GREAT RIVER ENERGY

MINNESOTA PUBLIC UTILITIES COMMISSION

MPUC DOCKET NO. ET-2/TL-23-170
OAH DOCKET NO. 23-2500-39476

DIRECT TESTIMONY OF MARK STROHFUS

January 10, 2024

I. INTRODUCTION AND QUALIFICATIONS

Q. Please state your name, employer, and business address.

A. My name is Mark Strohfus. I am a Transmission Permitting, Project Manager, with Great River Energy. My business address is 12300 Elm Creek Boulevard, Maple Grove, Minnesota 55369.

Q. Please briefly describe your educational and professional background and experience.

A. I have a BS in Pulp & Paper Science and Engineering from the University of Minnesota. I have worked for Great River Energy as an environmental policy analyst, an environmental project lead, and currently as a project manager in the transmission permitting and land rights department. In my role as environmental project lead, I was responsible for managing and obtaining all environmental permits, including permits from the Minnesota Public Utilities Commission ("Commission") for large electric generating facilities. In my current role as project manager, I am responsible for managing all aspects of environmental permitting, including Commission route permits for transmission projects, and advising Great River Energy staff on environmental and permitting implications during the early project planning phases. I had 12 years of experience as an environmental consultant prior to joining Great River Energy.

Q. What is your role with respect to the proposed construction of a 115-kilovolt ("kV") transmission line in Scott and Rice Counties, Minnesota (the "Project")?

A. My role is to assist in selecting the Project route; assist with stakeholder outreach and community relations for the Project; obtain all necessary permits, licenses, and approvals for the construction and operation of the Project; and ensure compliance with permit and license conditions through the construction and energization of the Project.

Q. What schedules are attached to your Direct Testimony?

A. The following schedules are attached to my Direct Testimony:

- **Schedule A**: Statement of Qualifications
- **Schedule B**: Expanded Route Width Landowner Notice
- **Schedule C**: Great River Energy's proposed revisions to the Draft Route Permit

II. PROJECT UPDATES

Q. Has Great River Energy undertaken any additional surveys or site evaluation since filing the Application?

A. Yes. Great River Energy is conducting a physical survey to locate the exact location of the United States Fish and Wildlife Services ("USFWS") Waterfowl Production Area ("WPA"). As discussed in the Application, the Proposed Alignment avoids structure placement within the WPA. This WPA is managed by the USFWS Minnesota Valley Wetland Management District. This physical survey will ensure the transmission line will not cross the WPA. In addition, a landowner along Baseline Road provided a comment outside an open comment period stating that there were bald eagles in the Baseline Road area. In response to this comment, Great River Energy has completed a preliminary nest survey, which did not find any nest within the Project's Proposed Route along Baseline Road. Additional surveys will be completed in the spring, and if nests are located within the route, Great River Energy will consult with the USFWS and/or the Minnesota Department of Natural Resources ("MDNR"), as applicable.

Q. Has Great River Energy begun the land acquisition process?

A. Yes. Great River Energy has started the land acquisition process, including obtaining landowner easement options, for the Project, given the importance of the Project schedule. Great River Energy anticipates that land acquisition will continue until after this permitting process has concluded.

Q. Has Great River Energy sought input from the Minnesota State Historic Preservation Office ("SHPO") regarding the Project?

A. Yes. Great River Energy retained Merjent, Inc. as a consultant to conduct a cultural resource review of the Proposed Route and a one-mile buffer. This literature review and Merjent's evaluation of the possible effects of the proposed Project on historic properties in the Project area was provided to SHPO in a letter dated May 10, 2023, and was attached to Great River Energy's Route Permit Application as Appendix D. The report included a recommendation to complete a Phase 1 Archaeological Reconnaissance field survey.

On June 29, 2023, SHPO responded and indicated that it agreed with Great River Energy's report and recommendation to proceed with the Phase 1 field survey. Once engineering design determines structure locations, the Phase 1 field survey will be completed to confirm there will be no cultural impacts due to installation of the structures.

Q. Are there any updates to the Project's schedule?

A. No. As discussed in Section 3.6 of the Application, Great River Energy plans to commence construction of the Project in fall 2024 once required permits and approvals are obtained. Great River Energy anticipates construction will take approximately seven to eight months and the Project will be energized in summer 2025. As explained in the Application, it continues to be critical for the Project's permitting and construction timelines to remain on schedule so that the Project can be in service in time for CapX2020 to install the second circuit.

III. COMMISSION ORDER ON SCOPING DECISION

Q. Did you review the order issued by the Commission dated October 26, 2023 ("October 26 Order")?

A. Yes, I did.

Q. What was the subject of the October 26 Order?

A. The October 26 Order concerned the scoping decision for the Project, which defined the scope of analysis to be included in the Environmental Assessment ("EA") that will be prepared by the Department of Commerce, Energy Environmental Review and Analysis ("DOC-EERA") for the Project. Specifically, the order required:

> (1) the EA to evaluate preferred route and the Country Hollows Lane Alternative alignment modification;
>
> (2) the EA to evaluate an expanded route width between the Cedar Lake Substation and Highway 19;[1] and
>
> (3) the EA include an analysis of a "complete under build for the full length of the proposed route paralleling Highway 19 of the existing distribution line that is now located South of Highway 19 or other modifications that co-locate or remove the distribution infrastructure…."

Q. With respect to the first item of the Commission's order regarding the alternate alignment, does Great River Energy have any comment?

A. Great River Energy did not object to the inclusion of the Country Hollows Lane Alternative alignment ("Alternative") within the EA and coordinated with DOC-EERA to ensure that DOC-EERA had the information needed to analyze this Alternative. As I will discuss further in Section V below, Great River Energy will work directly with the landowners crossed by the Proposed Alignment and the alternate alignment (both of which are within the Project's proposed route width) to determine whether agreement can be reached regarding an alignment in this area.

[1] The expanded route width would also route through La Sueur County, in addition to Scott and Rice Counties.

Q. Please discuss the second item in the October 26 Order (regarding the expanded route width).

A. On November 13, 2023, Great River Energy sent via U.S. Mail a notice of consideration of an expansion of route width to affected landowners. *See* **Schedule B**.

The notice invited the landowner to contact myself to discuss the Project or if they had any questions regarding proposing an alternative alignment that was within the expanded route width. The notice also advised the landowner of the upcoming public hearings scheduled for January 24 and 25, 2024, and indicated that the Commission would provide additional hearing details at a later time.

Q. Did any landowners within the expanded route width contact you?

A. Yes. On December 11, 2023, Mr. Frank Bisek called me about the expanded route width. Mr. Bisek solely, and jointly with his brother, owns four parcels adjacent to Baseline Road. He stated that he prefers Great River Energy's Proposed Alignment and did not want to modify the alignment.

On January 5, 2024, I received a call from landowner Mr. John Hendricks. Mr. Hendricks owns four parcels on the west side of Baseline Avenue. As I understood, Mr. Hendricks suggested the line goes west across the parcel south of his properties owned by Bisek Brothers LLC, and then turn north along the western edge of the expanded route until the transmission line turns east. I encouraged Mr. Hendricks to provide a map of this proposed alignment. However, as described in the EA, an alignment in this area would require the creation of new corridors, impact wetlands, and pose additional vegetation clearing considerations.

Q. Did DOC-EERA evaluate the expanded route width in its EA?

A. Yes. In accordance with the October 26 Order, DOC-EERA considered the expanded route width. In Section 6.1.1 of the EA, DOC-EERA ultimately concluded that:

Any alignment located west of Baseline Ave elsewhere within the expanded route to get from the existing Cedar Lake Substation to Baseline Ave, and to Highway 19 will have to cross the same, if not more, agricultural land, forested land, forested wetland and emergent wetland. Additionally, moving the alignment to another location west of Baseline Ave, within the expanded route, will cross forested wetland and emergent wetland further from the edge and closer to the habitat interior. Impacting habitats closer to their interior can have greater impacts on both vegetation and wildlife by increasing the potential for invasive plant species to establish within the habitat block, creating additional "edge effect," and increasing fragmentation of the habitat block.

Q. Did Great River Energy provide DOC-EERA with information regarding the third item in the October 26 Order (related to existing distribution lines)?

A. Yes. With respect to the proposed 115-kV line along Highway 19, it is Great River Energy's understanding that Minnesota Valley Electric Cooperative ("MVEC") is planning to bury its distribution lines for the entire length of the new 115-kV line. This would eliminate the need to clear and maintain a separate right-of-way for the distribution line. This also allows for construction of the Project to proceed on schedule and achieve the desired in-service date. I note, however, that Great River Energy will not conduct, control, or direct this undergrounding work.

The October 26 Order also referenced underbuild of existing distribution lines. However, if the distribution lines were to be attached to the Project's structures as underbuild, the structures would need to be five to 10 feet taller to accommodate the underbuild. The distance between poles would also be less than the typical 300- to 400-foot spans or inset distribution poles would be required; either case would result in more and taller structures.

In addition, an underbuild scenario would likely require some outages on those customers, which can be reduced by burying the distribution lines. This analysis is reflected in Section 6.2 of the EA.

IV. ENVIRONMENTAL ASSESSMENT

Q. Have you reviewed the EA prepared by DOC-EERA for the Project?

A. Yes. DOC-EERA filed the EA on December 28, 2023. Included with the EA was a draft route permit prepared by DOC-EERA ("Draft Route Permit"). I have reviewed both the EA and the Draft Route Permit.

Q. What are your comments on the EA?

A. Great River Energy appreciates DOC-EERA's thorough review of the Project, and the EA generally captures the potential impacts of the Project. In addition, I note a minor update to Tables 9 and 10 in the EA to include Census Tract 701.01 in Rice County. This tract is already reflected in Section 6.1.1 and Table 25, and I provide this update for clarification purposes only.

Q. Do you have any comments on the Draft Route Permit?

A. Yes. Great River Energy has comments on Sections 1, 2.3, 4, 5.2, and 6.2 of the Draft Route Permit. I will discuss each, in turn, below.

Q. What are your comments on Section 1 of the Draft Route Permit?

A. Great River Energy requests that the Draft Route Permit be updated to note that the Project is in Helena and Cedar Lake Townships in Scott County, as well as Wheatland Township in Rice County. The same updates are needed on the cover page. These revisions are reflected in **Schedule C**, as are the remainder of the revisions I will discuss in my testimony.

Q. What are your comments on Section 2.3 of the Draft Route Permit?

A. Great River Energy requests that this section be updated to note that the Project will consist primarily of single circuit and also that: "Laminated wood or steel structure may be needed for switch structures, angle structures, and dead-end structures. Guy wires may also be used on some angle structures."

Q. Please discuss your comments on Section 4 of the Draft Route Permit?

A. Great River Energy requests that Section 4 of the Draft Route Permit be updated to reflect other recent route permits issued by the Commission in two aspects. First, Great River Energy requests language be added to acknowledge that guy wires may be used in some instances: "If guy wires are needed to support a structure, a 250-foot box right-of-way around such structures to accommodate guy wires and anchors are authorized."[2]

Great River Energy also requests the addition of Section 4.1 (Route Width Variations). This language regularly included in other recent route permits:[3]

Route width variations may be allowed to accommodate the potential site-specific constraints listed below. These constraints may arise from any of the following:

1. Unforeseen circumstances encountered during the detailed engineering and design process.
2. Federal or state agency requirements.

[2] *See In the Matter of the Application of Great River Energy for a Route Permit to Rebuild the Existing 69 kV ST-WW Transmission Line to 115 kV in Stearns County, Minnesota*, Docket No. ET-2/TL-22-235, Order Adopting Administrative Law Judge Report and Issuing Report Permit (Oct. 23, 2023), at 3 (hereafter "ST-WW Route Permit Order"); *In the Matter of the Application of Great River Energy and Otter Tail Power Company for a Route Permit for the Frazee to Erie 115 kV Transmission Line Project in Becker and Otter Tail Counties*, Docket No. E-T2/TL-20-423, Order Adopting Administrative Law Judge Report and Issuing Route Permit (Dec. 17, 2021), at 4 (hereafter "Frazee Route Permit Order").

[3] *See* ST-WW Route Permit Order, at 4; Frazee Route Permit Order, at 4.

3. Existing infrastructure within the route, including but not limited to railroads, natural gas and liquid pipelines, high voltage electric transmission lines, or sewer and water lines.

Any alignment modifications arising from these site-specific constraints that would result in right-of- way placement outside of the designated route shall be specifically reviewed by the Commission under Minn. R. 7850.4900.

Q. What are your comments on Section 5.2 of the Draft Route Permit?

A. Great River Energy requests that this section be revised to account for negotiation with landowners and/or landowner preferences regarding providing notice of access to property: "The Permittee shall notify landowners or their designee at least 14 days in advance but not greater than 60 days in advance of entering the property, unless otherwise negotiated with the affected landowner." This provision has been included in prior route permits.[4]

Q. Please discuss your comments on Section 6.2 of the Draft Route Permit.

A. Section 6.2 currently provides that Great River Energy will coordinate with MDNR regarding bird flight diverters and timing of tree removal. Great River Energy requests that this condition be revised. Specifically, Section 5.3.15 of the Draft Route Permit already requires Great River Energy to coordinate with MDNR regarding bird flight diverters, so it is not necessary to include this language in Section 6.2. With respect to tree removal, Great River Energy believes that the purpose of the proposed coordination related to the northern long-eared bat ("NLEB"), which has been classified as endangered by the U.S. Fish and Wildlife

[4] *See* ST-WW Route Permit Order, at 5. ("The Permittee shall notify landowners or their designee at least 14 days in advance but not greater than 60 days in advance of entering the property, unless otherwise negotiated with the affected landowner."); Frazee Route Permit Order, at 5 ("The Permittee shall contact landowners prior to entering the property or conducting maintenance within the route, unless otherwise negotiated with the affected landowner.").

Service ("USFWS"). One measure to avoid/minimize impacts to NLEB is through tree-clearing restrictions that are defined by USFWS in certain locations. Because USFWS is the agency with jurisdiction over NLEB tree-clearing restrictions, Great River Energy proposes to modify this condition to require coordination with USFWS regarding the timing of tree-clearing: "The Permittee shall coordinate with the USFWS regarding the timing of tree-clearing and any other construction or restoration actions that may impact Northern Long-Eared Bat in the vicinity of the Project." This is consistent with prior Commission route permits, which have implemented the USFWS tree-clearing restrictions in place at the time of permit issuance.[5]

V. PROPOSED ROUTE & ALIGNMENT

Q. Does Great River Energy support the Country Hollows Alternative alignment studied in the EA?

A. With respect to the Country Hollows Alternative alignment, the Section 5.4.1 of the EA states, "The proposed alignment would pass directly over the landscaping at the entrance and more than likely require some tree removal to remain compliant with the [NESC] code…". The EA further states, "[a]n appropriate mitigation for the identified impacts to the landscaping at the entrance to the Country Hollow Development would be avoidance. This could be accomplished by modification of the proposed alignment, moving the proposed alignment to the south side of State Highway 19 just west of Country Hollow Lane while staying in the requested route width avoiding the land scaping at the entrance to the development."

[5] *See* ST-WW Route Permit Order, at 13 ("The Permittee will coordinate with the U.S. Fish and Wildlife Service regarding the timing of tree-clearing and any other construction or restoration actions that may impact Northern Long-Eared Bat in vicinity of the project."); Frazee Route Permit Order, at 9 ("For Project construction, Applicants must comply with the U.S. Fish and Wildlife Service guidance and requirements in effect regarding NLEB. Additionally, tree clearing shall occur between August 1st and May 31st.").

Although the EA generally accurately describes impacts and mitigation of Proposed Alignment and the Alternative, I note that there are also other mitigation options beyond what is described in the EA.

Specifically, impacts to landscaping can be mitigated by providing monetary compensation for the landowner to move or rebuild the landscaping so that it is consistent with transmission line design requirements. The monument and floral plantings are not incompatible with the transmission line right-of-way, and the line design can mitigate visual impacts by locating the structure distant from the monument.

Regardless of the alignment in this area, both the Proposed Alignment and Alternative are within the route width requested by Great River Energy for the Project. It is important to note that the landowners directly impacted by the Proposed Alignment were not the initiators for the Alternative. Great River Energy plans to work with all landowners impacted by the Proposed Alignment and the Alternative in hopes of coming to an agreeable resolution for the final alignment. Great River Energy is beginning that outreach now, and I hope to be able to provide a status update as a subsequent part of this permitting process.

Q. Is Great River Energy proposing to shift the Proposed Alignment within the Expanded Route Width along Baseline Avenue?

A. No. As reflected in the EA, shifting the alignment would likely increase Project impacts to agricultural land, forested land, forested wetland, and emergent wetlands, as well as increase habitat fragmentation.

VI. CONCLUSION

Q. Does this conclude your Direct Testimony?

A. Yes.

GREAT RIVER ENERGY®

Statement of Qualifications for:

Mark Strohfus
Project Manager, Transmission Permitting

Great River Energy
12300 Elm Creek Blvd, Maple Grove MN, 55369
MStrohfus@GREnergy.com
Direct: 763-445-5210; Mobile: 612-961-9820

PROFESSIONAL EXPERIENCE

Mark has worked at Great River Energy for the past 21 years successfully focusing in the areas of environmental policy, compliance and permitting. He has been an integral team member on evaluating, siting, permitting and regulatory analyses for: new transmission lines; power generating plants including gas combustion turbines, coal-fired combined heat and power, and coal gasification. He has served on the corporate strategic planning committee for three years.

07/99 – Present: **Great River Energy, Maple Grove, Minnesota**

Responsibilities

Support transmission and generation capital projects by guiding them through local, state and federal permitting and approval processes, and collaborating with the project team on selecting project sites or routes that minimize environmental and socioeconomic impacts, avoid permitting constraints and unnecessary costs.

Lead the preparation of applications for all environmental permits and approvals needed for timely implementation of generation and transmission projects. Such permits and approvals include Minnesota Public Utilities Commission Certificate of Need, Site and Route Permits; local governmental conditional use permits; air emissions permits; wastewater discharge permits; state and federal wetland impact permits; construction stormwater permits; and Department of Natural Resources License to Cross.

Conduct stakeholder outreach to enhance public relations with local and state governments, agencies, landowners and other interested parties, with an ultimate goal of gaining stakeholder acceptance of the particular project Great River Energy is attempting to complete.

Respond to landowner questions and concerns regarding electric fields, magnetic fields and stray voltage associated with high voltage transmission lines.

Ensure that all permit conditions are met during and after successful construction of transmission and generations projects by overseeing project staff and preparing and submitting requisite reports to the various regulatory agencies.

Accomplishment Highlights
Obtained all necessary permits and approvals for the Enterprise Park 115-kV transmission line and substation project through the heart of the City of Anoka, a project through one of the more developed areas of Great River Energy's transmission area.

Successfully obtained and negotiated all necessary permits to allow the construction and operation of one of the few coal-fired power plants proposed to be constructed in the last 10 years.

Lead the company's analysis of the federal Clean Power Plan (CPP) including preparing comments on the draft CPP and its associated Federal Plan and Model Trading Rule, developing a project team to evaluate the cost impacts of the rule, and collaborating with other Minnesota utilities to develop a Minnesota State Implementation Plan that is in the best interest of the rate payers.

Leveraged corporate funds by a factor of four to accomplish over $1 million in research and development efforts to control mercury emissions from coal-fired power plants.

03/87 – 07/99: Environmental Consultant, Minneapolis, Minnesota

Before joining Great River Energy, Mark worked a total of 12 years for three different environmental consulting companies in the Minneapolis area. During this time frame, he performed environmental sampling and analyses, assisted clients with interpreting environmental requirements applicable to their operation, prepared environmental permit applications, audited facilities for compliance with environmental requirements, and served as an on-site environmental compliance manager for an aerospace equipment manager.

EDUCATION

Bachelor of Science, Pulp & Paper Science and Engineering
University of Minnesota, 1986

Schedule B

GREAT RIVER ENERGY™

12300 Elm Creek Boulevard
Maple Grove, Minnesota 55369-4718
763-445-5000
greatriverenergy.com

November 13, 2023

MV-CDT line
WO# 209488

[redacted]

Subject: Cedar Lake transmission line reroute project (MPUC Docket No. TL-23-170)
Expansion of route width under consideration by Minnesota Public Utilities Commission

Dear [redacted]

As you may know, Great River Energy is proposing the reroute of a 115-kilovolt (kV) transmission line (Project) in the vicinity of your property. A project fact sheet and map are enclosed. The Project requires a route permit from the Minnesota Public Utilities Commission (MPUC). As part of the MPUC permitting process, on October 26, 2023, the MPUC issued an order directing that an increased "route width" between the Cedar Lake Substation and Highway 19 be studied in the forthcoming environmental assessment (EA) for the Project. The EA is being prepared by the Minnesota Department of Commerce, Energy Environmental Review and Analysis unit (DOC-EERA). The "route width" is the area in which the Project alignment (or centerline) and right-of-way may ultimately be located. The "expanded route width" is depicted with the black-dashed-line on the enclosed larger figure, and the proposed alignment is shown as a red line.

Specifically, the MPUC's October 26, 2023, order states:

> For the purpose of encouraging alignment modifications within the studied route to mitigate environment and human impacts and to allow impacted landowners to propose alignment modifications for consideration before the public hearing, required that the environmental assessment evaluate an expanded route width between the Cedar Lake Substation and Highway 19. The environmental assessment shall provide an assessment of potential impacts a quarter mile South and West of the proposed alignment from the substation to Highway 19 and a quarter mile to the east of the proposed alignment from the intersection of 270th St. W. and Baseline Road to Highway 19.

mstrohfus@grenergy.com

D: 763-445-5210

Please contact me if you would like to discuss the Project or have questions regarding proposing an alternative alignment that is within this "expanded route width." The public hearings for this Project are scheduled for January 24 and 25, 2024. The MPUC will provide additional hearing details at a later date.

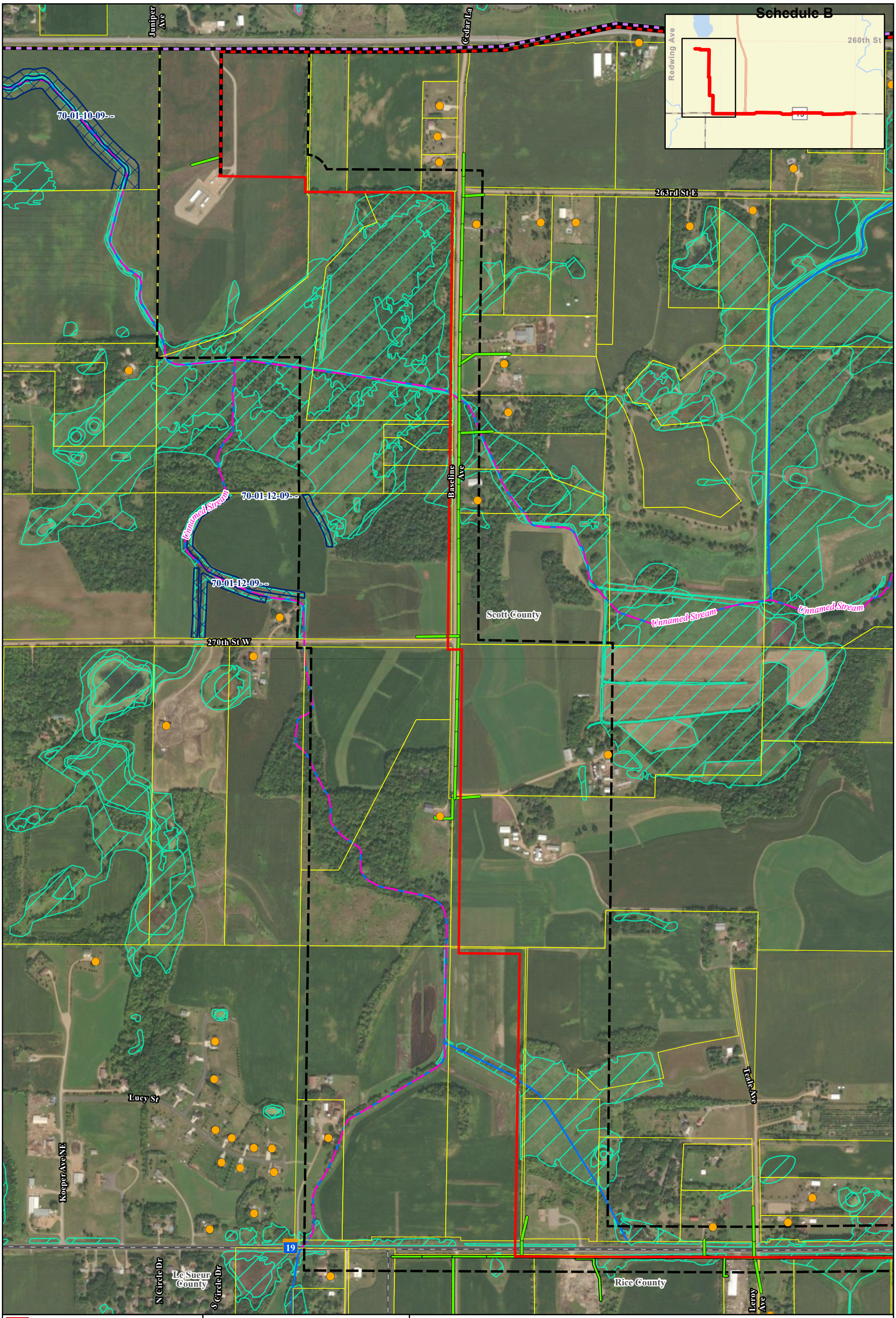
Sincerely,

GREAT RIVER ENERGY

Mark Strohfus
Project Manager, Transmission Permitting

Encl: Project Fact Sheet, Large Scale Map

mstrohfus@grenergy.com D: 763-445-5321



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N W E S

For Environmental Review Purposes Only

Cedar Lake Reroute
Expanded Route Width
Great River Energy
Rice and Scott Counties, Minnesota

- Residence
- Proposed Alignment
- Proposed Expanded Route Width
- Parcel Boundary
- County Boundary

Existing 115-kV Transmission
- MV-CDT 115-kV Transmission Line
- MV-EVX 115-kV Transmission Line

Non-GRE Transmission
- CapX2020
- Minnesota Valley Distribution Line

- MDNR Hydrography Dataset Waterway
- NWI Wetland
- PWI Waterway
- PWI Basin
- BWSR Easement

Source:

Date: (10/18/2023)

WO# 209488

Schedule B

AFFIDAVIT OF MAILING

In the Matter of the Expansion of route width
Notice to landowners for the Great River Energy
Cedar Lake (MV-CDT) Transmission Line Project in
Scott and Rice Counties, Minnesota

MPUC Docket No. TL-23-170

STATE OF MINNESOTA)
) ss.
COUNTY OF HENNEPIN)

I, Jodi Pawlicki, hereby certify that on the 13th of November 2023, I
PRINT mailer name
directed to be sent via U.S. Mail, a true and correct copy of the following to the individuals on the attached spreadsheet:

1. MPUC Expansion of route width landowner letter
2. Cedar Lake Fact Sheet
3. 11X17 map

Mailer signature

Subscribed and sworn to before me this 13 day of Nov. 2023.

DIONA MARY PEARSON
Notary Public-Minnesota
My Commission Expires Jan 31, 2026

Notary stamp

Notary signature

Schedule B

Bisek Brothers LLC
1901 270th St W
New Prague MN 56071

Frank Bisek
1901 270th St W
New Prague MN 56071

Scott & Anne Pexa Revocable Trust
196 280th St W
New Prague MN 56071

Anrita B. Novotny Irrevocable Trust
210 7th Ave NW
New Prague MN 56071

Alvin & Genevieve Novotny Trust
27255 Baseline Ave
New Prague MN 56071

Ashley M. Quam
27268 Baseline Ave
New Prague MN 56071

Steven C. Trewartha
27747 Teale Ave
New Prague MN 56071

Steven D. Eischens
27776 Mark Ave
New Prague MN 56071

Jon C. & Mary R. Hendricks
880 260 St W
New Prague MN 56071

Heritage United Meth Church
PO Box 32
New Prague MN 56071

Schedule C-1

STATE OF MINNESOTA PUBLIC UTILITIES COMMISSION

ROUTE PERMIT FOR A
HIGH-VOLTAGE TRANSMISSION LINE AND ASSOCIATED FACILITIES

IN
Scott and Rice Counties

ISSUED TO
Great River Energy

PUC DOCKET NO. ET2/TL-23-170

In accordance with the requirements of Minnesota Statutes Chapter 216E and Minnesota Rules Chapter 7850 this route permit is hereby issued to:

Great River Energy

Great River Energy is authorized by this route permit to construct and operate a 6.3-mile 115 kV Transmission Line in Helena Township and Cedar Lake Township in Scott County, and Wheatland Township in Rice County, Minnesota.

The high-voltage transmission line and associated facilities shall be built within the route identified in this permit and as portrayed on the route maps and in compliance with the conditions specified in this permit.

Approved and adopted this ____ day of 2024

BY ORDER OF THE COMMISSION

Will Seuffert,
Executive Secretary

CONTENTS

ATTACHMENTS

1. ROUTE PERMIT

The Minnesota Public Utilities Commission (Commission) hereby issues this route permit to Great River Energy (Permittee) pursuant to Minnesota Statutes Chapter 216E and Minnesota Rules Chapter 7850. This permit authorizes the Great River Energy to construct and operate an a 6.3-mile 115 kV Transmission Line in Helena and Cedar Lake Townships in Scott County, Minnesota, and Wheatland Township in Rice County, Minnesota, and as identified in the attached Route Maps, hereby incorporated into this document as Attachment 3.

1.1. Pre-emption

Pursuant to Minn. Stat. § 216E.10, this permit shall be the sole route approval required to be obtained by the Permittee for construction of the transmission facilities and this permit shall supersede and preempt all zoning, building, or land use rules, regulations, or ordinances promulgated by regional, county, local and special purpose governments.

2. PROJECT DESCRIPTION

Great River Energy (GRE) will construct and own approximately 6.3 miles of new 115 kilovolt (kV) high voltage transmission line (HVTL) beginning at the Cedar Lake Substation located in Helena Township and terminating at a switching station at GRE's existing MV-EVX 115-kV line near Panama Avenue/County Highway 23.

2.1. Project Location

Township Name	Township	Range	Sections
Helena	T113N	R23W	25, 36
Cedar Lake	T113N	R22W	30, 31,
Wheatland	T112N	R22W	2, 3, 4,

2.2. Substations and Associated Facilities

The Cedar Lake Substation is already equipped with breakers and relays. This equipment is designed to protect human health, as well as all of the equipment on the transmission system, by de-energizing the transmission line should any unsafe line faults occur. No modifications are anticipated other than to connect the new transmission line to the substation.

2.3. Structures

The 115-kV line will consist primarily of single circuit, monopole wood structures spaced approximately 300 to 400 feet apart. Laminated wood or steel structures may be needed for switch structures, angle structures, and dead-end structures. Guy wires may also be used on some angle structures. Transmission structures will typically range in height from 60 to 90 feet above ground, depending upon the terrain and environmental constraints. The average diameter of the wood structures at ground level is 20 inches.

2.4. Conductors

The single circuit structures will have three single conductor phase wires and one shield wire. It is anticipated that the phase wires will be 795 thousand circular mil aluminum conductor steel supported with seven steel core strands and 26 outer aluminum strands, or a conductor with similar capacity. The shield wire will be 0.528 optical ground wire.

The table below details specifics on the various structure types as presented in the route permit application.

Structure Type	Material	Approximate Height Above Ground (feet)	Structure Base Diameter	Span Between Distances (feet)
Monopole with horizontal post or braced post	Wood, steel, or ductile iron	60 - 90	18 - 36	300 - 400
H-Frame	Wood, steel, or ductile iron	60 - 90	18 - 36	350 - 800
Three-pole	Wood, steel, or ductile iron	60 - 90	18 - 36	350 - 800

3. DESIGNATED ROUTE

The route designated by the Commission in this permit is the route described below and shown on the Route Maps in Attachment 3 of this permit. The route is generally described as follows:

The Project will begin at GRE's existing Cedar Lake Substation located approximately 1,000 feet south of 260th Street West in Helena Township in Scott County. The route will extend east from the Cedar Lake Substation through agricultural fields and forested areas to Baseline Avenue. From there, it will continue to follow Baseline Avenue south until 270th Street West to Baseline Avenue's termination point. The route will continue south for approximately 1,300 feet to a landowner property boundary, where it will turn east for approximately 600 feet to the eastern

edge of the landowner property boundary. The route will then continue south for approximately 2,650 feet to 280th Street East/State Highway 19 and then turn east. It will continue along 280th Street East/State Highway 19 for approximately 4 miles until it intersects with GRE's existing MV-EVX 115-kV line near Panama Avenue/County Highway 23.

4. RIGHT-OF-WAY

This Permit authorizes the Permittee to obtain a new permanent right-of-way for the transmission line up to 100 feet in width. The permanent right-of-way is typically 50 feet on both sides of the transmission line measured from its centerline. If guy wires are needed to support a structure, a 250-foot box right-of-way around such structures to accommodate guy wires and anchors are authorized.

The Project's anticipated alignment is intended to minimize potential impacts relative to criteria identified in Minn. R. 7850.4100. The actual right-of-way will generally conform to the anticipated alignment identified on the Route Maps, unless changes are requested by individual landowners and agreed to by the Permittee or for unforeseen conditions that are encountered or as otherwise provided for by this permit.

Any right-of-way modifications within the designated route shall be located so as to have comparable overall impacts relative to the factors in Minn. R. 7850.4100, as does the right-of-way identified in this permit, and shall be specifically identified and documented in and approved as part of the plan and profile submitted pursuant to Section 9.1 of this permit.

Where the transmission line parallels existing highway and other road rights-of-way, the transmission line right-of-way shall occupy and utilize the existing right-of-way to the maximum extent possible; consistent with the criteria in Minn. R. 7850.4100 and the other requirements of this permit; and for highways under the jurisdiction of the Minnesota Department of Transportation, the procedures for accommodating utilities in trunk highway rights-of-way.

4.1. ROUTE WIDTH VARIATIONS

Route width variations may be allowed to accommodate the potential site-specific constraints listed below. These constraints may arise from any of the following:

1. Unforeseen circumstances encountered during the detailed engineering and design process.
2. Federal or state agency requirements.
3. Existing infrastructure within the route, including but not limited to railroads, natural gas and liquid pipelines, high voltage electric transmission lines, or sewer and water lines.

Any alignment modifications arising from these site-specific constraints that would result in right-of-way placement outside of the designated route shall be specifically reviewed by the Commission under Minn. R. 7850.4900.

5. GENERAL CONDITIONS

The Permittee shall comply with the following conditions during construction and operation of the transmission line and associated facilities over the life of this permit.

5.1. Permit Distribution

Within 30 days of permit issuance, the Permittee shall provide all affected landowners with a copy of this permit and the complaint procedures. In no case shall the landowner receive this route permit and complaint procedures less than five days prior to the start of construction on their property. An affected landowner is any landowner or designee that is within or adjacent to the permitted route.

At the time of first contact, the Permittee shall also provide all affected landowners with a copy of the Department of Commerce's Rights-of-Way and Easements for Energy Facility Construction and Operation fact sheet.[1]

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The Permittee shall notify landowners or their designee at least 14 days in advance but not greater than 60 days in advance of entering the property, unless otherwise negotiated with the affected landowner.

5.3. Construction and Operation Practices

The Permittee shall follow those specific construction practices and material specifications described in GRE's Application to the Commission for a route permit for the Cedar Lake Reroute Project, dated June 7, 2023, and the record of the proceedings unless this permit establishes a different requirement in which case this permit shall prevail.

5.3.1 Field Representative

The Permittee shall designate a field representative responsible for overseeing compliance with the conditions of this permit during construction of the project. This person shall be accessible by telephone or other means during normal business hours throughout site preparation, construction, cleanup, and restoration.

The Permittee shall file with the Commission the name, address, email, phone number, and emergency phone number of the field representative 14 days prior to commencing construction.

[1] http://mn.gov/commerce/energyfacilities/documents/Easements%20Fact%20Sheet_08.05.14.pdf

The Permittee shall provide the field representative's contact information to affected landowners, residents, local government units and other interested persons 14 days prior to commencing construction. The Permittee may change the field representative at any time upon notice to the Commission, affected landowners, residents, local government units and other interested persons.

5.3.2 Employee Training and Education of Permit Terms and Conditions

The Permittee shall inform and educate all employees, contractors, and other persons involved in the construction and ongoing operation of the transmission line of the terms and conditions of this permit.

5.3.3 Public Services, Public Utilities, and Existing Easements

During construction, the Permittee shall minimize any disruption to public services or public utilities. To the extent disruptions to public services or public utilities occur these will be temporary, and the Permittee will restore service promptly. Where any impacts to utilities have the potential to occur the Permittee will work with both landowners and local agencies to determine the most appropriate transmission structure placement.

The Permittee shall consult with landowners, townships, cities, and counties along the route and consider concerns regarding tree clearing, distance from existing structures, drain tiles, pole depth and placement in relationship to existing roads and road expansion plans.

The Permittee shall cooperate with county and city road authorities to develop appropriate signage and traffic management during construction.

5.3.4 Temporary Workspace

The Permittee shall limit temporary easements to special construction access needs and additional staging, or lay-down areas required outside of the authorized right-of-way. Temporary space shall be selected to limit the removal and impacts to vegetation. Temporary easements outside of the authorized transmission line right-of-way will be obtained from affected landowners through rental agreements and are not provided for in this permit.

Temporary driveways may be constructed between the roadway and the structures to minimize impact using the shortest route possible. Construction mats should be used to minimize impacts on access paths and construction areas.

5.3.5 Noise

The Permittee shall comply with noise standards established under Minn. R. 7030.0010 to 7030.0080. Construction and maintenance activities shall be limited to daytime working hours to the extent practicable to ensure nighttime noise level standards will not be exceeded.

5.3.6 Aesthetics

The Permittee shall consider input pertaining to visual impacts from landowners or land management agencies prior to final location of structures, rights-of-way, and other areas with the potential for visual disturbance. Care shall be used to preserve the natural landscape, minimize tree removal, and prevent any unnecessary destruction of the natural surroundings in the vicinity of the project during construction and maintenance. The Permittee shall work with landowners to locate the high-voltage transmission line to minimize the loss of agricultural land, forest, and wetlands, and to avoid homes and farmsteads. Structures shall be placed at a distance, consistent with sound engineering principles and system reliability criteria, from intersecting roads, highways, or trail crossings.

5.3.7 Soil Erosion and Sediment Control

The Permittee shall implement those erosion prevention and sediment control practices recommended by the Minnesota Pollution Control Agency Construction Stormwater Program.

The Permittee shall implement reasonable measures to minimize erosion and sedimentation during construction and shall employ perimeter sediment controls, protect exposed soil by promptly planting, seeding, using erosion control blankets and turf reinforcement mats, stabilizing slopes, protecting storm drain inlets, protecting soil stockpiles, and controlling vehicle tracking. Contours shall be graded as required so that all surfaces provide for proper drainage, blend with the natural terrain, and are left in a condition that will facilitate re-vegetation and prevent erosion. All areas disturbed during construction of the facilities shall be returned to pre-construction conditions.

In accordance with Minnesota Pollution Control Agency requirements, the Permittee shall obtain a National Pollutant Discharge Elimination System (NPDES)/State Disposal System (SDS) Construction Stormwater permit from the Minnesota Pollution Control Agency.

5.3.8 Wetlands and Water Resources

Wetland impact avoidance measures that shall be implemented during design and construction of the transmission line will include spacing and placing the power poles at variable distances to span and avoid wetlands, watercourses, and floodplains. Unavoidable wetland impacts as a result of the placement of poles shall be limited to the immediate area around the poles. To minimize impacts, construction in wetland areas shall occur during frozen ground conditions where practicable and shall be according to permit requirements by the applicable permitting authority. When construction during winter is not possible, wooden or composite mats shall be used to protect wetland vegetation. Soil excavated from the wetlands and riparian areas shall be contained and not placed back into the wetland or riparian area. Wetlands and riparian areas shall be accessed using the shortest route possible in order to minimize travel through wetland areas and prevent unnecessary impacts. No staging or stringing set up areas shall be placed within or adjacent to wetlands or water resources, as practicable. Power pole structures shall be assembled on upland areas before they are brought to the site for installation.

Areas disturbed by construction activities shall be restored to pre-construction conditions. Restoration of the wetlands will be performed by the Permittee in accordance with the requirements of applicable state and federal permits or laws and landowner agreements.

All requirements of the U.S. Army Corps of Engineers (wetlands under federal jurisdiction), Minnesota Department of Natural Resources (Public Waters/Wetlands), and County (wetlands under the jurisdiction of the Minnesota Wetland Conservation Act) shall be met.

5.3.9 5.3.9 Vegetation Management

The Permittee shall minimize the number of trees to be removed in selecting the right-of-way specifically preserving to the maximum extent practicable windbreaks, shelterbelts, living snow fences, and vegetation in areas such as trail and stream crossings where vegetative screening may minimize aesthetic impacts, to the extent that such actions do not violate sound engineering principles or system reliability criteria.

Tall growing species located within the transmission line right-of-way that endanger the safe and reliable operation of the transmission facility will be removed by the Permittee. The Permittee shall leave undisturbed, to the extent possible, existing low growing species in the right-of-way or replant such species in the right-of-way to blend the difference between the right-of-way and adjacent areas, to the extent that the low growing vegetation that will not pose a threat to the transmission facility or impede construction.

5.3.10 Application of Pesticides

The Permittee shall restrict pesticide use to those pesticides and methods of application approved by the Minnesota Department of Agriculture, Minnesota Department of Natural Resources, and the U.S. Environmental Protection Agency. Selective foliage or basal application shall be used when practicable. All pesticides shall be applied in a safe and cautious manner so as not to damage adjacent properties including crops, orchards, tree farms, apiaries, or gardens. The Permittee shall contact the landowner or designee to obtain approval for the use of pesticide at least 14 days prior to any application on their property. The landowner may request that there be no application of pesticides on any part of the site within the landowner's property. The Permittee shall provide notice of pesticide application to affected landowners and known beekeepers operating apiaries within three miles of the project site at least 14 days prior to such application.

5.3.11 Invasive Species

The Permittee shall employ best management practices to avoid the potential spread of invasive species on lands disturbed by project construction activities.

5.3.12 Noxious Weeds

The Permittee shall take all reasonable precautions against the spread of noxious weeds during all phases of construction. When utilizing seed to establish temporary and permanent vegetative cover on exposed soil the Permittee shall select site appropriate seed certified to be free of

noxious weeds. To the extent possible, the Permittee shall use native seed mixes. The Permittee shall consult with landowners on the selection and use of seed for replanting.

5.3.13 Roads

The Permittee shall advise the appropriate governing bodies having jurisdiction over all state, county, city or township roads that will be used during the construction phase of the project. Where practical, existing roadways shall be used for all activities associated with construction of the facility. Oversize or overweight loads associated with the facility shall not be hauled across public roads without required permits and approvals.

The Permittee shall construct the least number of site access roads it can. Access roads shall not be constructed across streams and drainage ways without the required permits and approvals. Access roads shall be constructed in accordance with all necessary township, county or state road requirements and permits.

The Permittee shall promptly repair private roads or lanes damaged when moving equipment or when accessing construction workspace, unless otherwise negotiated with the affected landowner.

5.3.14 Archaeological and Historic Resources

The Permittee shall make every effort to avoid impacts to identified archaeological and historic resources when constructing the transmission facility. In the event that a resource is encountered, the Permittee shall contact and consult with the State Historic Preservation Office and the State Archaeologist. Where feasible, avoidance of the resource is required. Where not feasible, mitigation must include an effort to minimize project impacts on the resource consistent with State Historic Preservation Office and State Archaeologist requirements.

Prior to construction, workers shall be trained about the need to avoid cultural properties, how to identify cultural properties, and procedures to follow if undocumented cultural properties, including gravesites, are found during construction. If human remains are encountered during construction, the Permittee shall immediately halt construction and promptly notify local law enforcement and the State Archaeologist. Construction at such location shall not proceed until authorized by local law enforcement or the State Archaeologist.

5.3.15 Avian Protection

The Permittee in cooperation with the Minnesota Department of Natural Resources shall identify areas of the project where bird flight diverters will be incorporated into the transmission line design to prevent large avian collisions attributed to visibility issues. Standard transmission design shall incorporate adequate spacing of conductors and grounding devices in accordance with Avian Power Line Interaction Committee standards to eliminate the risk of electrocution to raptors with larger wingspans that may simultaneously come in contact with a conductor and grounding devices.

5.3.16 Restoration

The Permittee shall restore the right-of-way, temporary work spaces, access roads, abandoned right-of-way, and other public or private lands affected by construction of the transmission line. Restoration within the right-of-way must be compatible with the safe operation, maintenance, and inspection of the transmission line. Within 60 days after completion of all restoration activities, the Permittee shall advise the Commission in writing of the completion of such activities.

5.3.17 Cleanup

All waste and scrap that is the product of construction shall be removed from the right-of-way and all premises on which construction activities were conducted and properly disposed of upon completion of each task. Personal litter, including bottles, cans, and paper from construction activities shall be removed on a daily basis.

5.3.18 Pollution and Hazardous Wastes

All appropriate precautions to protect against pollution of the environment must be taken by the Permittee. The Permittee shall be responsible for compliance with all laws applicable to the generation, storage, transportation, clean up and disposal of all wastes generated during construction and restoration of the right-of-way.

5.3.19 Damages

The Permittee shall fairly restore or compensate landowners for damage to crops, fences, private roads and lanes, landscaping, drain tile, or other damages sustained during construction.

5.4. Electrical Performance Standards

5.4.1 Grounding

The Permittee shall design, construct, and operate the transmission line in a manner so that the maximum induced steady state short-circuit current shall be limited to five milliamperes root mean square (rms) alternating current between the ground and any non-stationary object within the right-of-way, including but not limited to large motor vehicles and agricultural equipment. All fixed metallic objects on or off the right-of-way, except electric fences that parallel or cross the right-of-way, shall be grounded to the extent necessary to limit the induced short-circuit current between ground and the object so as not to exceed one milliampere rms under steady state conditions of the transmission line and to comply with the ground fault conditions specified in the National Electric Safety Code. The Permittee shall address and rectify any induced current problems that arise during transmission line operation.

5.4.2 Electric Field

The transmission line shall be designed, constructed, and operated in such a manner that the electric field measured one meter above ground level immediately below the transmission line shall not exceed 8.0 kV/m rms.

5.4.3 Interference with Communication Devices

If interference with radio or television, satellite, wireless internet, GPS-based agriculture navigation systems or other communication devices is caused by the presence or operation of the transmission line, the Permittee shall take whatever action is necessary to restore or provide reception equivalent to reception levels in the immediate area just prior to the construction of the line.

5.5. Other Requirements

5.5.4 Safety Codes and Design Requirements

The transmission line and associated facilities shall be designed to meet or exceed all relevant local and state codes, the National Electric Safety Code, and North American Electric Reliability Corporation requirements. This includes standards relating to clearances to ground, clearance to crossing utilities, clearance to buildings, strength of materials, clearances over roadways, right-of-way widths, and permit requirements.

5.5.5 Other Permits and Regulations

The Permittee shall comply with all applicable state rules and statutes. The Permittee shall obtain all required permits for the project and comply with the conditions of those permits unless those permits conflict with or are preempted by federal or state permits and regulations. A list of the permits known to be required is included in the permit application. The Permittee shall submit a copy of such permits to the Commission upon request.

6. SPECIAL CONDITIONS

Special conditions shall take precedence over other conditions of this permit should there be a conflict.

6.1. Independent Third-Party Monitor

Prior to any construction, the Permittee shall propose a scope of work and identify an independent third-party monitor to conduct Project construction monitoring on behalf of Commerce. The scope of work shall be developed in consultation with and approved by Commerce. This third-party monitor will report directly to and will be under the control of Commerce with costs borne by the Permittee.

6.2. Coordination with U.S. Fish and Wildlife Service ("USFWS")

The permittee shall coordinate with the USFWS regarding the timing of tree-clearing and any other construction or restoration actions that may impact Northern Long-Eared Bat in the vicinity of the Project.

6.3. Preparation of a Vegetation Management Plan

The permittee shall develop a vegetation management plan in coordination with EERA and other relevant agencies prior to construction. The plan shall address site restoration, seed mixes, and tree removal.

7. DELAY IN CONSTRUCTION

If the Permittee has not commenced construction or improvement of the route within four years after the date of issuance of this permit the Permittee shall file a report on the failure to construct and the Commission shall consider suspension of the permit in accordance with Minn. R. 7850.4700.

8. COMPLAINT PROCEDURES

Prior to the start of construction, the Permittee shall submit to the Commission the procedures that will be used to receive and respond to complaints. The procedures shall be in accordance with the requirements of Minn. R. 7829.1500 or Minn. R. 7829.1700, and as set forth in the complaint procedures attached to this permit.

Upon request, the Permittee shall assist the Commission with the disposition of unresolved or longstanding complaints. This assistance shall include, but is not limited to, the submittal of complaint correspondence and complaint resolution efforts.

9. COMPLIANCE REQUIREMENTS

Failure to timely and properly make compliance filings required by this permit is a failure to comply with the conditions of this permit. Compliance filings must be electronically filed with the Commission.

9.1. Plan and Profile

At least 30 days before right-of-way preparation for construction begins on any segment or portion of the project, the Permittee shall provide the Commission with a plan and profile of the right-of-way and the specifications and drawings for right-of-way preparation, construction, structure specifications and locations, cleanup, and restoration for the transmission line. The

documentation shall include maps depicting the plan and profile including the right-of-way, alignment, and structures in relation to the route and alignment approved per this permit.

The Permittee may not commence construction until the 30 days has expired or until the Commission has advised the Permittee in writing that it has completed its review of the documents and determined that the planned construction is consistent with this permit. If the Permittee intends to make any significant changes in its plan and profile or the specifications and drawings after submission to the Commission, the Permittee shall notify the Commission at least five days before implementing the changes. No changes shall be made that would be in violation of any of the terms of this permit.

9.2. Status Reports

The Permittee shall report to the Commission on progress during finalization of the route, design of structures, and construction of the transmission line. The Permittee need not report more frequently than monthly. Reports shall begin with the submittal of the plan and profile for the project and continue until completion of restoration.

9.3. Notification to Commission

At least three days before the line is to be placed into service, the Permittee shall notify the Commission of the date on which the line will be placed into service and the date on which construction was complete.

9.4. As-Builts

Within 90 days after completion of construction, the Permittee shall submit copies of all final as-built plans and specifications developed during the project.

9.5. GPS Data

Within 90 days after completion of construction, the Permittee shall submit to the Commission, in the format requested by the Commission, geo-spatial information (e.g., ArcGIS compatible map files, GPS coordinates, associated database of characteristics) for all structures associated with the transmission line and each substation connected.

9.6. Right of Entry

The Permittee shall allow Commission designated representatives to perform the following, upon reasonable notice, upon presentation of credentials and at all times in compliance with the Permittee's site safety standards.

(a) To enter upon the facilities easement of the property for the purpose of obtaining information, examining records, and conducting surveys or investigations.

(b) To bring such equipment upon the facilities easement of the property as is necessary to conduct such surveys and investigations.

(c) To sample and monitor upon the facilities easement of the property.

(d) To examine and copy any documents pertaining to compliance with the conditions of this route permit.

10. PERMIT AMENDMENT

This permit may be amended at any time by the Commission. Any person may request an amendment of the conditions of this permit by submitting a request to the Commission in writing describing the amendment sought and the reasons for the amendment. The Commission will mail notice of receipt of the request to the Permittee. The Commission may amend the conditions after affording the Permittee and interested persons such process as is required.

11. TRANSFER OF PERMIT

The Permittee may request at any time that the Commission transfer this permit to another person or entity. The Permittee shall provide the name and description of the person or entity to whom the permit is requested to be transferred, the reasons for the transfer, a description of the facilities affected, and the proposed effective date of the transfer.

The person to whom the permit is to be transferred shall provide the Commission with such information as the Commission shall require to determine whether the new Permittee can comply with the conditions of the permit. The Commission may authorize transfer of the permit after affording the Permittee, the new Permittee, and interested persons such process as is required.

12. REVOCATION OR SUSPENSION OF THE PERMIT

The Commission may initiate action to revoke or suspend this permit at any time. The Commission shall act in accordance with the requirements of Minn. R. 7850.5100, to revoke or suspend the permit.

Attachment 1 – Complaint Handling Procedures for Permitted Energy Facilities

Attachment 2 – Compliance Filing Procedures for Permitted Energy Facilities

Attachment 3 – Route Permit Maps

STATE OF MINNESOTA PUBLIC UTILITIES COMMISSION

ROUTE PERMIT FOR A
HIGH-VOLTAGE TRANSMISSION LINE AND ASSOCIATED FACILITIES

IN
Scott and Rice Counties

ISSUED TO
Great River Energy

PUC DOCKET NO. ET2/TL-23-170

In accordance with the requirements of Minnesota Statutes Chapter 216E and Minnesota Rules Chapter 7850 this route permit is hereby issued to:

Great River Energy

Great River Energy is authorized by this route permit to construct and operate a 6.3-mile 115 kV Transmission Line in Helena Township and Cedar Lake Township in Scott County, and Wheatland Township in Rice County, Minnesota.

The high-voltage transmission line and associated facilities shall be built within the route identified in this permit and as portrayed on the route maps and in compliance with the conditions specified in this permit.

Approved and adopted this ____ day of ~~2023~~2024

BY ORDER OF THE COMMISSION

Will Seuffert,
Executive Secretary

To request this document in another format such as large print or audio, call 651-296-0406 or 800-657-3782 (voice). Persons with a hearing or speech impairment may call using their preferred Telecommunications Relay Service or email consumer.puc@state.mn.us for assistance.

CONTENTS

ATTACHMENTS

1. ROUTE PERMIT

The Minnesota Public Utilities Commission (Commission) hereby issues this route permit to Great River Energy (Permittee) pursuant to Minnesota Statutes Chapter 216E and Minnesota Rules Chapter 7850. This permit authorizes the Great River Energy to construct and operate an a 6.3-mile 115 kV Transmission Line in Helena ~~Township~~and Cedar Lake Townships in Scott County, Minnesota, and Wheatland Township in Rice County, Minnesota, and as identified in the attached Route Maps, hereby incorporated into this document as Attachment 3.

1.1. Pre-emption

Pursuant to Minn. Stat. § 216E.10, this permit shall be the sole route approval required to be obtained by the Permittee for construction of the transmission facilities and this permit shall supersede and preempt all zoning, building, or land use rules, regulations, or ordinances promulgated by regional, county, local and special purpose governments.

2. PROJECT DESCRIPTION

Great River Energy (GRE) will construct and own approximately 6.3 miles of new 115 kilovolt (kV) high voltage transmission line (HVTL) beginning at the Cedar Lake Substation located in Helena Township and terminating at a switching station at GRE's existing MV-EVX 115-kV line near Panama Avenue/County Highway 23.

2.1. Project Location

Township Name	Township	Range	Sections
Helena	T113N	R23W	25, 36
Cedar Lake	T113N	R22W	30, 31,
Wheatland	T112N	R22W	2, 3, 4,

2.2. Substations and Associated Facilities

The Cedar Lake Substation is already equipped with breakers and relays. This equipment is designed to protect human health, as well as all of the equipment on the transmission system, by de-energizing the transmission line should any unsafe line faults occur. No modifications are anticipated other than to connect the new transmission line to the substation.

2.3. Structures

The 115-kV line will consist primarily of single circuit, monopole wood structures spaced approximately 300 to 400 feet apart. Laminated wood or steel structures may be needed for switch

structures, angle structures, and dead-end structures. Guy wires may also be used on some angle structures. Transmission structures will typically range in height from 60 to 90 feet above ground, depending upon the terrain and environmental constraints. The average diameter of the wood structures at ground level is 20 inches.

2.4. Conductors

The single circuit structures will have three single conductor phase wires and one shield wire. It is anticipated that the phase wires will be 795 thousand circular mil aluminum conductor steel supported with seven steel core strands and 26 outer aluminum strands, or a conductor with similar capacity. The shield wire will be 0.528 optical ground wire.

The table below details specifics on the various structure types as presented in the route permit application.

Structure Type	Material	Approximate Height Above Ground (feet)	Structure Base Diameter (inches)	Span Between Distances (feet)
Monopole with horizontal post or braced post	Wood, steel, or ductile iron	60 - 90	18 - 36	300 - 400
H-Frame	Wood, steel, or ductile iron	60 - 90	18 - 36	350 - 800
Three-pole	Wood, steel, or ductile iron	60 - 90	18 - 36	350 - 800

3. DESIGNATED ROUTE

The route designated by the Commission in this permit is the route described below and shown on the Route Maps in Attachment 3 of this permit. The route is generally described as follows:

The Project will begin at GRE's existing Cedar Lake Substation located approximately 1,000 feet south of 260th Street West in Helena Township in Scott County. The route will extend east from the Cedar Lake Substation through agricultural fields and forested areas to Baseline Avenue. From there, it will continue to follow Baseline Avenue south until 270th Street West to Baseline Avenue's termination point. The route will continue south for approximately 1,300 feet to a landowner property boundary, where it will turn east for approximately 600 feet to the eastern edge of the landowner property boundary. The route will then continue south for approximately 2,650 feet to 280th Street East/State Highway 19 and then turn east. It will continue along 280th Street East/State Highway 19 for approximately 4 miles until it intersects with GRE's existing MV-EVX 115-kV line near Panama Avenue/County Highway 23.

4. RIGHT-OF-WAY

This Permit authorizes the Permittee to obtain a new permanent right-of-way for the transmission line up to 100 feet in width. The permanent right-of-way is typically 50 feet on both sides of the transmission line measured from its centerline. If guy wires are needed to support a structure, a 250-foot box right-of-way around such structures to accommodate guy wires and anchors are authorized.

The Project's anticipated alignment is intended to minimize potential impacts relative to criteria identified in Minn. R. 7850.4100. The actual right-of-way will generally conform to the anticipated alignment identified on the Route Maps, unless changes are requested by individual landowners and agreed to by the Permittee or for unforeseen conditions that are encountered or as otherwise provided for by this permit.

Any right-of-way modifications within the designated route shall be located so as to have comparable overall impacts relative to the factors in Minn. R. 7850.4100, as does the right-of-way identified in this permit, and shall be specifically identified and documented in and approved as part of the plan and profile submitted pursuant to Section 9.1 of this permit.

Where the transmission line parallels existing highway and other road rights-of-way, the transmission line right-of-way shall occupy and utilize the existing right-of-way to the maximum extent possible; consistent with the criteria in Minn. R. 7850.4100 and the other requirements of this permit; and for highways under the jurisdiction of the Minnesota Department of Transportation, the procedures for accommodating utilities in trunk highway rights-of-way.

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Route width variations may be allowed to accommodate the potential site-specific constraints listed below. These constraints may arise from any of the following:

1. Unforeseen circumstances encountered during the detailed engineering and design process.
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The Permittee shall comply with the following conditions during construction and operation of the transmission line and associated facilities over the life of this permit.

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At the time of first contact, the Permittee shall also provide all affected landowners with a copy of the Department of Commerce's Rights-of-Way and Easements for Energy Facility Construction and Operation fact sheet.[1]

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5.3.6 Aesthetics

The Permittee shall consider input pertaining to visual impacts from landowners or land management agencies prior to final location of structures, rights-of-way, and other areas with

the potential for visual disturbance. Care shall be used to preserve the natural landscape, minimize tree removal, and prevent any unnecessary destruction of the natural surroundings in the vicinity of the project during construction and maintenance. The Permittee shall work with landowners to locate the high-voltage transmission line to minimize the loss of agricultural land, forest, and wetlands, and to avoid homes and farmsteads. Structures shall be placed at a distance, consistent with sound engineering principles and system reliability criteria, from intersecting roads, highways, or trail crossings.

5.3.7 Soil Erosion and Sediment Control

The Permittee shall implement those erosion prevention and sediment control practices recommended by the Minnesota Pollution Control Agency Construction Stormwater Program.

The Permittee shall implement reasonable measures to minimize erosion and sedimentation during construction and shall employ perimeter sediment controls, protect exposed soil by promptly planting, seeding, using erosion control blankets and turf reinforcement mats, stabilizing slopes, protecting storm drain inlets, protecting soil stockpiles, and controlling vehicle tracking. Contours shall be graded as required so that all surfaces provide for proper drainage, blend with the natural terrain, and are left in a condition that will facilitate re-vegetation and prevent erosion. All areas disturbed during construction of the facilities shall be returned to pre-construction conditions.

In accordance with Minnesota Pollution Control Agency requirements, the Permittee shall obtain a National Pollutant Discharge Elimination System (NPDES)/State Disposal System (SDS) Construction Stormwater permit from the Minnesota Pollution Control Agency.

5.3.8 Wetlands and Water Resources

Wetland impact avoidance measures that shall be implemented during design and construction of the transmission line will include spacing and placing the power poles at variable distances to span and avoid wetlands, watercourses, and floodplains. Unavoidable wetland impacts as a result of the placement of poles shall be limited to the immediate area around the poles. To minimize impacts, construction in wetland areas shall occur during frozen ground conditions where practicable and shall be according to permit requirements by the applicable permitting authority. When construction during winter is not possible, wooden or composite mats shall be used to protect wetland vegetation. Soil excavated from the wetlands and riparian areas shall be contained and not placed back into the wetland or riparian area. Wetlands and riparian areas shall be accessed using the shortest route possible in order to minimize travel through wetland areas and prevent unnecessary impacts. No staging or stringing set up areas shall be placed within or adjacent to wetlands or water resources, as practicable. Power pole structures shall be assembled on upland areas before they are brought to the site for installation.

Areas disturbed by construction activities shall be restored to pre-construction conditions. Restoration of the wetlands will be performed by the Permittee in accordance with the requirements of applicable state and federal permits or laws and landowner agreements.

All requirements of the U.S. Army Corps of Engineers (wetlands under federal jurisdiction), Minnesota Department of Natural Resources (Public Waters/Wetlands), and County (wetlands under the jurisdiction of the Minnesota Wetland Conservation Act) shall be met.

5.3.9 5.3.9 Vegetation Management

The Permittee shall minimize the number of trees to be removed in selecting the right-of-way specifically preserving to the maximum extent practicable windbreaks, shelterbelts, living snow fences, and vegetation in areas such as trail and stream crossings where vegetative screening may minimize aesthetic impacts, to the extent that such actions do not violate sound engineering principles or system reliability criteria.

Tall growing species located within the transmission line right-of-way that endanger the safe and reliable operation of the transmission facility will be removed by the Permittee. The Permittee shall leave undisturbed, to the extent possible, existing low growing species in the right-of-way or replant such species in the right-of-way to blend the difference between the right-of-way and adjacent areas, to the extent that the low growing vegetation that will not pose a threat to the transmission facility or impede construction.

5.3.10 Application of Pesticides

The Permittee shall restrict pesticide use to those pesticides and methods of application approved by the Minnesota Department of Agriculture, Minnesota Department of Natural Resources, and the U.S. Environmental Protection Agency. Selective foliage or basal application shall be used when practicable. All pesticides shall be applied in a safe and cautious manner so as not to damage adjacent properties including crops, orchards, tree farms, apiaries, or gardens. The Permittee shall contact the landowner or designee to obtain approval for the use of pesticide at least 14 days prior to any application on their property. The landowner may request that there be no application of pesticides on any part of the site within the landowner's property. The Permittee shall provide notice of pesticide application to affected landowners and known beekeepers operating apiaries within three miles of the project site at least 14 days prior to such application.

5.3.11 Invasive Species

The Permittee shall employ best management practices to avoid the potential spread of invasive species on lands disturbed by project construction activities.

5.3.12 Noxious Weeds

The Permittee shall take all reasonable precautions against the spread of noxious weeds during all phases of construction. When utilizing seed to establish temporary and permanent

vegetative cover on exposed soil the Permittee shall select site appropriate seed certified to be free of noxious weeds. To the extent possible, the Permittee shall use native seed mixes. The Permittee shall consult with landowners on the selection and use of seed for replanting.

5.3.13 Roads

The Permittee shall advise the appropriate governing bodies having jurisdiction over all state, county, city or township roads that will be used during the construction phase of the project. Where practical, existing roadways shall be used for all activities associated with construction of the facility. Oversize or overweight loads associated with the facility shall not be hauled across public roads without required permits and approvals.

The Permittee shall construct the least number of site access roads it can. Access roads shall not be constructed across streams and drainage ways without the required permits and approvals. Access roads shall be constructed in accordance with all necessary township, county or state road requirements and permits.

The Permittee shall promptly repair private roads or lanes damaged when moving equipment or when accessing construction workspace, unless otherwise negotiated with the affected landowner.

5.3.14 Archaeological and Historic Resources

The Permittee shall make every effort to avoid impacts to identified archaeological and historic resources when constructing the transmission facility. In the event that a resource is encountered, the Permittee shall contact and consult with the State Historic Preservation Office and the State Archaeologist. Where feasible, avoidance of the resource is required. Where not feasible, mitigation must include an effort to minimize project impacts on the resource consistent with State Historic Preservation Office and State Archaeologist requirements.

Prior to construction, workers shall be trained about the need to avoid cultural properties, how to identify cultural properties, and procedures to follow if undocumented cultural properties, including gravesites, are found during construction. If human remains are encountered during construction, the Permittee shall immediately halt construction and promptly notify local law enforcement and the State Archaeologist. Construction at such location shall not proceed until authorized by local law enforcement or the State Archaeologist.

5.3.15 Avian Protection

The Permittee in cooperation with the Minnesota Department of Natural Resources shall identify areas of the project where bird flight diverters will be incorporated into the transmission line design to prevent large avian collisions attributed to visibility issues. Standard transmission design shall incorporate adequate spacing of conductors and grounding devices in accordance with Avian Power Line Interaction Committee standards to eliminate the risk of electrocution to raptors with larger wingspans that may simultaneously come in contact with a conductor and grounding devices.

5.3.16 Restoration

The Permittee shall restore the right-of-way, temporary work spaces, access roads, abandoned right-of-way, and other public or private lands affected by construction of the transmission line. Restoration within the right-of-way must be compatible with the safe operation, maintenance, and inspection of the transmission line. Within 60 days after completion of all restoration activities, the Permittee shall advise the Commission in writing of the completion of such activities.

5.3.17 Cleanup

All waste and scrap that is the product of construction shall be removed from the right-of-way and all premises on which construction activities were conducted and properly disposed of upon completion of each task. Personal litter, including bottles, cans, and paper from construction activities shall be removed on a daily basis.

5.3.18 Pollution and Hazardous Wastes

All appropriate precautions to protect against pollution of the environment must be taken by the Permittee. The Permittee shall be responsible for compliance with all laws applicable to the generation, storage, transportation, clean up and disposal of all wastes generated during construction and restoration of the right-of-way.

5.3.19 Damages

The Permittee shall fairly restore or compensate landowners for damage to crops, fences, private roads and lanes, landscaping, drain tile, or other damages sustained during construction.

5.4. Electrical Performance Standards

5.4.1 Grounding

The Permittee shall design, construct, and operate the transmission line in a manner so that the maximum induced steady state short-circuit current shall be limited to five milliamperes root mean square (rms) alternating current between the ground and any non-stationary object within the right-of-way, including but not limited to large motor vehicles and agricultural equipment. All fixed metallic objects on or off the right-of-way, except electric fences that parallel or cross the right-of-way, shall be grounded to the extent necessary to limit the induced short-circuit current between ground and the object so as not to exceed one milliampere rms under steady state conditions of the transmission line and to comply with the ground fault conditions specified in the National Electric Safety Code. The Permittee shall address and rectify any induced current problems that arise during transmission line operation.

5.4.2 Electric Field

The transmission line shall be designed, constructed, and operated in such a manner that the electric field measured one meter above ground level immediately below the transmission line shall not exceed 8.0 kV/m rms.

5.4.3 Interference with Communication Devices

If interference with radio or television, satellite, wireless internet, GPS-based agriculture navigation systems or other communication devices is caused by the presence or operation of the transmission line, the Permittee shall take whatever action is necessary to restore or provide reception equivalent to reception levels in the immediate area just prior to the construction of the line.

5.5. Other Requirements

5.5.4 Safety Codes and Design Requirements

The transmission line and associated facilities shall be designed to meet or exceed all relevant local and state codes, the National Electric Safety Code, and North American Electric Reliability Corporation requirements. This includes standards relating to clearances to ground, clearance to crossing utilities, clearance to buildings, strength of materials, clearances over roadways, right-of-way widths, and permit requirements.

5.5.5 Other Permits and Regulations

The Permittee shall comply with all applicable state rules and statutes. The Permittee shall obtain all required permits for the project and comply with the conditions of those permits unless those permits conflict with or are preempted by federal or state permits and regulations. A list of the permits known to be required is included in the permit application. The Permittee shall submit a copy of such permits to the Commission upon request.

6. SPECIAL CONDITIONS

Special conditions shall take precedence over other conditions of this permit should there be a conflict.

6.1. Independent Third-Party Monitor

Prior to any construction, the ~~Permittees~~Permittee shall propose a scope of work and identify an independent third-party monitor to conduct Project construction monitoring on behalf of Commerce. The scope of work shall be developed in consultation with and approved by Commerce. This third-party monitor will report directly to and will be under the control of Commerce with costs borne by the Permittee.

6.2. Coordination with ~~Minnesota DNR~~U.S. Fish and Wildlife Service ("USFWS")

The permittee shall coordinate with the ~~Minnesota DNR on the placement of swan-diverters and the timing of tree removal activities.~~USFWS regarding the timing of tree-clearing and any other construction or restoration actions that may impact Northern Long-Eared Bat in the vicinity of the Project.

6.3. Preparation of a Vegetation Management Plan

The permittee shall develop a vegetation management plan in coordination with EERA and other relevant agencies prior to construction. The plan shall address site restoration, seed mixes, and tree removal.

7. DELAY IN CONSTRUCTION

If the Permittee has not commenced construction or improvement of the route within four years after the date of issuance of this permit the Permittee shall file a report on the failure to construct and the Commission shall consider suspension of the permit in accordance with Minn. R. 7850.4700.

8. COMPLAINT PROCEDURES

Prior to the start of construction, the Permittee shall submit to the Commission the procedures that will be used to receive and respond to complaints. The procedures shall be in accordance with the requirements of Minn. R. 7829.1500 or Minn. R. 7829.1700, and as set forth in the complaint procedures attached to this permit.

Upon request, the Permittee shall assist the Commission with the disposition of unresolved or longstanding complaints. This assistance shall include, but is not limited to, the submittal of complaint correspondence and complaint resolution efforts.

9. COMPLIANCE REQUIREMENTS

Failure to timely and properly make compliance filings required by this permit is a failure to comply with the conditions of this permit. Compliance filings must be electronically filed with the Commission.

9.1. Plan and Profile

At least 30 days before right-of-way preparation for construction begins on any segment or portion of the project, the Permittee shall provide the Commission with a plan and profile of the right-of-way and the specifications and drawings for right-of-way preparation, construction, structure specifications and locations, cleanup, and restoration for the transmission line. The documentation shall include maps depicting the plan and profile including the right-of-way, alignment, and structures in relation to the route and alignment approved per this permit.

The Permittee may not commence construction until the 30 days has expired or until the Commission has advised the Permittee in writing that it has completed its review of the documents and determined that the planned construction is consistent with this permit. If the Permittee intends to make any significant changes in its plan and profile or the specifications and drawings after submission to the Commission, the Permittee shall notify the Commission at least five days before implementing the changes. No changes shall be made that would be in violation of any of the terms of this permit.

9.2. Status Reports

The Permittee shall report to the Commission on progress during finalization of the route, design of structures, and construction of the transmission line. The Permittee need not report more frequently than monthly. Reports shall begin with the submittal of the plan and profile for the project and continue until completion of restoration.

9.3. Notification to Commission

At least three days before the line is to be placed into service, the Permittee shall notify the Commission of the date on which the line will be placed into service and the date on which construction was complete.

9.4. As-Builts

Within 90 days after completion of construction, the Permittee shall submit copies of all final as-built plans and specifications developed during the project.

9.5. GPS Data

Within 90 days after completion of construction, the Permittee shall submit to the Commission, in the format requested by the Commission, geo-spatial information (e.g., ArcGIS compatible map files, GPS coordinates, associated database of characteristics) for all structures associated with the transmission line and each substation connected.

9.6. Right of Entry

The Permittee shall allow Commission designated representatives to perform the following, upon reasonable notice, upon presentation of credentials and at all times in compliance with the Permittee's site safety standards.

(a) To enter upon the facilities easement of the property for the purpose of obtaining information, examining records, and conducting surveys or investigations.

(b) To bring such equipment upon the facilities easement of the property as is necessary to conduct such surveys and investigations.

(c) To sample and monitor upon the facilities easement of the property.

(d) To examine and copy any documents pertaining to compliance with the conditions of this route permit.

10. PERMIT AMENDMENT

This permit may be amended at any time by the Commission. Any person may request an amendment of the conditions of this permit by submitting a request to the Commission in writing describing the amendment sought and the reasons for the amendment. The Commission will mail notice of receipt of the request to the Permittee. The Commission may amend the conditions after affording the Permittee and interested persons such process as is required.

11. TRANSFER OF PERMIT

The Permittee may request at any time that the Commission transfer this permit to another person or entity. The Permittee shall provide the name and description of the person or entity to whom the permit is requested to be transferred, the reasons for the transfer, a description of the facilities affected, and the proposed effective date of the transfer.

The person to whom the permit is to be transferred shall provide the Commission with such information as the Commission shall require to determine whether the new Permittee can comply with the conditions of the permit. The Commission may authorize transfer of the permit after affording the Permittee, the new Permittee, and interested persons such process as is required.

12. REVOCATION OR SUSPENSION OF THE PERMIT

The Commission may initiate action to revoke or suspend this permit at any time. The Commission shall act in accordance with the requirements of Minn. R. 7850.5100, to revoke or suspend the permit.

Attachment 1 – Complaint Handling Procedures for Permitted Energy Facilities

Attachment 2 – Compliance Filing Procedures for Permitted Energy Facilities

Attachment 3 – Route Permit Maps