7.3.14 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.

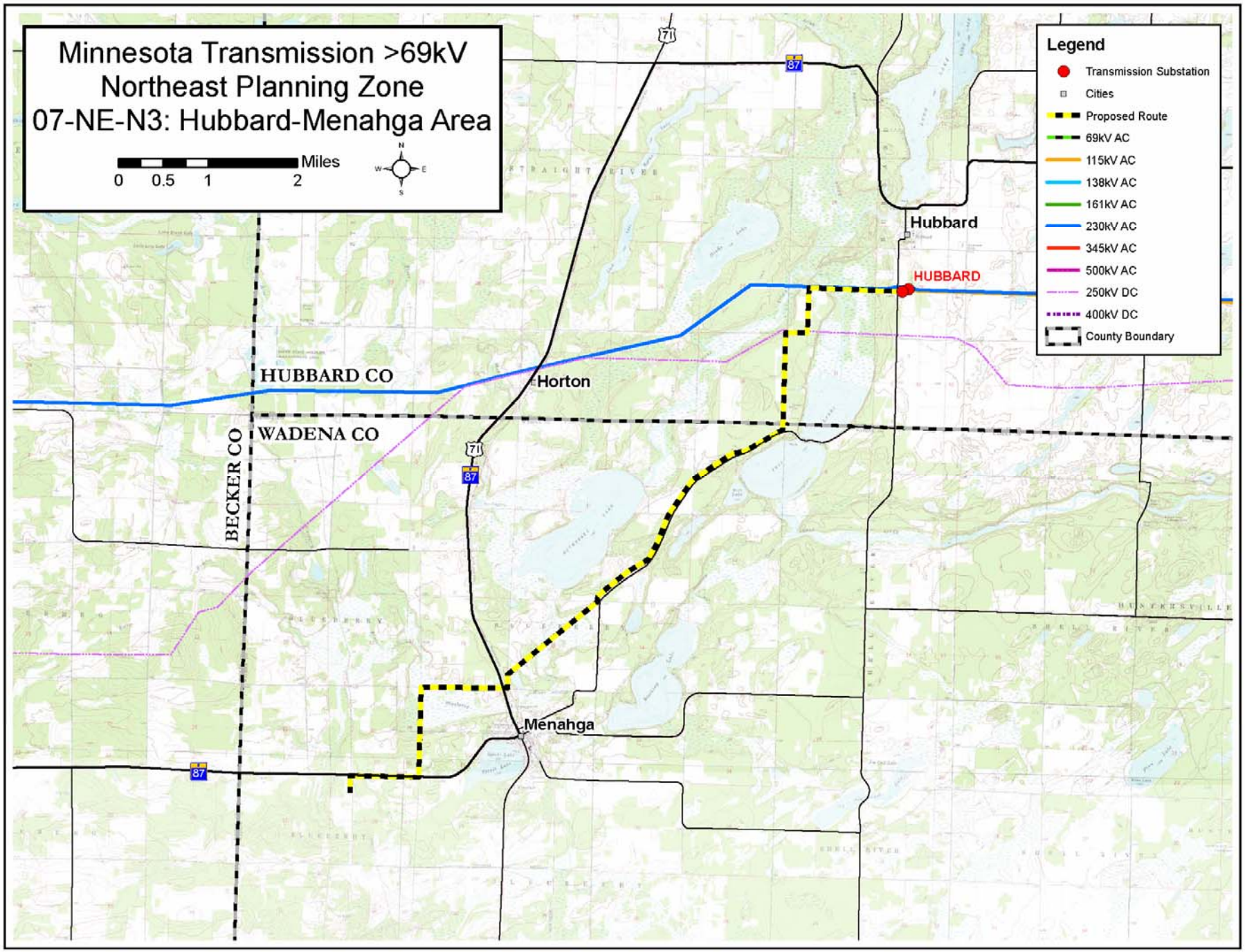
A map of the area is shown on the following page.

Alternatives. GRE had planned to construct a 34.5 kV line from Hubbard to Menahga. However, due to the potential of ethanol loads on the southern end of the system, a larger line should be developed for meeting potential larger loads in the area. The Hubbard-Menahga 115 kV line would be the start of a Hubbard-Menahga-Wadena/Compton-Wing River 115 kV line.

This area also has some wind potential. The existing 34.5 kV system, due to capacity limitations, would not provide the needs if a large windfarm were to develop in the area. The start of a 115 kV line between Hubbard and Wing River would provide the appropriate capability.

Analysis. The Menahga area sees low voltages on the loss of the Hubbard-Twin Lake 34.5 kV line. Historical load levels indicate that low voltage is already a problem if this critical contingency were to occur. MP is installing a 2.4 MVAR capacitor at Sebeka Regulator Station, which should be complete early in 2008, and this will push the voltage issues out a few years, depending on load growth.

Schedule. GRE is assessing this system as part of its Long Range Planning study, which is schedule to be completed in 2008. GRE may elect to proceed with this line in 2008. A Certificate of Need will be required if the line is longer than 10 miles.


Minnesota Transmission >69kV
Northeast Planning Zone
07-NE-N3: Hubbard-Menahga Area
Miles
0 0.5 1 2
Legend
Transmission Substation
Cities
Proposed Route
69kV AC
115kV AC
138kV AC
161kV AC
230kV AC
345kV AC
500kV AC
250kV DC
400kV DC
County Boundary
HUBBARD
Hubbard
HUBBARD CO
WADENA CO
BECKER CO
Horton
Menahga
71
87