

6.3.11 Hubbard-Menahga Area

Tracking Number. 2007-NE-N3

Utility. Great River Energy

Inadequacy. The 34.5 kV system between Hubbard and Verndale is incapable of supporting the voltage on contingency for the projected load by 2010.

A map of the area is shown on the following page.

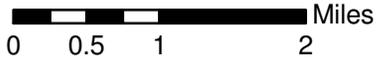
Alternatives. GRE is planning on constructing a 115 kV line between the radial Hubbard-Minnesota Pipeline 34.5 kV line and the Todd-Wadena Electric Cooperative Menahga substation. This line will be operated at 34.5 kV initially.

Analysis. The Menahga area sees low voltages on the loss of the Hubbard-Twin Lakes 34.5 kV line and the Leaf River area sees low voltages for loss of the Verndale source. Transferring the Menahga load from the Hubbard-Verndale system will rectify these low system voltages. Historical load levels indicate that low voltage is already a problem if this critical contingency were to occur.

115 kV transmission is proposed for this area as there is some wind potential along the corridor. The existing 34.5 kV system would not be able to serve the needs of a large wind farm in the area, due to capacity limitations on the system. The start of a 115 kV line between Hubbard and Wing River would provide the appropriate capability.

Schedule. GRE has scheduled this project for a 2013 energization. The proposed 115 kV line is not expected to exceed ten miles in length, which means that a Certificate of Need from the Public Utilities Commission will not be required.

Minnesota Transmission >34.5kV Northeast Planning Zone 07-NE-N3: Hubbard-Menahga Area



Legend

- Transmission Substation
- 34.5 kV AC
- 69kV AC
- 115kV AC
- 138kV AC
- 161kV AC
- 230kV AC
- 345kV AC
- 500kV AC
- 250kV DC
- 400kV DC
- ▭ County Boundary

