

Memorandum

To: Commissioners Christmann, Haugen-Hoffart and Fedorchak

From: Robert Frank Public Utility Analyst



Date: July 3, 2023

Re: Otter Tail Power Company, Amend - Luverne Wind Upgrade, Siting Application, Case No. PU-23-176

On October 30, 2008, in Case No. PU-08-34, the Commission issued its Findings of Fact, Conclusions of Law and Order issuing Certificate of Site Compatibility Number 9 to M-Power, LLC authorizing the construction of Luverne Wind Farm in Steele County, North Dakota. On May 20, 2009, in Case No. PU-09-73, the Commission adopted an Order reissuing Certificate of Site Compatibility No. 9 to Otter Tail Power Company (OTP).

On May 8, 2023, in Case No. PU-23-176, OTP filed an application to amend Certificate of Site Compatibility No. 9 to repower the Luverne Wind Farm (Project). The wind farm consists of 33 General Electric (GE) turbines rated at 1.5 MW with 82.5-meter rotor diameter blades. The Project would upgrade the turbines to 1.6 MW GE generator technology and increase the rotor diameter blades to 97-meters and upgrade the hubs and gearboxes. As a result of the upgrade, the Luverne Wind Farm's total nameplate generating capacity will increase to 52.8 MW, but its output will remain at 49.5 MW, the amount of OTP's Generator Interconnection Agreement.

The upgrade will reuse the existing structural steel towers and the existing nacelles. OTP plans to use the existing turbine foundations with reinforcement if needed, the collection and communication systems, and the permanent access roads. During installation of the upgraded equipment, temporary construction disturbances will occur, but activities are expected to be within the bounds of areas previously disturbed by initial construction.

OTP had completed an environmental and regulatory compliance analysis and an associated report prepared by its environmental consultant, Atwell, LCC. It is not anticipated that the Project will disturb areas outside those designated in the October 20, 2008 Findings of Facts, Conclusions of Law and Order issued by the Commission. If this does occur, OTP will complete cultural resource field surveys and avoid any relevant cultural resources identified. OTP will conduct an architectural history survey to identify and evaluate potential impacts to architectural resources. No wetlands and waterbodies have been identified within the Project area.

A shadow flicker assessment was completed by Epsilon Associates, Inc. and this demonstrated that the shadow flicker levels are not anticipated to exceed 30 hours per year at any occupied residence. A sound analysis was also completed with the proposed upgraded technology. Sound levels within 100 feet of five occupied residences were found to be above 45 dBA. OTP has obtained sound waivers from two of the residences and is pursuing waivers from the other three. OTP will install noise-reduction technology to comply with the sound level requirements for the three affected residences.

The project complies with all exclusion areas with the exception of two turbines (#155 and #157) that are within the non-participating property line exclusion area. OTP is pursuing waivers and requests that the Commission grant a variance conditioned upon submission of these waivers. If waivers are not obtained, OTP will not upgrade equipment at the affected turbines.

Staff has reviewed the application and believes it is reasonable and prudent. An informal meeting is scheduled for July 13, 2023.

c. Mollie Smith