

APPLICATION OF RULE CRITERIA

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10.1 Certificate of Need

The Commission has established in its rules (Minn. R. 7849.0120) the criteria that it will apply to determine whether an applicant has established that a new proposed large energy facility is needed. Great River Energy and Minnesota Power have described in this Application the reasons why a CON should be granted to build the Menahga Area 115 kV Project. Those reasons are summarized below.

10.1.1 Denial Would Adversely Affect the Energy Supply

The proposed Project is required to serve the proposed new MPL Sebeka pump station (10 MW load) and to address system overloads in the affected load area near Menahga, Minnesota.

MPL Pump Station

The existing Hubbard-Verndale 34.5 kV system does not have the capacity to serve 10 MW of new electrical demand. Although transition of Great River Energy's Menahga load from the 34.5 kV system to a new 115 kV system creates capacity on the Hubbard-Verndale 34.5 kV system, it is not nearly enough capacity to serve the proposed MPL pump station load; therefore, a larger voltage source (115 kV) is needed to provide reliable electric service to the pump station.

The Project as proposed will provide a reliable source of electricity to the proposed MPL Sebeka pump station. Denial of the Project would prevent MPL from meeting the objective of their MPL Reliability Project, which is to increase the pumping capacity on MPL Line 4 to maintain reliable crude oil supplies to Minnesota refineries.

System Overloads

System overload concerns in the Menahga area are due to the growth of the peak electrical demand that has surpassed the level that can be served, and the age of the 34.5 kV transmission lines combined with the overall length of the 34.5 kV network. The load area served from the Hubbard-Verndale 34.5 kV system has shown growth rate in the past five years. As discussed in **Section 5.6**, the load area is growing at a weighted annual average rate of about 1.0 percent.

Transmission line and transformer overloads concerns relate to the amount of current operating through the conductor. Electrical equipment requires sufficient current to function properly. Conductors are rated to allow a certain amount of current to be carried. As electrical demand grows or when additional equipment is connected to the system, the conductor continues to supply the required current until the conductor reaches its maximum rating. An overload situation occurs when the conductor transfers current above its rating. In an overload situation, a conductor can heat up and begin to sag. Similarly, a transformer or regulator can overload and

cause loss of life and/or fail catastrophically. If the overload condition is great enough or prolonged enough, the conductor can break. A break in a conductor can cause service interruption, equipment damage, or other system concerns.

Load growth is occurring in the affected load area, and this growth is not the result of promotional activities by Applicants. Forecasts modeled by Applicants are reasonable and supported by both the historic data and load forecasts; there is a demonstrated need for improved service in the area.

The proposed Project is designed to address these line overload concerns, and denial of the Project would adversely affect the reliable electric service to the affected load area.

10.1.2 There is No Reasonable and Prudent Alternative

Applicants have proposed the most efficient and cost effective way to provide electrical service for a new pump station load and to address transmission system overloads in the affected load area. As discussed in this application, the 34.5 kV system is not a robust enough voltage to serve the existing native load along with the 10 MW pump station. A complete rebuild of the Hubbard-Verndale 34.5 kV system still would not achieve the end goal of serving the pump station; therefore, the proposed Project is the most cost effective way to serve both the native load growth and the large industrial MPL pump station.

Applicants considered a number of alternatives to the Project, including various generation options, different transmission scenarios, and a no-build alternative focusing on reactive power supply improvements and conservation/demand side management. Applicants deemed all of these alternatives inferior to the proposed Project as discussed in **Chapter 6**.

10.1.3 The Project will Protect the Environment and Provide Benefits

Approximately one-third of the proposed Project replaces an existing line, and the remaining two-thirds of the Project follow existing road or utility ROWs. The Project is located in a rural setting and impacts to the environment and to human settlement should be minimal. Applicants are working with the DNR, USFWS, Corps and other agencies to ensure that natural resources are protected.

The Project will be a reliable solution for the pump station and the affected load area because the line will operate nearly continuously for decades. There can be no doubt that the Project will benefit customers in the service area by ensuring an adequate power supply for years to come.

10.1.4 The Project will Comply with All Applicable Requirements

Applicants have identified other permits and approvals that may be required for the Project in **Section 2.5**. Applicants have demonstrated that they will comply with all applicable requirements and obtain all necessary permits.

10.2 Route Permit

According to Minnesota Statutes Section 216E.02, subd. 1, it is the policy of the state of Minnesota to locate high voltage transmission lines in an orderly manner that minimizes adverse human and environmental impacts and ensures continuing electric power system reliability and integrity. The Commission has promulgated standards and criteria for issuing route permits (Minn. R. 7850.4000). That rule provides that the Commission shall issue route permits for high voltage transmission lines that are consistent with state goals to conserve resources, minimize environmental impacts and impacts to human settlement, minimize land use conflicts, and ensure the state's electric energy security through efficient, cost-effective transmission infrastructure.

The 115 kV transmission proposed for the Menahga Area 115 kV Project satisfies all the criteria that are applied in evaluating a new transmission line project. Following an existing transmission line route for approximately one-third of the Project conserves resources and minimizes environmental impacts and other impacts. The remaining two-thirds of the Project follow road or utility corridors. Constructing the line at 115 kV capability helps ensure a reliable and secure power source in the area served by the line.

For all the reasons described in this Application, and summarized in **Section 10.1** regarding the reasons why a CON should be issued, the Commission should also issue a Route Permit.

10.3 Conclusion

Great River Energy and Minnesota Power respectfully request that the Commission issue a Certificate of Need authorizing construction of approximately 22.5 total miles of 115 kV transmission line between the existing Hubbard Substation and the proposed new Red Eye Substation, construction of the proposed new Straight River, Blueberry and Red Eye substations, relocation of the Todd-Wadena Menahga Substation to the Blueberry Substation site and conversion of the voltage from 34.5 kV to 115 kV, and modifications to the existing Hubbard and Pipeline substations.

In addition, Great River Energy and Minnesota Power request that the Commission issue a Route Permit at the same time that designates the route for the 115 kV transmission line and sites for the proposed new Straight River, Blueberry and Red Eye substations. Applicants request that the Commission designate a route wider than the necessary ROW for the Project, to allow flexibility in determining the precise location of the transmission centerline and structures.

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