

Environmental Assessment
Proposed Richmond 115 kV Project
Stearns County, Minnesota

Stearns County

May 2008

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List of Acronyms Used in this Document

ACRONYMS	
Commission	Minnesota Public Utilities Commission
CSAH	County State Aid Highway
CUP	Conditional Use Permit
dB db(A)	Decibel Decibel, A-weighted
DNR	Minnesota Department of Natural Resources
EA	Environmental Assessment
EMF	Electromagnetic fields
EQB	Minnesota Environmental Quality Board
GRE	Great River Energy
kV	Kilovolt
MPCA	Minnesota Pollution Control Agency
NAC	Noise Area Classification
NPDES	National Pollutant Discharge Elimination System
ROW	Right-of-way
SEA	Stearns Electric Association
SHPO	State Historic Preservation Office
SWPPP	Stormwater Pollution Prevention Plan
USACE	United States Army Corps of Engineers
USFWS	United States Fish and Wildlife Service

1.0 Introduction

Great River Energy (GRE), located in Maple Grove, MN, presently operates a 69 kilovolt (kV) transmission line located six miles north of Richmond in Stearns County (Figures 1-1 and 1-2). GRE is proposing to rebuild this 69 kV line to 115 kV to remove the line overload concerns, boost the reliability of the transmission line, and better serve the existing and future growth in the area.

1.1 Project Location

The project is located in Sections 24, 25, 36, T124N, R31W; and Sections 1, 12 and 13, T123N, R31W. It will generally follow the same route as the existing 69 kV transmission line (Figure 1-2). The majority of the route is located on the east side of County State Aid Highway (CSAH) 9 between Richmond and the Stearns Electric Association (SEA), Farming distribution substation.

1.2 Project Description

GRE proposes to construct and own six miles of rebuilt 115 kV transmission line between Richmond and SEA's Farming Substation. Due to anticipated future transmission system upgrades from 69 kV to 115 kV in the greater St. Cloud area, this rebuild project will be permitted, designed and built to 115 kV standards, but will initially operate at 69 kV until the adjoining transmission systems are upgraded to 115 kV. The new line will be constructed with new single wood poles that will be 60-75 feet in height. The spacing between the new poles will be approximately 350 feet.

These components are discussed in more detail in Section 3.

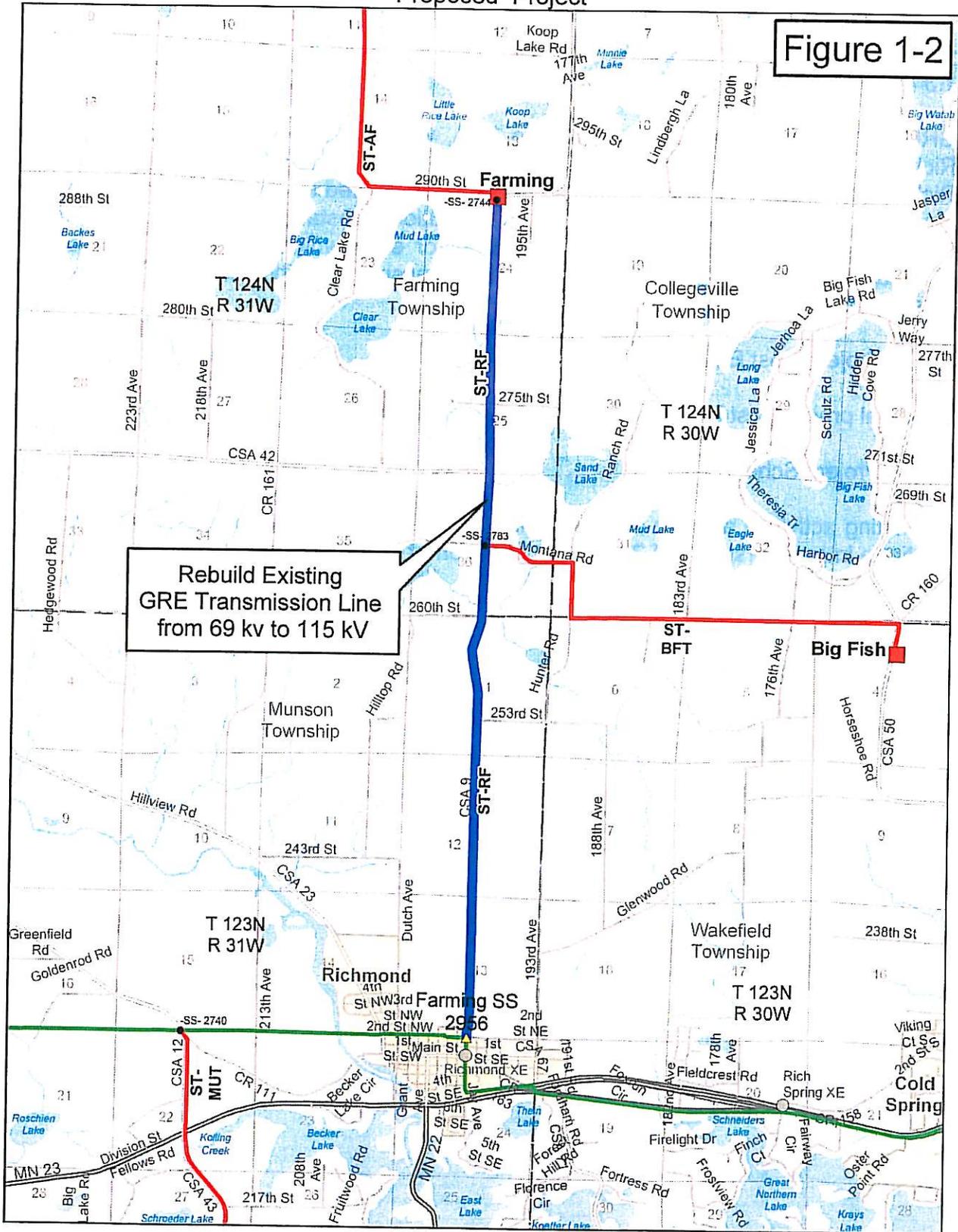
General Vicinity Map

Figure 1-1



Proposed Project

Figure 1-2



1.3 Project Need

GRE is the wholesale power supplier to SEA, who serves much of the area around Richmond. GRE presently operates a 69 kV transmission line that extends from Richmond to SEA's Farming distribution substation located six miles north of Richmond and also directly feeds SEA's Big Fish distribution substation. GRE is proposing to rebuild this 69 kV line with a heavier conductor size, which would remove the line overload concerns, boost the reliability of the transmission line, and better serve the existing and future load growth in the area.

1.4 Project Cost Estimate

The total project cost is estimated to be \$ 1.8 million.

1.5 Project Schedule

Permitting activities and the environmental review started in late summer 2007 and will continue into the first half of 2008. Construction of the transmission line and substation modifications is proposed to begin in fall 2008. The anticipated in-service date is winter 2008.

2.0 Regulatory Framework

2.1 Permit Requirement

This project falls under the State of Minnesota's Power Plant Siting Act, (Minnesota Statutes § 216E.01-.18 and Minnesota Rules Chapter 7849) for transmission projects over 100 kV and requires a permit from the Minnesota Public Utilities Commission (Commission). However, for eligible projects, a utility may apply to the local unit of government that has jurisdiction over the project for approval instead of applying to the Commission (Minn. Rules 7849.6200). This proposed 115 kV project is eligible for local review.

Stearns County has agreed to act as the lead local unit of government with jurisdiction to approve the project. The County was afforded the opportunity to relinquish its jurisdiction by requesting that the Commission assume jurisdiction, but has elected to maintain jurisdiction of the project. As required by Minn. Rules 7849.6200 Subp.3, a project notice was sent by GRE to those persons on the Power Plant Siting General Notification list (see Appendix A).

2.2 Environmental Assessment Requirement

In accordance with Minn. Rules 7849.6200 Subp.5, an environmental assessment (EA) prepared by the local unit of government with jurisdiction over the project must be completed. The EA contains information on the human and environmental impacts of the proposed project and addresses methods to mitigate such impacts.

When the EA is complete, Stearns County must publish a notice in the Environmental Quality Board (EQB) Monitor that the EA is available for review, how a copy of the document may be reviewed, that the public may comment on the document, and the procedure for submitting comments to the County. A final decision on the project cannot be made until at least ten days after the notice appears in the EQB Monitor.

2.3 Scoping of Environmental Assessment/Public Participation

The rules require that the public be afforded the opportunity to participate in developing the scope of the EA before it is prepared.

GRE held a public information meeting on the project on March 27, 2008 in Richmond, Minnesota. Notice was printed in the local newspaper (see Appendix A). One Richmond city official and five members of the public attended the meeting. No township or county officials attended.

A survey on the project was sent by Stearns County to all landowners along the proposed corridor on April 9, 2008 to satisfy the requirement in the rules for public involvement in preparation of the environmental assessment. The survey and responses received are provided in Appendix B. The Conditional Use Permit (CUP) request process is also open to the public as part of the respective review by the Stearns County Planning Commission at its regularly scheduled meetings. Prior to the

public hearing, notices are sent out to landowners located within one-quarter mile of the project corridor and public hearing notices are published in the Stearns County official newspaper.

2.4 Conditional Use Permit

Stearns County is the legal governing body for all activities that may require permitting in Munson and Farming townships. The City of Richmond is self-governing in regard to permitting requirements within its corporate limits. However, Richmond city officials have deferred its permitting authority to Stearns County, as the project is predominantly located within the corporate limits of Munson and Farming townships.

Stearns County requires a CUP for this project. GRE submitted a Conditional Use Permit Application to Stearns County on April 22, 2008. After the EA is finalized, notice of the EA has been published in the EQB Monitor, and the comment period requirements have been met, Stearns County will hold a public hearing and make a decision on GRE's request for a CUP.

3.0 Engineering Design, Right-of-Way Acquisition, and Construction

3.1 Transmission Line

The transmission line will be a single circuit design (Figure 3-1), consisting of three phase wires and a shield wire for lightning protection. The line starts at a switching structure, runs down the transmission corridor, connects to structures along the route, and terminates at the Farming Substation.

There are a few isolated areas where the new line will be shifted easterly of its present location to comply with applicable CSAH minimum clear zone requirements.

The new line will be constructed with 795 ACSS conductor supported by single wood poles that will be 60-75 feet in height. The spacing between the new poles will be approximately 350 feet.

The line will be primarily self-supporting and guyed wood structures. In some cases engineered poles such as laminated wood or tubular steel may be used.

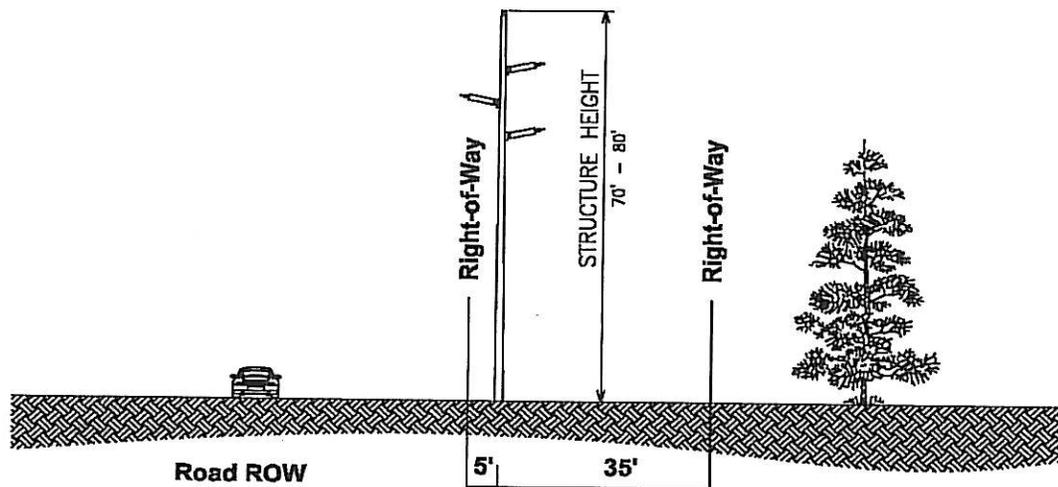
3.2 Right-of-Way Acquisition

After project approvals to construct the transmission line are secured, landowners will be contacted by representatives of GRE to begin direct negotiation to acquire additional easements, if needed, and purchase any land rights for transmission line construction. The majority of the rebuilt line will use the existing easement rights of the transmission corridor. As the design of the line is developed, landowners will be contacted to discuss the project in detail and in preparation for any necessary surveys and soil investigations.

Once easements, permits and land rights have been acquired, and immediately prior to construction, individual property owners will be contacted to discuss the construction schedules, access to the site and vegetation clearing required for the project. The right-of-way (ROW) would be cleared of the amount of vegetation necessary to construct, operate and maintain the proposed transmission line. Wood from the clearing operation will be offered to the landowner or removed from the site. Brush will be chipped and disposed of on the ROW. It is standard practice to remove any vegetation species that would be a danger to the line when at a mature height. Also, any vegetation that is in the way of construction equipment may have to be removed.

Figure 3-1

115 kV Horizontal Post Structure



115 kV Line Typical Span 400'
40' Typical Total Right-of-Way Width (Paralleling Road)

Some structure locations may require soil analysis to assist with the design of the line. Soil borings would be taken to determine the soil properties for engineering analysis. An independent geotechnical testing company would take and analyze these borings. Site access would be required and landowners would be contacted for permission.

In addition to the ROW required for adequate clearance of the proposed transmission line, temporary construction easements may be obtained from landowners for the duration of construction. These construction easements would need to be limited to special construction access needs or any additional staging or laydown areas required outside of the proposed transmission line ROW. Where possible, staging and laydown areas would be located within the ROW and limited to previously disturbed or developed areas. Upon completion of construction activities, landowners will be contacted to determine if any additional restoration due to construction damage is necessary.

3.3 Construction and Maintenance Procedures

Construction is planned to begin in summer/fall 2008, depending on when required approvals are obtained and easement acquisition is completed. The proposed 115 kV transmission line would be constructed at grade elevations; therefore, no pole locations would require grading unless it is necessary to provide a level area for construction access and activities. Construction would comply with the latest industry standards regarding clearance to ground, clearance to crossing utilities, clearance to buildings, ROW widths, erecting power poles, and stringing of transmission line conductors.

Typical pole structures would require a hole dug 10 to 15 feet deep and 3 to 4 feet in diameter for each pole. Pole structures in wet environments or angle structures may require additional foundation support, typically consisting of a concrete foundation or placement of the pole base inside a vertical galvanized steel culvert. Erosion control methods would be implemented to minimize runoff during construction. GRE or an approved GRE contractor would perform transmission line construction in compliance with local, state, National Electrical Safety Code, and industry standards.

Poles would be delivered to either the staked location or a project storage yard. If the poles were delivered to a staked site, they would be placed on the ROW out of the clear zone of any adjacent roadways or designated pathways. Insulators and other hardware would typically be attached while the pole was on the ground. The pole would then be lifted, placed and secured on the foundation by a bucket truck or crane.

Once the structures have been erected, conductors would be installed by establishing stringing setup areas within the ROW. The stringing setup areas would usually be established every two miles along the project route. Conductor stringing operations also require brief access to each structure to secure the conductor wire to the insulators or to install shield wire clamps once final sag is established. Temporary guard or clearance poles would be installed, as needed, over existing distribution or

communication lines, streets, roads, highways, railways or other obstructions after any necessary notifications were made or permits obtained. This ensures that conductors would not obstruct traffic or contact existing energized conductors or other cables. In addition, the conductors would be protected from damage.

GRE would periodically use the transmission line ROW to perform inspections, maintain equipment, and repair any damage. GRE would also conduct regular route maintenance for weed control and removal of undesired vegetation that would interfere with the operation of the proposed transmission line.

During construction, limited ground disturbance at the structure sites may occur. Disturbed areas would be restored to their original condition to the maximum extent practicable as negotiated with the landowner. Post-construction reclamation activities include:

- removing and disposing of debris,
- removing all temporary facilities (including staging and laydown areas),
- employing appropriate erosion control measures,
- reseeding and mulching areas disturbed by construction activities with vegetation similar to that which was removed and,
- restoring the areas to their original condition to the extent possible.

In cases where soil compaction has occurred, the construction crews or a restoration contractor uses various methods to alleviate the compaction as negotiated with landowners.

4.0 Assessment of Impacts and Mitigation

The majority of the proposed project is located along existing road or utility ROWs and impacts to the environment are expected to be minimal and short-term, therefore little mitigation will be required. GRE will minimize negative environmental impacts during construction of the project.

Correspondence relative to environmental conditions at the proposed site and responses received from state and federal agencies that reviewed the project are provided in Appendix C.

4.1 Description of Environmental Setting

The proposed transmission line corridor runs through a predominantly agricultural setting with approximately 25 residences, farm buildings and commercial structures within 500 feet of the proposed transmission line.

The majority of the proposed transmission line corridor is located on Agricultural A-40 and Agricultural A-80. A small portion of the rebuilt line will be located inside the Richmond municipal boundaries, which consist of one block of residential and commercial parcels (see Figures 4-1 and 4-2). The rebuilt 115 kV transmission line will exit Richmond at the intersection of 2nd Street NE and Jay Ave NE and traverse north through areas zoned Residential/Commercial on CSAH 9 for less than 0.1 miles. The line crosses CSAH 9 and continues north along CSAH 9 for approximately six miles through areas zoned Agricultural.

4.2 Impacts on Human Settlement

4.2.1 Socioeconomics

The local economy is based primarily on agriculture and small businesses. Approximately 5-10 workers will be required for construction of the new transmission line. During construction, there would be a small impact on the local community due to revenue created from expenditures of the construction crew (local community services, hotels, restaurants, construction materials). No permanent jobs will be created by this project.

4.2.2 Displacement

The rebuilt transmission line will not cause displacement of any residence and will not affect any public services.