

Proposed Little Falls 115 kV Substation and Transmission Line



GREAT RIVER
ENERGY®
A Tristate Energy Cooperative

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Project Need

Great River Energy, power supplier to Crow Wing Power and 27 other distribution cooperatives, proposes to upgrade Crow Wing Power's existing 34.5 kV Little Falls Substation to 115,000 volts (115 kV) and construct a new 115 kV transmission line source extending from Minnesota Power's existing Little Falls Substation to Crow Wing Power's existing Little Falls Substation (see back). This upgrade will benefit the Little Falls area and is needed to:

- Improve the reliability of electric service
- Reduce the risk of problems associated with low voltage

The area is now served by Crow Wing Power's 34.5 kV Little Falls Substation, which is served by Minnesota Power's 34.5 kV transmission line along T.H. 27. This line will remain intact after the project is constructed.

Planned Project

The single circuit poles will typically be single-pole wood structures with horizontal post insulators (see top photo). Guy wires with anchors and possibly two-pole or steel structures may be required in limited areas if needed for long spans or if soil conditions would require them. The transmission line will carry three energized wires and one non-energized optical ground wire for lightning protection, which will also provide communications between the electrical facilities. In some areas, Crow Wing Power's distribution lines may be underbuilt on cross-arms on the transmission line structures (see bottom photo). Structures without underbuild will generally be 60 to 75 feet in height with 300- to 400-foot spans. Those with underbuild will generally be 70-85 feet in height with 250- to 300-foot spans.

The project will require modifications at Minnesota Power's Little Falls Substation and a new 115 kV transformer will replace the existing 34.5 kV transformer at Crow Wing Power's Little Falls Substation.

After public notification and an open house, Great River Energy will apply to the Minnesota Public Utilities Commission for a Route Permit. Great River Energy will request a width of 300 feet for the permit corridor, although the easement width will only be 50 feet on each side of the transmission centerline, within the permitted corridor. Once the project has received approval and the transmission line route is finalized, survey will be performed. Landowners will be contacted and a fair offer of compensation will be presented along with the easement. Easements will allow the poles to be located on private property, although the majority of the easement area will still be available for uses such as agricultural cultivation, underground utilities, fencing and access drives.

Project Schedule

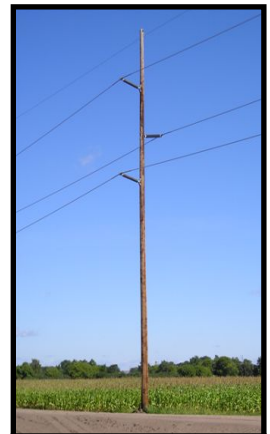
Open house and public notifications.....November/December 2010
Project permitting.....Fall 2011
Easement acquisition.....Fall/Winter 2011
Construction.....Early 2012

For ongoing status updates, visit www.greatriverenergy.com/LittleFalls or contact:

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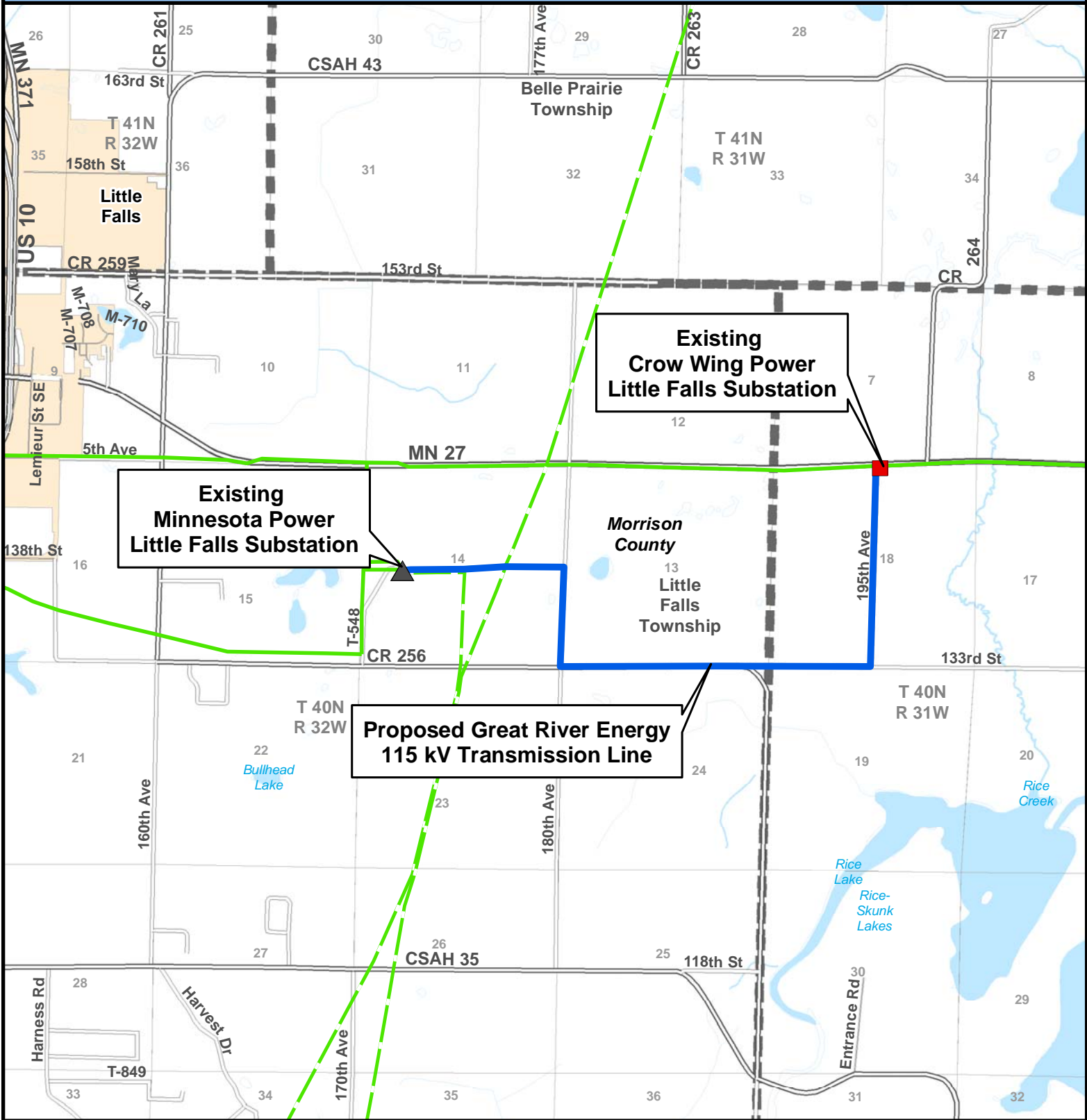


*Typical 115 kV
Transmission
Structure*



*Typical 115 kV
Transmission
Structure
With Distribution
Underbuild*

Project Map



Crow Wing Power

■ Existing Distribution Sub

Great River Energy

— Proposed 115 kV Transmission Line

— Existing Single Circuit 69 kV Transmission Line

Minnesota Power

▲ Transmission Substation

— 34.5 kV Transmission Line

— 115 kV AC Transmission Line

0 0.5 1 Miles



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