

Menahga Area 115 kV Transmission Project



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Project Need

Great River Energy and Minnesota Power propose a new overhead 115 kilovolt (kV) transmission line project (Menahga Area Project) in Hubbard, Wadena and Becker Counties to relieve overload issues on the transmission system in the area and to serve a new pump station to be built by Minnesota Pipe Line Company (MPL). The Menahga Area Project would:

- Strengthen the Menahga area electric transmission system, as the existing 34.5 kV system serving the area is becoming outdated and reaching its maximum capacity.
- Provide electric service to the proposed new Todd-Wadena Electric Cooperative (Todd-Wadena) “Red Eye” distribution substation that would provide electric power to a new pipeline pump station proposed by MPL.

Project Description

The Menahga Area Project (see map on back) would consist of:

- An east-west section between the existing Great River Energy Hubbard Substation and the proposed Minnesota Power Straight River Substation, of which approximately 4.5 miles will be double-circuit 115 kV line (see top photo) and approximately 2.5 miles will be single-circuit 115 kV line (see middle photo).
- A generally north-south section of single-circuit 115 kV line (approximately 15.5 miles) between the proposed Minnesota Power Straight River Substation and the proposed Red Eye distribution substation.
- The proposed new Minnesota Power Straight River Substation, Great River Energy Blueberry Substation, and Todd-Wadena Red Eye Substation; relocation of Todd-Wadena’s existing Menahga distribution substation to the new Blueberry Substation site and converting the voltage from 34.5 kV to 115 kV; and modifications to the existing Minnesota Power Pipeline Substation and Great River Energy Hubbard Substation.

The proposed transmission line would generally require a 100-foot-wide right-of-way, 50 feet on each side of the centerline. The majority of the project would use single round wood poles ranging in height from 60 - 90 feet above ground and a distance between poles of 275 - 400 feet. Poles with guy wires/anchors, two-pole H-frame or steel poles may be required in some areas as line angles, soil conditions, or crossing of existing utilities necessitate. Some segments of the line would carry lower-voltage distribution underbuild (see bottom photo).

Permitting

The Minnesota Public Utilities Commission (Commission) must issue a Certificate of Need (CON) and Route Permit before project construction can proceed. Great River Energy will be the permitting lead and a combined CON/Route Permit application will be submitted containing relevant information that will help the Commission determine if there is sufficient need for the project and evaluate the proposed route and any alternative routes brought forth by the public. At the conclusion of the permitting process, the Commission will determine the final location of the proposed transmission facilities.

The public and regulatory agencies will have numerous opportunities to provide input during the CON and Route Permitting process, which is conducted and facilitated by Commission and Minnesota Department of Commerce (DOC) staff. Public meetings will be held and other opportunities will be provided for collecting comments and responses. The DOC will prepare an Environmental Assessment document for the project.

Easements/Trees

Later in 2015, Great River Energy will begin to contact landowners to present an easement and offer of compensation. Most poles will be located on private property, although the majority of the right-of-way can continue to be used for agricultural cultivation, underground utilities, fencing and access drives. During acquisition, information is shared on tree removal, access and construction practices. Removal of trees and vegetation in the right-of-way will be necessary for safety and maintenance.

Project Schedule

Project contact and/or notifications -----	Fall 2014
State permitting -----	Early 2015 – early 2016
Survey/design -----	Summer 2015 – Spring 2016
Easement acquisition/right-of-way permits-----	Fall 2015 – Fall 2016
Transmission line construction -----	Summer 2016 – Spring 2017
Energyization-----	Spring 2017

For project updates and information, visit greatriverenergy.com/Menahga or contact:

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Typical 115 kV Wood Double Circuit Structure

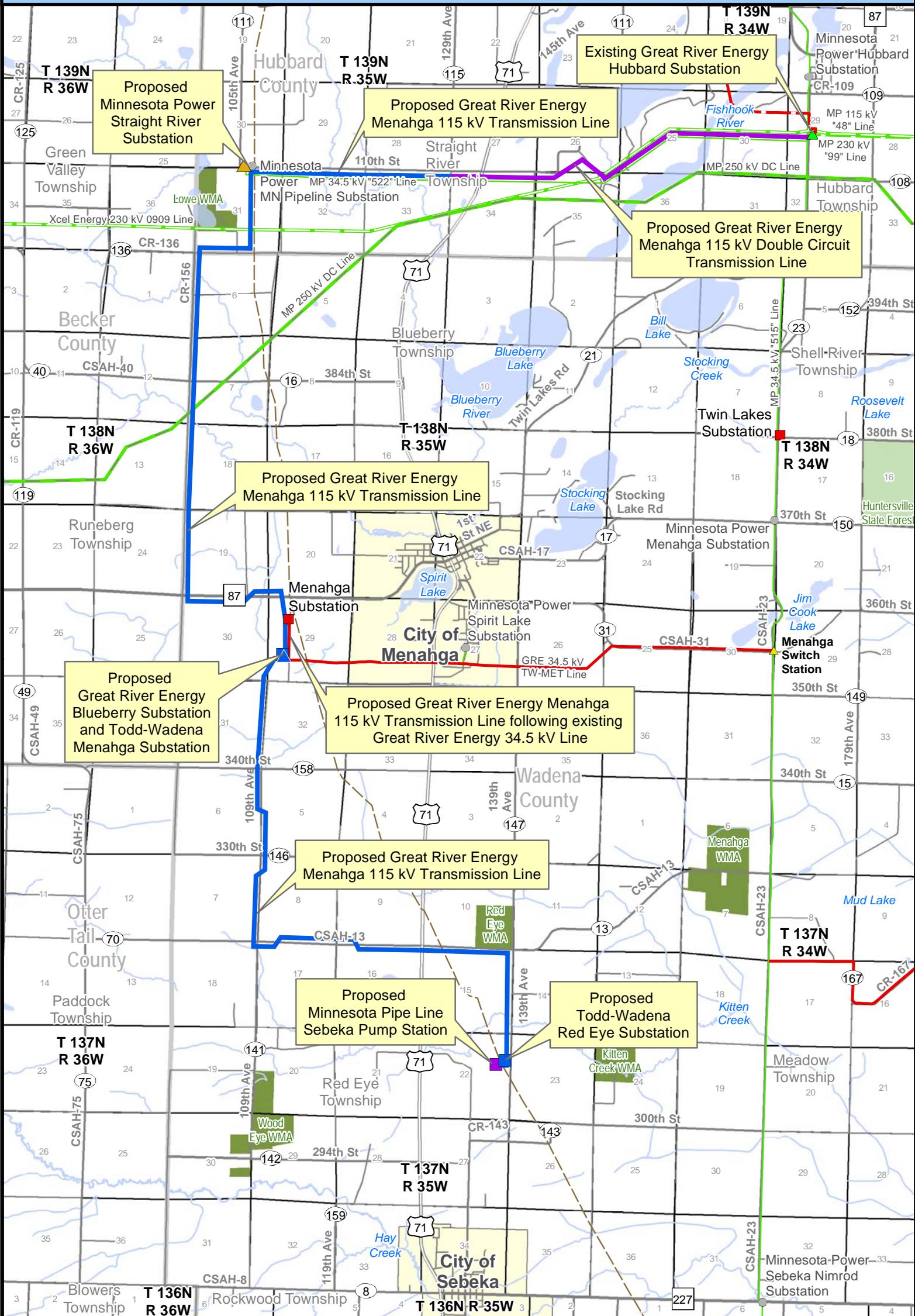


Typical 115 kV Wood Single Circuit Structure



Typical 115 kV Wood Structure with Distribution Underbuild

Proposed Project



- | Proposed | | Existing | | | |
|----------|--|----------|--|--|--|
| | Great River Energy Double Circuit 115 kV Transmission Line | | Great River Energy 115 kV Transmission Line | | Minnesota Power and Xcel Energy 230 kV Transmission Line |
| | Great River Energy Single Circuit 115 kV Transmission Line | | Great River Energy 34.5 kV Transmission Line | | Minnesota Power 250 kV DC Transmission Line |
| | Great River Energy Transmission Substation | | Great River Energy Substation | | Minnesota Power 115 kV Transmission Line |
| | Todd-Wadena Distribution Substation | | Great River Energy Switch Station | | Minnesota Power 34.5 kV Transmission Line |
| | Minnesota Pipe Line Pump Station | | Todd-Wadena Distribution Substation | | Pipeline |
| | Minnesota Power Transmission Substation | | Minnesota Power Distribution Substation | | |

