

2.0 Project Purpose and Need

Minnesota Power supplies retail electric service to 144,000 customers, and wholesale electric service to 16 municipalities, within a 26,000 square-mile area in northeastern Minnesota. To meet its customers' electricity needs, the Applicant operates transmission and distribution components, including 8,866 miles of transmission lines and 169 power substations including the Blackberry Substation where the Project will interconnect. The Project is an important part of the Applicant's plans to serve its customers for decades to come.

2.1 Project Description

The Project will carry hydropower generated by facilities operated by Manitoba Hydro, a Canadian electric utility. In the U.S., the Project will consist of a 500 kilovolt (kV) transmission line between the Minnesota-Manitoba border crossing northwest of Roseau, Minnesota and the existing Blackberry Substation near Grand Rapids, Minnesota, as well as associated substation facilities and transmission system modifications at the Blackberry Substation site, and a 500 kV series compensation station. The overall length of the line in Minnesota will be approximately 220 miles, regardless of the Route Alternative selected.

2.2 Purpose and Need Statement

2.2.1 Purpose of the Proposed Action

The purpose for the Project is:

To efficiently provide the Applicant's customers and the region with clean, emission-free energy that will

- (a) help meet the region's growing energy demands
- (b) advance the Applicant's *EnergyForward* strategy of increasing its generation diversity and renewable portfolio
- (c) strengthen system reliability
- (d) fulfill the Applicant's obligations under its power purchase agreements with Manitoba Hydro

all in a manner that is consistent with the Applicant's commitment to making a positive impact on communities.

This purpose, and the various needs to which it is responding, are discussed in more detail below.

2.2.2 Need for the Proposed Action

Efficiently providing Minnesota Power customers and the region with clean energy. The Applicant is obligated as a public utility to provide customers with reliable and affordable electricity that balances environmental impact. The Project is a unique opportunity to provide the Applicant's customers, as well as other utilities in the upper Midwest region, with electricity that is not only cost-competitive, but also generated by emission-free hydroelectric facilities. A new 500 kV line

provides the most efficient means to transport this electricity to the Applicant's service territory and to the regional grid.

Meeting the region's growing energy demands. The demand for electricity in the Applicant's service area, and in the entire region, is expected to grow significantly in the coming years. Much of this growth is associated with planned mining and industrial expansion on Minnesota's Iron Range. The upgraded and expanded substation and new 500 kV transmission line from the Canadian border to the Applicant's Blackberry 500 kV Substation will provide important new capacity and energy for the electric transmission grid. The hydroelectric power imported from Canada pursuant to the Applicant's 250 megawatts (MW) Power Purchase Agreement, and new 133 MW Renewable Optimization Agreement, with Manitoba Hydro as well as other agreements Manitoba Hydro will enter into with other utilities will help to meet the projected increased need for power in the region.

Advancing Minnesota Power's EnergyForward strategy. The Applicant announced its *EnergyForward* resource strategy in January 2013. As a public utility in Minnesota, the Public Utilities Commission (PUC) requires that the Applicant develop a resource plan approximately every two years. In September 2013, PUC approved the Applicant's 2013 Integrated Resource Plan (PUC Docket No. E015/RP-13-53) that is based on its *EnergyForward* resource strategy, thus creating a roadmap to providing customers with reliable, cost-effective, and environmentally compliant power for decades to come. *EnergyForward* further transitions the company's energy supply mix toward one-third renewables, one-third coal, and one-third natural gas and other market resources long term through hydro and wind energy additions, coal-fired energy reductions, and a post-2020 natural gas generation resource. This Project is a central element of the *EnergyForward* resource strategy, delivering hydro energy resources and, pursuant to an innovative feature of the Applicant's Power Purchase Agreement with Manitoba Hydro, allowing the Applicant to use Manitoba Hydro's system to compliment the intermittent nature of its wind energy investments in North Dakota. This wind storage capacity will optimize the timing, availability, and value of power delivery for customers.

Strengthening system reliability. At present, the regional transmission system includes only one 500 kV tie line between Minnesota and Canada. The Mid-Continent Independent System Operator (MISO) has identified an unplanned outage in that line as the second largest contingency in the MISO footprint. By providing a second 500 kV tie line between Minnesota and Canada, the Project will reduce loading on the existing tie line and enhance the performance of the transmission system during this contingency.

Fulfilling obligations under power purchase agreements. The Applicant is party to a 250 MW Power Purchase Agreement (PPA), as well as an additional 133 MW Renewable Optimization Agreement with Manitoba Hydro. The 250 MW PPA has been reviewed and approved by PUC (see PUC Docket No. E015/M-11-938). The Applicant will submit the new 133 MW Renewable Optimization Agreement to PUC for approval upon the parties' finalization of terms and execution. Under the 250 MW PPA and 133 MW Renewable Optimization Agreement, the Applicant has agreed to purchase 383 MW of energy from Manitoba Hydro, which will be generated at Manitoba Hydro hydroelectric facilities. The 250 MW PPA and 133 MW

Renewable Optimization Agreement obligate the Applicant to have the Project in service on or before June 1, 2020, so it can begin these power purchases. That date corresponds with the beginning of the time period that the Applicant faces energy and capacity deficits. If the Applicant does not have the Project in service by June 1, 2020, it will not only be in breach of the 250 MW PPA and 133 MW Renewable Optimization Agreement, but it likely will be forced to purchase electricity on the market at a substantially higher cost. In addition, a failure to meet the 250 MW PPA and 133 MW Renewable Optimization Agreement's in-service date will adversely affect the infrastructure investments that Manitoba Hydro is making in Canada, including the billions of dollars it is spending to build new hydroelectric generation facilities and associated transmission facilities, including for sale to other Midwest utilities.

Making a positive impact on communities. The Applicant's shared values are central to the company and the individuals who work for the company. They distinguish the Applicant as a citizen and an employer. Among the Applicant's core values is its commitment to contribute skills, knowledge, and resources to make a positive impact on communities. In practice, that means taking the time to meet with the people in the communities that may be affected by the Project, listening to their concerns, and looking for ways to respond to those concerns. Building on this strong, values-based foundation, the Applicant will achieve the right results, the right way.

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