not limited to, agriculture, forestry, tourism, and mining;
D. effects on archaeological and historic resources;
E. effects on the natural environment, including effects on air and water quality resources and flora and fauna;
F. effects on rare and unique natural resources;
G. application of design options that maximize energy efficiencies, mitigate adverse environmental effects, and could accommodate expansion of transmission or generating capacity;
H. use or paralleling of existing rights-of-way, survey lines, natural division lines, and agricultural field boundaries;
I. use of existing large electric power generating plant sites;[76]
J. use of existing transportation, pipeline, and electrical transmission systems or rights-of-way;
K. electrical system reliability;
L. costs of constructing, operating, and maintaining the facility which are dependent on design and route;
M. adverse human and natural environmental effects which cannot be avoided; and
N. irreversible and irretrievable commitments of resources.[77]

[75] Minn. Stat. § 216E.03, Subd. 7.
[76] This factor is not applicable because it applies only to power plant siting.
[77] Minn. R. 7850.4100.

71. There is sufficient evidence on the record for the Commission to assess the proposed routes and route alternatives using the criteria and factors set forth above.

APPLICATION OF STATUTORY AND RULE FACTORS

I. Application of Routing Factors to the Proposed Routes and Route Alternatives

A. Effects on Human Settlement.

72. Minnesota law requires consideration of the Project's effects on human settlement, including displacement of residences and businesses, noise created during construction and by operation of the Project, and impacts to aesthetics, cultural values, recreation, and public services.[78]

73. Impacts to human settlements resulting from the Project are anticipated to be minimal to moderate.[79]

1. Displacement

74. No residences or business will be displaced by the Project, and property value impacts are anticipated to be minimal.[80] Route alternatives are anticipated to result in similar impacts.[81]

75. Properties with dwellings, structures, or other property improvements with the power line ROW are not eligible for Federal Housing Administration (FHA) insured loads financing. Two residences within the anticipated alignment of ROW of the proposed Common Route along the west side of U.S. Highway 10 may be affected by the presence of the overhead transmission line in close proximity.[82]

76. The Applicants have generally agreed to two mitigation measures to mitigate the relative close proximity of the power line: 1) Shift the alignment of the transmission line several feet intot he U.S. Highway 10 ROW to provide additional horizontal separation from the dwellings, and 2) if needed, reduce the width of the transmission line ROW in proximity of the two residences to ensure there is no ROW encroachment within the footprint area of the dwellings as constructed. [83]

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[78] *See* Minn. Stat. § 216E.03, subd. 7(b); Minn. R. 7850.4100, subp. A.
[79] Ex. 23, at 60 (EA).
[80] Ex. 23, at 60, 68 (EA).
[81] *E.g.*, Ex. 23, at 122 (EA).
[82] Ex. 23 at 122 (EA)
[83] Applicants Comments on ALJ Hearing (November 30, 2015, eDocket Document No. 201511-116031-01).

2. Noise

77. The MPCA has established standards for the regulation of noise levels.[84]

78. The most restrictive MPCA noise limits are 60-65 A-weighted decibels ("dBA") during the daytime and 50-55 dBA during the nighttime.[85]

79. Noise from the Project may arise from construction activities and the normal operation of transmission lines and substations. For each of these, noise impacts are anticipated to be minimal.[86]

80. Construction noise may occur during daytime hours as the result of heavy equipment operation and increased vehicle traffic associated with the Project. Any exceedance of MPCA daytime noise limits would be temporary. Exceedance of MPCA nighttime noise limits is not expected.[87]

81. In foggy, damp, or light rain conditions, transmission lines may produce audible noise higher than background levels. Applicants estimated noise levels for the Project's transmission line. The data indicate that any noise levels for the Project's transmission line are within Minnesota noise standards and likely less than ambient noise levels in the Project area.[88]

82. The Project includes one new substation and modifications at two existing substations. The Motley and Fish Trap Lake substations will have additional or new transformers, which will add new noise-producing equipment. The Dog Lake Substation will not have any new noise-producing equipment added to the facility. Applicants' modeling indicated that noise levels at the Motley and Fish Trap Lake substations should comply with the state noise standard of 50 dBA at distances greater than 40 feet from the transformers at the substations. The noise level at the nearest residence to each of the substations is estimated to be 33 dBA or less, which is within Minnesota noise standards.[89]

83. Noise impacts from the Project are anticipated to be minimal and within Minnesota noise standards. The primary means of mitigating noise impacts is routing to avoid areas where residents live, work, and congregate. Noise impacts associated with substations can be mitigated by natural or built sound barriers. The noise generated by the MPL Line 4 Fish Trap pump station, which will be constructed within close proximity to the Project's proposed Fish Trap Lake substation, will be monitored during operation to confirm modeling

[84] *See* Ex. 23, at 65-66 (EA).
[85] Ex. 23, at 65-66 (EA).
[86] Ex. 23, at 65 (EA).
[87] Ex. 23, at 65-66 (EA).
[88] Ex. 23, at 66 (EA).
[89] Ex. 23, at 67 (EA).

efforts and, if noise levels are greater than Minnesota noise standards, mitigation measures will be instituted.[90]

3. Aesthetics

84. The landscape in the Project area includes rural residences, commercial highway development, forested areas, agricultural lands, wetlands, and lakes. The City of Motley is the largest community in the area and includes commercial and residential development. Because of the topography and interspersed forested areas, viewsheds in the Project area are relatively limited except along natural corridors and manmade corridors.[91]

85. There are no residences, non-residential buildings, or commercial buildings within 250 feet either side of the anticipated alignment for the Project to connect the MP Dog Lake Substation and MP "24 Line."[92]

86. The number of residences in or near the Project area are provided in Table 2 below:[93]

Table 2: Distance of Buildings from Anticipated Alignment

Transmission Line Segment	**Number of Residences within Various Distances of Either Side of Transmission Line Centerline**					
	0-50'	**50-100'**	**100-150'**	**150-200'**	**200-250'**	**Total**
Dog Lake Substation and Tap Line to "115" Transmission Line	0	0	0	0	0	0
West Option, "115" Transmission Line – Motley Substation	0	2	2	2	2	8
East Option, "115" Transmission Line – Motley Substation	0	1	7	3	5	16
Motley Substation – Fish Trap Lake Substation	4	6	3	0	2	15

87. The proposed MP Dog Lake Substation expansion will occur on the east and south sides of the existing substation. There are no residences within the Proposed Routes on

[90] Ex. 23, at 68 (EA).
[91] Ex. 23, at 61 (EA).
[92] Ex. 23, at 62 (EA).
[93] Ex. 2, at 9-5 (Application).

either side of the east or south sides of the existing substation. The proposed Crow Wing Power Motley Substation expansion will occur adjacent to the existing substation footprint, and there are no residences within the Proposed Routes near the Motley Substation. The proposed Fish Trap Lake Substation will be constructed in an area that is currently a mix of grassland, shrubland, and forested area, and adjacent to the existing MPL Line 4 petroleum pipeline. There are no residences within the Proposed Routes near the proposed Fish Trap Lake Substation.[94]

88. The West Route Option has a greater potential to have visual impacts when compared to the East Route Option. The West Route Option will require the construction of a new river crossing on the Crow Wing River, which will occur in a relatively undisturbed portion of the river. The Project will introduce new and relatively taller structures and more conductors into the Project area, but these introductions will minimally impact investments and expectations related to aesthetics in the area. Impacts related to construction of the Project are anticipated to be minimal and temporary.[95]

89. Aesthetic impacts due to the Project are anticipated to be minimal to moderate.

90. The primary strategy for minimizing aesthetic impacts is prudent routing. Aesthetic impacts can be minimized by utilizing existing rights-of-way and avoiding residences by placing the alignment away from residences. To a great extent the Proposed Routes and anticipated alignment implement these strategies. The Proposed Routes follow existing rights- of-way for approximately 98-99% of its length, and the alignment is located along rights-of-way away from most residences. Three residences are within the anticipated right-of-way, but none is expected to be displaced. Applicants have been in contact with the landowners and stated that additional efforts will be made to ensure the residents' aesthetic concerns are addressed during structure placement.[96]

91. Aesthetic impacts can also be mitigated by ensuring that damage to natural landscapes during construction is minimized. Applicants will work with landowners to best locate structures and to minimize damage to vegetation and natural landscapes. Commission route permits require permittees to minimize vegetation removal in constructing the line and to consider landowner input in locating structures.[97]

92. The route alternatives have similar aesthetic impacts to the Proposed Routes and are minimal.[98]

4. Cultural Values.

[94] Ex. 23, at 63 (EA).
[95] Ex. 23, at 60 (EA).
[96] Ex. 23, at 64 (EA).
[97] Ex. 23, at 64-65 (EA).
[98] Ex. 23, at 121, 129, 133 (EA).

93. No impacts to cultural values are anticipated as a result of the Project. The Project will not adversely impact the work or recreation of residents in the Project area that underlie the area's cultural values. Nor will the Project adversely impact geographical features that inform these values. The Project will provide a more stable power source to the area, and is anticipated to support the local way of life.[99]

94. With respect to the Old Tree Avoidance Alternative, residents within the Project area have indicated that the large native elm tree has local cultural value.[100]

5. Recreation

95. The Project is located in a relatively rural area with a diversity of recreation and tourism resources. The Project area includes parks, a golf course, trails, lakes, rivers, streams, state wildlife management areas ("WMAs"), Scientific and Natural Areas ("SNAs"), and county and state forest lands. However, there are no WMAs, SNAs, or lakes within or directly adjacent to the Proposed Routes. Popular outdoor activities in the Project area include fishing, hunting, boating, hiking, golfing, riding ATVs, and snowmobiling.[101]

96. Impacts to recreation and tourism as a result of the Project are anticipated to be minimal. Recreational resources are, generally, located away from the Proposed Routes. Although there may be aesthetic impacts arising from the Project, these impacts are not expected to impact recreation decisions. Further, most tree clearing will be adjacent to existing road and utility rights-of-way, which should minimize potential impacts on wildlife viewing in the Project area.[102]

97. The East of U.S. Highway 10 Alternative (Common Route from Azalea Road to Holt Road) and the East of U.S. Highway 10 Alternative (Common Route from Ridge Road to Holt Road) would place portions of the right-of-way on the Pine Ridge Golf Club property. Clearing of the right-of-way to construct the Project would result in the clearing of approximately 6.4 acres of forested areas along the west edge of the property, which currently provides screening between the property and U.S. Highway 10. This could impact the attractiveness of the property to potential customers.[103]

6. Public Service and Infrastructure

98. Impacts to roads and highways due to the Project are anticipated to be minimal and temporary. Minor, temporary impacts to roads may occur during construction of the

[99] Ex. 23, at 72-73 (EA).
[100] Ex. 23, at 134 (EA).
[101] Ex. 23, at 92 (EA).
[102] Ex. 23, at 93 (EA).
[103] Ex. 23, at 123 (EA).

Project. No impacts to roads or highways are anticipated after the Project has been constructed.[104]

99. There are no known airports within the Project area. There is a private airstrip (Morey's) near the Project Area. MnDOT was contacted to identify potential Project impacts to
local airports and determined that the Project would not have a significant effect. Based on the Project's height and distances to local airports, no impacts to airport operations are anticipated.[105]

100. No impacts to water utilities or natural gas service are anticipated as a result of the Project. The electrical transmission system in the Project area will change as a result of the Project, but no long term adverse impacts to electrical service are anticipated. Some distribution lines may experience temporary service outages during Project construction, but Applicants will minimize the impact of temporary outages during construction planning.[106]

101. No impacts to emergency services are anticipated as a result of the Project.[107]

102. The route alternatives are anticipated to have similar (and minimal) impacts on public services as the Proposed Routes.[108]

B. Effects on Public Health and Safety.

103. Minnesota high voltage transmission line routing factors require consideration of the Project's potential effect on health and safety.[109]

1. Construction and Operation of Facilities

104. The Project will be designed in compliance with local, state, National Electrical Safety Code (NESC), and Applicant's standards regarding clearance to the ground, clearance to crossing utilities, strength of materials, and right-of-way widths.[110]

105. Construction crews and/or contract crews would comply with local, state, and NESC standards regarding installation of facilities and standard construction practices. Applicant's established safety procedures, as well as industry safety procedures, would be

[104] Ex. 23, at 86 (EA).
[105] Ex. 23, at 87 (EA).
[106] Ex. 23, at 88 (EA).
[107] Ex. 23, at 89 (EA).
[108] Ex. 23, at 122, 129 (EA).
[109] Minn. Stat. § 216E.03, subd. 7(b)(1); Minn. R. 7850.4100, subp. B.
[110] Ex. 2, at 9-2 (Application).

followed during and after installation of the transmission lines, including clear signage during all construction activities.[111]

106. The Project would be equipped with protective devices to safeguard the public if an accident occurs and a structure or conductor falls to the ground. The existing substations are already equipped with breakers and relays located where existing transmission lines connect to the substations. The protective equipment is designed to de-energize the transmission lines, should such an event occur.[112]

2. Electric and Magnetic Fields

107. There are no federal standards for transmission line electric fields.

108. The Commission has imposed a maximum electric field limit of 8kV/m measured at one meter above the ground at the edge of the right-of-way.

109. The calculated electric fields for the Project are less than the maximum limit of 8 kV/m prescribed by the Commission.

110. There are no federal or state regulations for the permitted strength of magnetic fields from transmission lines.

111. Research has not been able to establish a cause-and-effect relationship between exposure to magnetic fields and adverse health effects.

112. The potential impacts of EMF on human health were at issue in the Route Permit proceeding for the Brookings County to Hampton 345 kV transmission line. In that proceeding, ALJ Luis found that: "The absence of any demonstrated impact by EMF-ELF exposure supports the conclusion that there is no demonstrated impact on human health and safety that is not adequately addressed by the existing State standards for such exposure. The record shows that the current exposure standard for EMF-ELF is adequately protective of human health and safety."[113]

113. Similarly, in the Route Permit proceeding for the St. Cloud-Fargo 345 kV transmission line, the ALJ found: "Over the past 30 years, many epidemiological studies have been conducted to determine if there is a correlation between childhood leukemia and proximity to electrical structures. Some studies have shown that there is an association and

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[111] Ex. 2, at 9-2 (Application).
[112] Ex. 2, at 9-2 (Application).
[113] *See In re Route Permit Application by Great River Energy and Xcel Energy for a 345 kV Transmission Line from Brookings County, South Dakota to Hampton, Minnesota*, Docket No. ET-2/TL-08-1474, ALJ's Findings of Fact and Conclusions of Law at 44 ¶ 216 (Apr. 22, 2010), eDocket Document No. 20104-49478-01, *adopted as amended*, Commission Order at 8 (Sept. 14, 2010), eDocket Document No. 20109-54429-01.

some have not. Although the epidemiological studies have been refined and increased in size, the studies do not show a stronger related effect. In addition, a great deal of experimental, laboratory research has been conducted to determine causality, and none has been found."[114]

114. Impacts to public health and safety along the West Route Option are anticipated to be similar to those along the East Route Option.[115] The route alternatives are expected to have similar impacts as the Proposed Routes.[116]

115. There is no indication that any significant impact on human health and safety will arise from the Project or any of the route alternatives.[117]

C. Effects on Land-Based Economies and Direct and Indirect Economics Impacts.

116. Minnesota's high voltage transmission line routing factors require consideration of the Project's impacts to land-based economies—specifically, agriculture, forestry, tourism, and mining.[118]

117. Land-based economies in the Project area include agriculture, forestry, recreation, and tourism. Impacts to these operations are anticipated to be minimal and can be mitigated.[119]

1. Agriculture

118. Agricultural lands in the Project area consist of croplands and grasslands. Crops grown in the area include corn, soybeans, hay, and vegetables. Farms in the area raise a variety of livestock.[120]

119. Approximately 6.5 miles of the up to 16.5 miles of the Proposed Routes is in agricultural production. With a right-of-way of 100 feet, the Project's transmission line will cross approximately 79 acres of farmland. However, the permanent impact to agricultural operations is much less because agricultural land within a transmission right-of-way is

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[114] *In re Application for a Route Permit for the Fargo to St. Cloud 345 kV Transmission Line Project*, Docket No. ET-2, E002/TL-09-1056, ALJ's Findings of Fact, Conclusions of Law at 23 ¶ 125 (Apr. 25, 2011), eDocket Document No. 20114-61700-01, *adopted as amended*, Commission Order at 2 (June 24, 2011), eDocket Document No. 20116-64023-01.
[115] Ex. 23, at 114 (EA).
[116] Ex. 23, at 122, 129, 134 (EA).
[117] Ex. 23, at 76-81, 122, 129, 134 (EA).
[118] Minn. Stat. § 216E.03, subd. 7(B)(5); Minn. R. 7850.4100, subp. C.
[119] Ex. 23, at 89 (EA).
[120] Ex. 23, at 89 (EA).

generally available for agricultural production. The amount of land that will be permanently removed from agricultural production as a result of the Project is approximately 392 feet.[121]

120. Temporary impacts, such as soil compaction and crop damage, may occur during construction. Applicants have indicated that they will mitigate agricultural impacts by, among other things: limiting movement of crews and equipment on the right-of-way; repairing and restoring areas disturbed to pre-construction contours; repairing ruts and soil compaction; repairing damages to ditches, tile, terraces, and roads; avoiding irrigation systems; developing a construction schedule to minimize agricultural impacts; and compensating landowners for crop and property damage. In addition, Commission route permits require permittees to compensate landowners for damage to crops and drain tile.[122]

121. As a result of the Project's routing and mitigation measures, impacts to agricultural operations as a result of the Project are anticipated to be minimal.[123]

2. Forestry

122. Forested lands are prevalent within the Project area. Forest stands in the Project area commonly include jack pine, northern pine oak, northern red oak, aspen, birch, red pine, and white pine. Treed windbreaks and shelter belts are common near residences and along roadways
and field edges. Forested lands in the Project area are routinely logged by the forestry industry and for personal use.[124]

123. Geographic Information Systems ("GIS") data for National Forest Lands, State Forest Lands, and DNR Forest Stand Inventories was reviewed within the Project Area. Three DNR Forest Stand Inventory areas were identified in close proximity to the anticipated alignment of the Common Route, and the closest area is approximately 0.16 miles from the anticipated alignment. The Common Route, West Route Option, East Route Option, and Dog Lake Substation to Minnesota Power "24 Line" segment do not cross any known federal, state, or locally identified areas of forestry interest.[125]

124. For the safe operation of the transmission line, tall-growing trees are not allowed in transmission rights-of-way. Applicants' anticipated alignment for the West Route Option crosses approximately 24 acres of forested land, and Applicants' anticipated alignment for the East Route Option crosses approximately 14 acres of forested lands. Applicants'

[121] Ex. 23, at 89-90 (EA).
[122] Ex. 23, at 90-91 (EA).
[123] Ex. 23, as 89-91 (EA).
[124] Ex. 23, at 91 (EA).
[125] Ex. 23, at 91 (EA).

anticipated alignment for the Common Route crosses approximately 36 acres of forested lands.[126]

125. Impacts to forested areas and to forestry operations due to the Project are anticipated to be minimal to moderate.[127] Impacts to forested areas and forestry operations can be avoided and minimized by prudent routing and prudent placement of structures within the route. Applicants have attempted to minimize forested lands in some areas by siting the Proposed Routes adjacent to existing utility and road rights-of-way. In the case of windbreaks comprised of vegetation that, when mature, does not exceed 15 feet in height, Applicants will consider allowing vegetation to remain at the outer edge of the right-of-way. Maintaining compatible vegetation at the edges of the new right-of-way and compensation for right-of-way vegetation removal will be negotiated with individual landowners during easement discussions.[128]

126. The West Route Option would result in clearing approximately 24 acres of forested lands; the East Route Option would result in clearing approximately 14 acres of forested lands. The East Route Option is anticipated to minimize forestry impacts.[129]

3. Mining

127. There are no mining activities within the vicinity of the Project area, so no impacts to mining activities are anticipated.[130]

128. In general, the route alternatives are anticipated to have similar impacts on land- based economies as the Proposed Routes.[131]

D. Effects on Archeological and Historic Resources.

129. Minnesota Rule 7850.4100, subpart D requires consideration of the effects on historic and archeological resources.

130. To determine potential impacts on known archeological and historic resources, Applicants conducted a review of records at SHPO. The review indicated that there are 24 previously recorded archeological sites in the review area, which included the Proposed Routes and a one-mile buffer area around the Proposed Routes. Twenty sites are located along the Crow Wing River, and one of the sites may be within or close to the West Route Option crossing of the Crow Wing River. Based on the review, there is a high potential that the

[126] Ex. 23, at 91 (EA).
[127] Ex. 23, at 91 (EA).
[128] Ex. 23, at 92 (EA).
[129] Ex. 23, at 115 (EA).
[130] Ex. 23, at 92 (EA).
[131] Ex. 23, at 122-23, 129, 134 (EA).

Proposed Routes could impact unrecorded archeological sites. Because of this potential SHPO recommended that a Phase I archeological survey be conducted.[132]

131. Applicants' review of SHPO records also indicated that there are four previously recorded historic structures within one miles of the Proposed Routes. One of the sites is located to the north of the existing Motley Substation. The Project is not likely to impact this resource during construction.[133]

132. Applicants have indicated that work will be stopped and SHPO staff will be consulted in the event archeological sites or resources are identified during Project construction. Consultation with SHPO concerning archeological resources encountered during construction is a standard Commission route permit condition.[134]

133. Potential impacts to archeological and historic resources are anticipated to be higher along the West Route Option than along the East Route Option because the Crow Wing River crossing associated with the West Route Option would have a greater likelihood of encountering previously non-recorded archeological sites.[135]

134. The route alternatives are anticipated to have similar impacts to archeological and historic resources as the Proposed Routes.[136]

E. Effects on Natural Environment.

135. Minnesota's high voltage transmission line routing factors require consideration of the Proposed Routes' effect on the natural environment, including effects on air and water quality resources and flora and fauna.[137]

1. Air Quality

136. No significant impacts to air quality are anticipated from the Project. Ozone and nitrous oxide emissions along transmission lines are generally directly linked to corona production. Transmission lines below 161 kV are generally operating at too low of a voltage to produce significant amounts of corona. The Project transmission lines will operate at a maximum of 121 kV, which is anticipated to produce minimal corona under normal operating conditions. Ozone and nitrous oxide emissions are anticipated to be less than state and federal standards. The impacts of any emissions are anticipated to be relatively minor.[138]

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[132] Ex. 23, at 93 (EA).
[133] Ex. 23, at 94 (EA).
[134] Ex. 23, at 94 (EA).
[135] Ex. 23, at 115 (EA).
[136] Ex. 23, at 123, 130, 134 (EA).
[137] Minn. Stat. § 216E.03, subd. 7(b)(1)-(2); Minn. R. 7850.4100, subp. E.
[138] Ex. 23, at 85-86 (EA).

137. Impacts due to construction dust and equipment exhaust are anticipated to be minor and temporary.[139]

2. Water Quality and Resources

138. There are several lakes in the Project area. However, the Proposed Routes do not cross or run adjacent to any lakes. Lake impacts are not anticipated to result from construction or operation of the Project.[140]

139. The Project will not directly impact the water surface or channel bottoms of any of the rivers or streams in the Project area. However, the transmission line will require overhead crossings of various rivers and streams. The West Route Option crosses the Crow Wing River, the East Route Option crosses Seven Mile Creek and the Crow Wing River, and the Common Route crosses an unnamed tributary to Fish Trap Creek, twice. Because the Project avoids or spans surface waters in the Project area, impacts to surface waters are anticipated to be minimal. There is a potential for adverse impacts due to vegetation clearing, ground disturbance, and construction traffic during construction. The Project requires a number of permits and licenses from state and federal agencies, many of which are directed at the prevention, and minimization and mitigation of water resource impacts.[141]

140. The Project is not anticipated to alter existing water drainage patterns, alter existing floodplain elevations, or increase flood susceptibility in the area. Thus, impacts to the 100-year floodplain in the Project area are anticipated to be minimal.[142]

141. The Project is located in Minnesota's central groundwater province. Impacts to groundwater are anticipated to be minimal. Impacts can be mitigated by utilizing measures to prevent impacts to surface waters. Direct impacts to groundwater are anticipated to be minimal due to anticipated minimal use of concrete foundations and the relatively low solubility of concrete components.[143]

142. Because most wetlands within the Proposed Routes can be avoided or spanned, impacts to wetlands are anticipated to be minimal. Forested wetlands within the Project right-of-way will likely undergo a permanent change of vegetation type as a result of the Project. Applicants do not anticipate that a general permit from USACE under Section 404 of the Clean Water Act will be required for the Project, but will conduct restoration and construction

[139] Ex. 23, at 86 (EA).
[140] Ex. 23, at 95 (EA).
[141] Ex. 23, at 95 (EA).
[142] Ex. 23, at 96 (EA).
[143] Ex. 23, at 96-97 (EA).

in accordance with such a permit if it is deemed necessary. Commission route permits generally require permittees to avoid and minimize wetland impacts.[144]

143. Impacts to water resources for the West Route Option and the East Route Option are anticipated to be similar and minimal.[145]

144. Impacts to water resources for the route alternatives are anticipated to be similar to the Project and minimal.[146]

3. Flora

145. Potential impacts to flora due to the Project are anticipated to be minimal to moderate. Impacts to forested areas are anticipated as a result of construction and maintenance of the Project. The Project is anticipated to impact 50-60 acres of forested land. Impacts to other vegetative communities, such as agricultural fields and non-forested wetlands, are anticipated to be minimal.[147]

146. Applicants have committed to minimizing the introduction and spread of invasive species.[148]

147. Mitigation and restoration measures for impacts to flora are standard Commission route permit conditions.[149]

148. The DNR recommended several strategies to minimize impacts to flora, including use of boarder zone/wire zone ROW management, the maintenance of vegetation at all water crossings, and development of a Vegetation Management Plan.[150]

149. Impacts to flora are anticipated to be minimal for the East and West Route Options.[151]

150. Impacts to flora are anticipated to be similar to the Proposed Routes and minimal to moderate for the East of U.S. Highway 10 Alternative (Common Route from Azalea Road to Holt Road) and the East of U.S. Highway 10 Alternative (Common Route from Ridge Road to Holt Road).[152]

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[144] Ex. 23, at 97-98 (EA).
[145] Ex. 23, at 115 (EA).
[146] Ex. 23, at 123, 130, 134 (EA).
[147] Ex. 23, at 100 (EA).
[148] Ex. 23, at 100-01 (EA).
[149] Ex. 23, at 101 (EA).
[150] DNR Public Hearing Comments (Nov. 30, 2015, eDocket Document No. 201511-116029-02).
[151] Ex. 23, at 115, 118 (EA).
[152] Ex. 23, at 123 (EA).

151. For the MP Land East River Crossing Alternative, impacts to flora are anticipated to be similar to the Proposed Routes. However, the Proposed Routes' tree clearing would be completed along the edges of forested areas where tree clearing has previously occurred, and the MPC Land East River Crossing Alternative would result in creating a short new utility right-of-way through the currently intact forested area on the MP-owned land east of the Crow Wing River.[153]

152. Impacts to flora along the Old Tree Avoidance Alternative are anticipated to be similar to those along the Proposed Routes and minimal to moderate. The Old Tree Avoidance Alternative may result in additional impacts to the existing forested area to the east of the large native elm tree location, depending on final design.[154]

4. Fauna

153. Potential impacts to fauna due to the Project are anticipated to be minimal. Avian species could be impacted by the Project through collision with transmission line conductors. However, there are mitigation strategies that can be implemented to minimize these impacts. Thus, impacts to avian species are anticipated to be minimal.[155]

154. DNR identified the Crow Wing River crossing as an area of concern. Applicants will work with DNR and USFWS to identify areas where transmission line marking and/or alternate structures are needed to reduce the likelihood of collisions. DNR has also indicated that an Avian Mitigation Plan should be developed for the Project.[156]

155. Impacts to fauna along the West Route Option are anticipated to be similar to those along the East Route Option and minimal.[157] However, it is anticipated that the West Route Option would result in greater impacts to the natural environment than the East Route Option because it will result in the construction of a new overhead crossing of the Crow Wing River.[158]

156. Impacts to fauna along the route alternatives are anticipated to be similar to the Proposed Routes.[159]

F. Effects on Rare and Unique Natural Resources.

[153] Ex. 23, at 130 (EA).
[154] Ex. 23, at 134-35 (EA).
[155] Ex. 23, at 101-02 (EA).
[156] Ex. 23, at 102 (EA).
[157] Ex. 23, at 115 (EA).
[158] Ex. 23, at 115 (EA).
[159] Ex. 23, at 124, 130, 135 (EA).

157. Minnesota's high voltage transmission line routing factors require consideration of the Proposed Routes' effect on rare and unique natural resources.[160]

158. There are no federally listed plant species and three state listed plant species (beach heather, Drummond's campion, and clustered bur-reed) in the Project area.

159. The West Route Option would cross one area of moderate biodiversity, and the Common Route intersects one area of high biodiversity in two locations, four areas of biodiversity ranked as below, and three areas of moderate biodiversity. Portions of the high biodiversity site crossed by the Common Route are identified as Native Plant Communities.[161]

160. DNR has indicated that there are records of the following rare or threatened animal species in the vicinity of the Project area: American bittern; red-shouldered hawk, least darter, bald eagle, northern barrens tiger beetle, black sandshell, creek heelsplitter, and Blanding's turtle.[162]

161. In addition, the Northern Long-Eared Bat ("NLEB") was listed by the USFWS as a federally threatened species on April 2, 2015. The NLEB was listed due to white nose syndrome, a fungal disease that has spread throughout the NLEB range.[163] Because of this disease, other possible causes of NLEB mortality may be important factors affecting the viability of NLEB populations.[164] Once such cause is the loss or degradation of summer roosting habitat.[165] Though there are no known occurrences of NLEB roosting in the Project area, the area includes trees that may serve as roosting habitat for NLEB.[166]

162. The USFWS recommends minimizing the removal of trees that could be used as roosting habitat for the NLEB.[167] The USFWS has indicated that an incidental take permit may be necessary for projects that result in greater than one acre of tree removal.[168] The take permit may impose conditions to mitigate potential impacts to NLEB.[169]

163. Impacts to rare and unique natural resources due to the Project are anticipated to be minimal to moderate; additionally, DNR and USFWS have recommended mitigation measures.[170]

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[160] Minn. Stat. § 216E.03, subd. 7(b)(1); Minn. R. 7850.4100, subp. F.
[161] Ex. 23, at 103 (EA).
[162] Ex. 23, at 103 (EA).
[163] Ex. 23 at 103 (EA)
[164] Ex. 23 at 103 (EA)
[165] Ex. 23 at 103 (EA)
[166] Ex. 23, at 103-04.
[167] Ex. 23 at 107 (EA)
[168] Ex. 23 at 107 (EA)
[169] Ex. 23 at 107 (EA)
[170] Ex. 23, at 104-06 (EA).

164. Applicants have further committed to several strategies to minimize impacts, including: minimizing tree and shrub removal, utilizing best management practices to prevent soil erosion, revegetating disturbed areas with native species and wildlife conservation species, installing bird flight diverters at water crossings, and avoiding impacts to undisturbed habitat to the greatest extent practicable.[171]

165. The DNR recommended several mitigation strategies for the Project, including: (1) constructing the project within already disturbed areas, (2) minimizing vehicular disturbance, (3) avoiding equipment or supply stockpiles in the area, (4) inspecting and cleaning all equipment to prevent the introduction of invasive species, (5) conducting work under frozen ground conditions, (6) using effective erosion control measures, (7) revegetating and using week-free seed mixes, (8) confining construction to activities to the opposite side of the road from Native Plant Communities, and (9) consultation with the DNR on the placement of bird diverters.[172], [173]

166. The DNR recommended that erosion control measures be implemented near the Crow Wing River and spanning the river with an overhead line or direction boring under the river to mitigate potential impacts to the Creek Heelsplitter and Black Sandshell mussel.[174]

167. The DNR recommended impact and avoidance measures be taken to project the Blanding's Turtle including: (1) providing an illustrated flyer on the Blanding's turtle to all contractors in the area, (2) removing turtles in imminent danger by hand, (3) leaving turtles not in imminent danger, (4) silt fencing should be used to keep turtles out of construction areas, and promptly removed once areas have been revegetated, (5) avoid dredging in wetlands and the discharge of chemical and sediments into wetlands and lakes, (6) utility access and maintenance roads should be kept to a minimum to reduce the potential for road kill, (7) any trenches not excavated during construction should be checked for turtles that may have become trapped prior to back-filling, (9) the project area terrain should be left with as much natural contour as possible, (10) graded areas should be revegetated with native grasses and forbs, (11) vegetation management under power lines and along utility access roads should be done mechanically, and occur after October 1 and before June 1.[175]

168. Impacts to rare and unique natural resources along the West Route Option are anticipated to be greater than those along the East Route Option. Because the East Route Option will result in the removal of fewer acres of trees, the East Route Option is anticipated to minimize potential impacts to the NLEB. In addition, the West Route Option has the potential to impact approximately 1.9 acres identified by DNR as a Site of Biodiversity and

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[171] Ex. 23, at 105.
[172] Ex. 23 at 111 (EA)
[173] DNR Public Hearing Comments (Nov. 30, 2015, eDocket Document No. 201511-116029-02).
[174] Ex. 23 at 111 (EA)
[175] Ex. 23 at 112 (EA)

0.2 acres of land identified by DNR as Native Plant Communities. The East Route Option does not impact any such sites.[176]

169. Impacts to rare and unique natural resources along the East of U.S. Highway 10 Alternative (Common Route from Azalea Road to Holt Road) and the East of U.S. Highway 10 Alternative (Common Route from Ridge Road to Holt Road) are anticipated to be greater than those along the Proposed Routes. The primary difference between these alternatives are the potential impacts to Sites of Biodiversity and Native Plant Communities.[177]

170. Impacts to rare and unique natural resources along the MP Land East River Crossing Alternative and the Old Tree Avoidance Alternative are anticipated to be similar to the Proposed Routes.[178]

G. Application of Various Design Considerations.

171. Minnesota's high voltage transmission line routing factors require consideration of the Project's applied design options that maximize energy efficiencies, mitigate adverse environmental effects, and could accommodate expansion of transmission or generating capacity.[179]

172. The Project is designed to improve electrical service and reliability in the Project area. It is also designed to accommodate future expansion of the transmission system in the area.[180]

H. Use of or Paralleling of Existing Rights-of-Way, Survey Lines, Natural Division Lines, and Agricultural Field Boundaries

173. Minnesota's high voltage transmission line routing factors require consideration of the Proposed Routes' use or paralleling of existing rights-of-way, survey lines, natural division lines, and agricultural field boundaries.[181]

174. The Project parallels existing rights-of-way for the vast majority of its length.[182]

175. The West Route Option will parallel or utilize existing rights-of-way for approximately 94% of the alignment. The East Route Option will parallel or utilize existing

[176] Ex. 23, at 116 (EA).
[177] Ex. 23, at 124 (EA).
[178] Ex. 23, at 130, 135 (EA).
[179] Minn. Stat. § 216E.03, subd. 7(a)-(b); Minn.. R. 7850.1900, subp. 2(L).
[180] Ex. 23, at 112 (EA).
[181] Minn. Stat. § 216E.03, subd. 7(b)(9); Minn. R. 7850.4100, subp. H.
[182] Ex. 2, at 8-1 (Application).

rights-of-way for approximately 97% of the alignment.[183] The Common Route parallels existing road rights-of- way for nearly its entire length.[184]

I. Use of Existing Transportation, Pipeline, and Electrical Transmission System Rights-of-Way

176. Minnesota's high voltage transmission line routing factors require consideration of the Proposed Routes' use of existing transportation, pipeline, and electrical transmission system rights-of-way.[185]

177. The Proposed Routes parallel or utilize existing transmission and roadway rights- of-way for approximately 98-99% of its length.[186]

178. The East of U.S. Highway 10 Alternative (Common Route from Azalea Road to Holt Road) and the East of U.S. Highway 10 Alternative (Common Route from Ridge Road to Holt Road) will parallel the same amount of right-of-way as the Proposed Routes along U.S. Highway 10. These alternatives will result in the right-of-way sharing and underbuild of approximately one additional mile of distribution power lines when compared to the Proposed Routes.[187]

179. The MP Land East River Crossing Alternative will result in the creation of approximately 250 feet of additional right-of-way when compared to the Proposed Routes.[188]

180. The Old Tree Avoidance Alternative and the Proposed Routes will parallel the existing Azalea Road and overtake the existing MP sub-transmission line.[189]

J. Electrical System Reliability

181. Minnesota's high voltage transmission line routing factors require consideration of the Project's impact on electrical system reliability.[190]

182. The Project will be constructed to improve electrical service and reliability in the Project area.[191]

K. Costs of Constructing, Operating, and Maintaining the Facility

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[183] Ex. 23, at 116 (EA).
[184] Ex. 2, at 8-1 (Application).
[185] Minn. Stat. § 216E.03, subd. 7(b)(8); Minn. R. 7850.4100, subp. J.
[186] Ex. 23, at 112.
[187] Ex. 23, at 125 (EA).
[188] Ex. 23, at 131 (EA).
[189] Ex. 23, at 135 (EA).
[190] Minn. Stat. § 216E.03, subd. 7(b)(10); Minn. R. 7850.4100, subp. K.
[191] Ex. 23, at 112 (EA).

183. Minnesota's high voltage transmission line routing factors require consideration of the Proposed Routes' cost of construction, operation, and maintenance.[192]

184. The estimated total cost for the Project is approximately $16-17 million, depending on final route selection. Annual operation and maintenance costs for a 115 kV line in the GRE system, including right-of-way maintenance, are approximately $2,000 per mile of transmission line.[193]

185. The West Route Option is estimated to cost approximately $1,992,000, and the East Route Option is estimated to cost approximately $2,490,000.[194]

186. The East of U.S. Highway 10 Alternative (Common Route from Azalea Road to Holt Road) is anticipated to cost approximately $172,000 more than the Proposed Routes. The East of U.S. Highway 10 Alternative (Common Route from Ridge Road to Holt Road) is anticipated to cost approximately $215,000 more than the Proposed Routes.[195]

187. The cost of the MP Land East River Crossing Alternative is anticipated to be $120,000 more than the Proposed Routes.[196]

188. The Old Tree Avoidance Alternative is anticipated to cost approximately $240,000 more than the Proposed Routes.[197]

L. Adverse Human and Natural Environmental Effects That Cannot Be Avoided.

189. Minnesota's high voltage transmission line routing factors require consideration of the adverse human and natural environmental effects that cannot be avoided.[198]

190. Unavoidable adverse impacts include the physical impacts to the land due to construction of the Project.[199]

M. Irreversible and Irretrievable Commitments of Resources

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[192] Minn. R. 7850.4100, subp. L.
[193] Ex. 23, at 46 (EA).
[194] Ex. 23, at 116 (EA).
[195] Ex. 23, at 125 (EA).
[196] Ex. 23, at 131 (EA).
[197] Ex. 23, at 135 (EA).
[198] Minn. Stat. § 216E.03, subd. 7(b)(5)-(6); Minn. R. 7850.4100, subp. M.
[199] *See* Ex. 23, at 112-13 (EA).

191. Minnesota's high voltage transmission line routing factors require consideration of the irreversible and irretrievable commitments of resources that are necessary for each route alternative.[200]

192. The commitment of a resource is irreversible when it is impossible or very difficult to redirect that resource to a different future use. An irretrievable commitment refers to the use or consumption of a resource such that it is not recoverable for later use by future generations. These types of commitments are anticipated to occur for all route and site alternatives and not to vary significantly between routing impacts.[201]

193. There are few commitments of resources associated with the Project that are irretrievable. These commitments include the steel, concrete, and hydrocarbon resources committed to the Project. Labor and fiscal resources required for the Project are also irretrievable commitments.[202]

N. Summary of Factors Analysis

194. The East Route Option has lesser impacts than the West Route Option.[203]

195. An alignment of the Common Route along the west side of U.S. Highway 10 would result in fewer impacts than an alignment along the east side.[204]

196. The Proposed Routes meet Minnesota's route selection criteria as well or better than the East of U.S. Highway 10 Alternative (Azalea Road to Holt Road) and the East of U.S. Highway 10 Alternative (Ridge Road to Holt Road) in terms of impacts to aesthetics, public health and safety, land-based economies, archeological and cultural resources, effects on natural environments, and use of existing rights-of-way.[205]

197. The Proposed Routes meet Minnesota's route selection criteria as well or better than the MP Land East Crossing Alternative.[206]

198. The Old Tree Avoidance Alternative and the Proposed Routes would meet Project needs, but the Old Tree Avoidance Alternative may minimize Project impacts and also utilizes existing rights-of-way.[207]

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[200] Minn. Stat. § 216E.03, subd. 7(b)(11); Minn. R. 7850.4100, subp. N.
[201] Ex. 23, at 113 (EA).
[202] Ex. 23, at 113 (EA).
[203] Ex. 23, at 119 (EA).
[204] *See* Ex. 14, at 18 (Other – Motley Area Written Public Comments); Ex. 23, at 35-36.
[205] Ex. 23, at 126-27 (EA).
[206] Ex. 23, at 132-33 (EA).
[207] Ex. 23, at 136-37 (EA).

199. Based on consideration of all routing factors, the East Route Option and the Common Route, including an alignment along the west side of U.S. Highway 10, and the Old Tree Avoidance Alternative, is the best route for the Project (the "Preferred Route").

II. Notice

200. Minnesota statutes and rules require Applicants to provide certain notice to the public and local governments before and during the Application for a Route Permit process.[208]

201. Applicants provided notice to the public and local governments in satisfaction of Minnesota statutory and rule requirements.[209]

202. Minnesota statutes and rules also require EERA and the Commission to provide certain notice to the public throughout the Route Permit process.[210] EERA and the Commission provided the notice in satisfaction of Minnesota statutes and rules.[211]

III. Completeness of EA

203. The EA process is the alternative environmental review approved by the Environmental Quality Board ("EQB") for high voltage transmission lines.[212] The Commission is required to determine the completeness of the EA.[213] An EA is complete if it and the record address the issues and alternatives identified in the Scoping Decision.[214]

204. The evidence on the record demonstrates that the EA is adequate because the EA and the record created at the public hearing and during the subsequent comment period address the issues and alternatives raised in the Scoping Decision.[215]

Based on the foregoing Findings of Fact and the record in this proceeding, the Commission makes the following:

CONCLUSIONS

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[208] Minn. Stat. § 216E.03, subds. 3a, 4; Minn. R. 7850.2100, subps. 2, 4.
[209] Ex. 1 (Initial Filing – Alternative Process Notification); Ex. 6 (Compliance Filing – Confirmation of Notice); Ex. 8 (Affidavit of Publication – Scoping Meeting Newspaper Notices).
[210] Minn. Stat. § 216E.03, subd. 6; Minn. R. 7850.2300, subp. 2; Minn. R. 7850.3700, subps. 2-3, 6.
[211] Ex. 3 (Notice of Comment Period on Application Completeness); Ex. 5 (Commission Meeting Notice on Completeness); Ex. 7 (Notice of Public Information and Scoping Meeting); Ex. 19 (EA Scoping Decision); Ex. 24 (Notice of Availability of EA).
[212] Minn. R. 4410.4400, subp. 6.
[213] Minn. R. 7850.3900, subp. 2.
[214] Id.
[215] *See* Ex. 19 (EA Scoping Decision); Ex. 23 (EA).

1. The Commission has jurisdiction to consider the Application.

2. The Commission determined that the Application was substantially complete and accepted the Application on May 27, 2015.[216]

3. EERA has conducted an appropriate environmental analysis of the Project for purposes of this Route Permit proceeding and the EA satisfies Minnesota Rules 7850.3700 and 7850.3900. Specifically, the EA and the record address the issues and alternatives identified in the Scoping Decision to a reasonable extent considering the availability of information, and the EA includes the items required by Minnesota Rule 7850.3700, Subpart 4, and was prepared in compliance with the procedures in Minnesota Rule 7850.3700.

4. Applicants gave notice as required by Minnesota Statutes Section 216E.04, Subdivision 4; Minnesota Rule 7850.2100, Subpart 2; Minnesota Rule 7850.2100, Subpart. 4.

5. Notice was provided as required by Minnesota Statutes Section 216E.04, Subdivision 6; Minnesota Rule 7850.3500, Subpart 1; Minnesota Rule 7850.3700, Subparts 2, 3, and 6; and Minnesota Rule 7850.3800.

6. A public hearing was conducted near the Proposed Routes. Proper notice of the public hearing was provided, and the public was given the opportunity to speak at the hearing and to submit written comments. All procedural requirements for the Route Permit were met.

7. The evidence on the record demonstrates that the Preferred Route (as depicted on Exhibit C), best satisfies the Route Permit factors set forth in Minnesota Statutes Section 216E.04, subdivision 8 (referencing Minnesota Statutes Section 216E.03, subdivision 7) and Minnesota Rule 7850.4100.

8. There is no feasible and prudent alternative to the construction of the Project, and the Project is consistent with and reasonably required for the promotion of public health and welfare in light of the state's concern for the protection of its air, water, land, and other natural resources as expressed in the Minnesota Environmental Rights Act.[217]

9. A special Route Permit condition requiring a Phase I archeological survey is appropriate for the Project:

> The permittees shall consult with the State Historic Preservation Office concerning the extent of a Phase I archeological survey and appropriate mitigation

[216] Ex. 9 (Order Accepting Application as Complete, Directing the Use of Alternative Process, and Granting Variance and Certificate of Service).
[217] *See* Minn. Stat. § 116B.01.

measures for the Project. Permittees shall document and submit to the Commission the results of the consultation, including those portions of the Project that will be surveyed and the extent of the survey. For those portions of the Project that are surveyed, permittees shall submit, with the plan and profile for these portions, the results of the survey and all avoidance and mitigation measures employed or to be employed.

10. A special Route Permit condition requiring that the permittees consult with the DNR and USFWS to develop an avian mitigation plan is appropriate for the Project.

11. A special Route Permit condition requiring that the permittees consult with the DNR to develop a vegetation management plan is appropriate for the Project. It is appropriate for the plan to incorporate expressed recommendations of the DNR including management of vegetation within the right-of-way to maintain low-growing plants on the border of the right-of- way (wire zone / border zone management) and maintaining natural vegetation within a 50-foot buffer on both banks at all stream crossings.

12. A special Route Permit condition requiring that the permittees implement those mitigation strategies recommended by the DNR for rare and unique natural resources (Findings 163-165) is appropriate for the Project.

13. A special Route Permit condition requiring that the permittees file with the Commission the results of any additional bat studies conducted for the Project is appropriate. Further, if the permittees are required to obtain an incidental take permit from the USFWS, it is appropriate for the permittees to file a copy of the permit with the Commission.

14. A special Route Permit condition requiring that the permittees conduct an eagle nest survey along the entire selected project route is appropriate for the Project. Results of the nest survey will be filed on eDockets and provided directly to the USFWS.

15. The evidence on the record demonstrates that the general Route Permit conditions are appropriate for the Project.

16. Any of the foregoing Findings more properly designated Conclusions are hereby adopted as such.

Exhibit A: Routes Proposed in Application

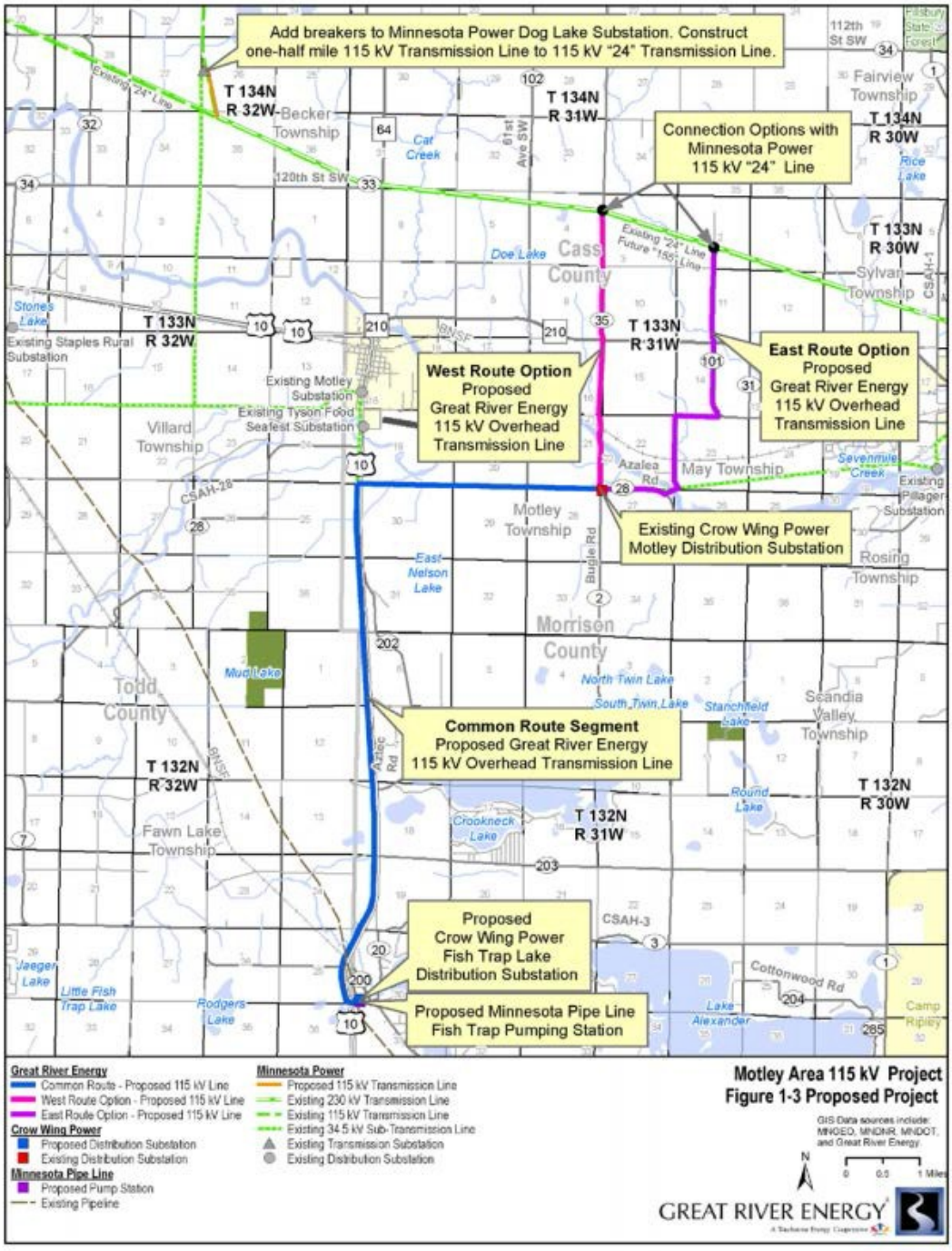
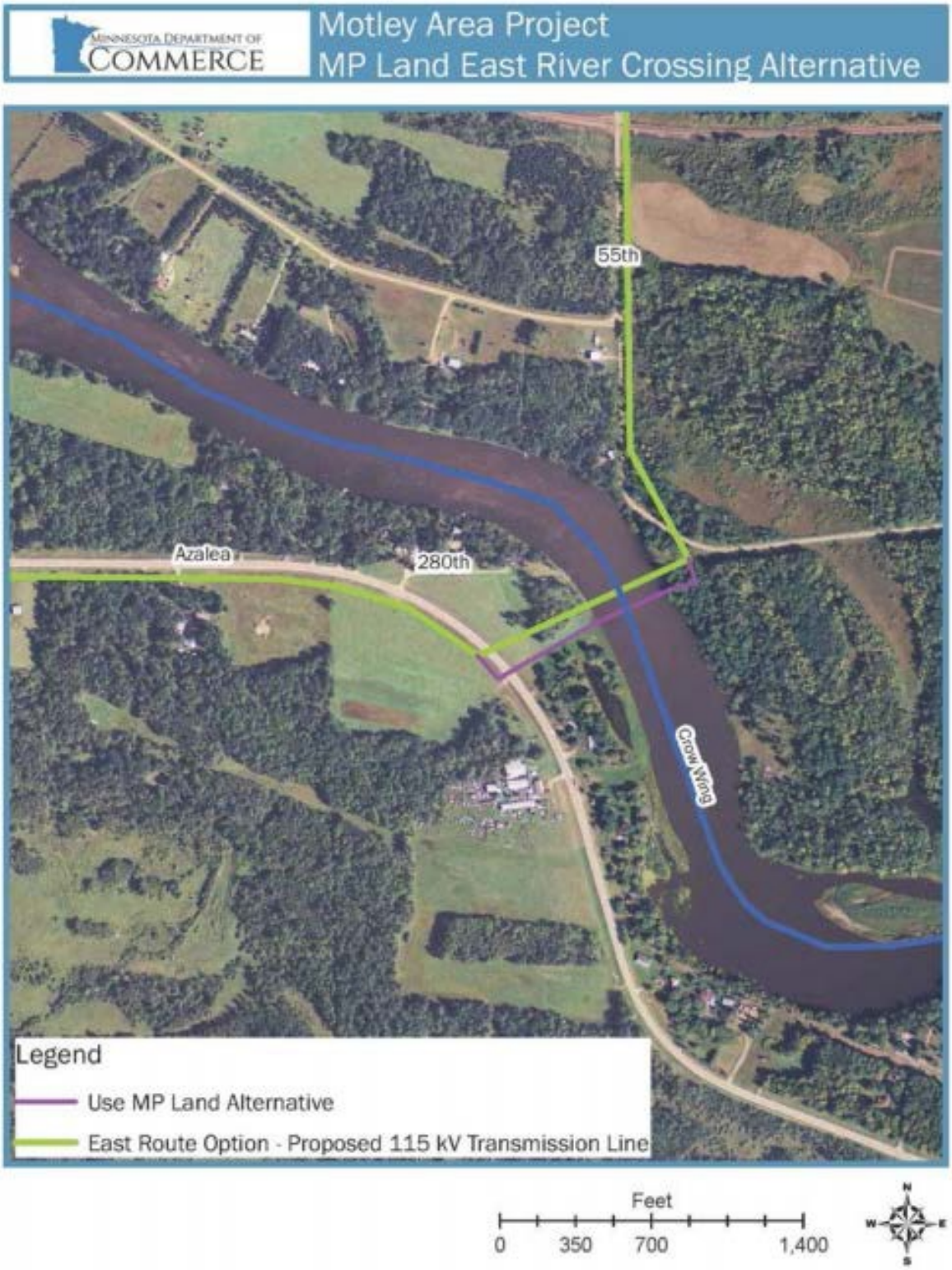


Exhibit B: Alternative Routes
B.1: MP Land East River Crossing Alternative



B.2: Common Route East of U.S. Highway 10 Alternatives

B.3: Applicants' Revised Old Tree Avoidance Alternative

Exhibit C: Preferred Route