

STATE OF NORTH DAKOTA
PUBLIC SERVICE COMMISSION

Otter Tail Power Company
Amend – Ashtabula I Wind Upgrade Project - Barnes Cnty
Siting Application

Case No. PU-23-252

ORDER

October 24, 2023

Preliminary Statement

On May 30, 2008, in Case No. PU-08-32, the Commission issued its Findings of Fact, Conclusions of Law and Order, issuing Certificate of Site Compatibility Number 7 to Ashtabula Wind, LLC, authorizing the construction of an up to 200 MW wind energy facility known as the Ashtabula Wind Energy Facility, in Barnes County, North Dakota.

On April 13, 2009, in Case No. PU-09-53, the Commission issued its Order Granting Partial Certificate Transfer, approving a request to transfer a 48 MW portion of the Ashtabula Wind Energy Center to Otter Tail Power Company (OTP), and issuing Certificate of Site Compatibility Number 10 to OTP for its portion of the facility, known as the Ashtabula I Wind Energy Facility (Project).

On June 28, 2023, OTP filed an application to amend Certificate of Site Compatibility Number 10 to repower the 32 existing 1.5 MW General Electric (GE) 77-meter rotor diameter blades, hubs, and gearboxes with upgraded 1.6 MW GE generator technology and 91-meter rotor diameter blades, hubs, and gearboxes (Upgrade Project). The filing included a request for variances from the following Exclusion Area requirements: (1) one and one-tenth the height of the turbine from the property line of a nonparticipating landowner for four turbines, subject to OTP filing waivers executed by the affected nonparticipating landowners; and (2) one and one-tenth the height of the turbine plus 75 feet from the centerline of a county roadway, subject to submitting approval from Barnes County.

On June 28, 2023, OTP also filed an Application to Amend Orders and Certificates requesting removal of the Project's total nameplate generating capacity limit in the relevant 2009 Order and Certificate of Site Compatibility Number 10.

On June 28, 2023, OTP filed an Application for Protection of Information regarding cultural resource location information.

On August 2, 2023, the Commission issued a Notice of Filing and Notice of Opportunity for Hearing, requesting comments and requests for hearing by September 15, 2023. The notice identified the following issues to be considered:

1. Will the location, construction, and operation of the proposed facilities produce minimal adverse effects on the

environment and upon the welfare of the citizens of North Dakota?

2. Is the proposed facility compatible with the environmental preservation and the efficient use of resources?

3. Will the proposed facility location minimize adverse human and environmental impact while ensuring continuing system reliability and integrity and ensuring that energy needs are met and fulfilled in an orderly and timely fashion?

On August 18, 2023, the State Historical Society of North Dakota (SHSND) filed comments.

On August 21, 2023, the North Dakota Department Environmental Quality filed comments.

On August 21, 2023, the North Dakota Game and Fish Department filed comments.

On September 6, 2023, the Commission held an Informal Hearing to discuss the application with OTP and Commission Staff.

Discussion

1. OTP is a public utility company authorized to conduct business in North Dakota. OTP provides retail electric service in North Dakota.

2. OTP currently owns and operates 32 GE 1.5 MW turbines at the Project, with a nameplate capacity of 48 MW.

3. OTP proposes to improve the 32 turbines at the Project by replacing the current GE 1.5 MW turbine blades (77 meter/252.6 feet rotor diameter), hub, and gearbox with new technology. The Upgrade Project will include new GE 1.6 MW generator technology and new 91 meter (298.6 feet) rotor diameter blades, hub, and gearbox.

4. The Upgrade Project's total nameplate generating capacity would increase to 51.2 MW; however, OTP will limit the output at the point of interconnection to 48 MW in accordance with its Generator Interconnection Agreement.

5. To accommodate the potential increase in nameplate capacity, OTP requests that the Commission amend the Commission's 2009 Order (Case No. PU-09-53), along with Certificate of Site Compatibility Number 10, to remove the designated 48 MW nameplate capacity limitation.

6. All 32 of the turbines will reuse the existing 80 meter (262.5 feet) structural steel towers and existing nacelles, and as a result, turbine locations will not change. OTP plans to use the existing turbine foundations (with reinforcement, if needed), collection and communications systems, and permanent access roads. Other associated facilities will remain unchanged.

7. Due to the increased blade length, the total turbine tip height would be 125.5 meters (411.8 feet).

8. During installation of the upgraded equipment, existing access roads will be temporarily widened to accommodate delivery and staging of components and equipment. Temporary crane paths may also be needed to facilitate equipment removal and installation. A temporary laydown yard will also be used during installation. All activities are expected to occur within areas previously disturbed by initial construction. Temporarily impacted areas will be restored in compliance with applicable provisions of the Commission's 2008 Order (Case No. PU-08-32).

9. The Upgrade Project activities will occur wholly within the site designated by the Commission for the Project in the Commission's 2008 Order (Case No. PU-08-32).

10. OTP conducted a new sound assessment using a 1.6 MW turbine with a 91 meter rotor diameter and 80 meter hub height. Modeling determined that sound levels may exceed 45 dBA within 100 feet of five occupied residences. OTP has obtained and filed with the Commission copies of waivers from the owner(s) of three affected residences. With respect to the remaining two residences with modeled sound levels above 45 dBA within 100 feet, OTP will either obtain a waiver from the owner(s) of each residence or install noise-reduction technology, such as noise-reducing operating modes (NRO) and/or low-noise trailing edge (LNTE) blades as needed. Accordingly, sound levels within 100 feet of an inhabited residence or community building will not exceed 45 dBA, unless waived in writing by the owner of such residence or building.

11. OTP conducted a new shadow flicker assessment using the 91 meter rotor diameter at the 80 meter hub height. Shadow flicker levels from the Upgrade Project will be 30 hours per year or less at all occupied residences.

12. OTP has coordinated with the SHSND. Because the Upgrade Project activities will occur primarily within areas previously surveyed for cultural resources, and all activities will occur within areas previously disturbed by initial construction, additional cultural resource surveys are not necessary, except to the extent crane paths are located in previously unsurveyed areas. This is consistent with the recommendations by the SHSND regarding OTP's Langdon Wind Energy Center Upgrade Project.¹ If any crane paths are located outside of areas previously surveyed for cultural resources, OTP will complete cultural resource field surveys and will avoid any resources identified that are

¹ See OTP's Certification of Bradley E. Tollerson, *Amend – Langdon Wind Energy Center Upgrade Project Siting Application – Cavalier County* (Case No. PU-23-086).

eligible or unevaluated for listing on the National Register of Historic Places (NRHP). The Upgrade Project will not impact cultural resources.

13. Based on recommendations from the SHSND, OTP will complete an architectural history survey for the area between the one-mile and two-mile radius of individual turbine locations.

14. OTP provided information regarding its plan for disposal of turbine components removed in connection with the Upgrade Project. Once removed, the existing blades will be transported to a facility for repurposing, with no blades deposited in a landfill.

15. The Commission's 2008 Order (Case No. PU-08-32) predates the Commission's current wind facility setback rules.

16. Four turbines do not meet the current Exclusion Area of one and one-tenth the height of the turbine from the property line of a nonparticipating landowner. OTP plans to obtain written waivers from the affected nonparticipating landowners. OTP requests that the Commission grant a variance conditioned upon submission of the landowner waivers. If any landowner is not willing to grant a waiver, OTP will not upgrade equipment at the affected turbine(s).

17. One turbine does not meet the current Exclusion Area of one and one-tenth the height of the turbine plus 75 feet from the centerline of a county roadway. OTP plans to obtain approval from Barnes County. OTP requests that the Commission grant a variance conditioned upon submission of approval from Barnes County. If Barnes County is not willing to grant approval, OTP will not upgrade equipment at the affected turbine.

18. The Upgrade Project construction will not affect any known Exclusion or Avoidance Areas.

19. The Project is currently operating with an aircraft detection lighting system (ADLS). Subject to Federal Aviation Administration approval, OTP will continue to operate an ADLS or other technology suitable to the Commission on the Upgrade Project in accordance with N.D.C.C. § 49-22-16.4.

20. OTP will continue to comply with all applicable conditions and protections in the siting laws and rules and Commission Orders previously issued for the Project.

21. The construction, operation, and maintenance of the proposed facilities at the site designated for the Project will produce minimal adverse effects on the environment and upon the welfare of the citizens of North Dakota.

22. The proposed facilities at the site designated for the Project are compatible with the environmental preservation and the efficient use of resources.

23. The proposed facility locations at the site designated for the Project will minimize adverse human and environmental impact while ensuring continuing system reliability and integrity and ensuring that energy needs are met and fulfilled in an orderly and timely fashion.

24. The Commission has authority to protect cultural resource location information pursuant to N.D.C.C. § 49-22-26.

Having considered this matter, the Commission finds the Commission's 2009 Order (Case No. PU-09-53), along with Certificate of Site Compatibility No. 10, should be amended to remove the overall 48 MW nameplate capacity limitation. Therefore, the Commission issues the following:

Order

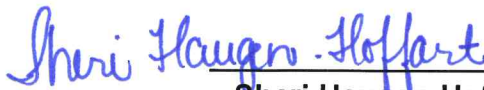
The Commission Orders:

1. The Commission's 2009 Order (Case No. PU-09-53) is amended to remove the 48 MW nameplate capacity limitation.
2. First Amended First Reissued Certificate of Site Compatibility No. 10 is issued to Otter Tail Power Company, removing the 48 MW nameplate capacity limitation.
3. OTP's Application for Protection of Information is granted.
4. A variance of the nonparticipating property line exclusion area of one and one-tenth the height of the turbine is granted, conditioned upon OTP obtaining and filing with the Commission a copy of a written waiver from the affected landowner(s) prior to any construction activities at those turbines. If any affected landowner is not willing to grant a waiver, OTP will not upgrade equipment at the affected turbine.
5. A variance of the county roadway exclusion area of one and one-tenth the height of the turbine plus 75 feet from the centerline of the roadway is granted, conditioned upon OTP obtaining and filing with the Commission a copy of an approval by Barnes County prior to any construction activities at that turbine. If Barnes County is not willing to grant an approval, OTP will not upgrade equipment at the affected turbine.
6. OTP will dispose of turbine components in accordance with the disposal plan outlined in Exhibit A to the Certification of Timothy G. Rogelstad. If solid waste disposal occurs in North Dakota, it shall be at a disposal facility permitted by the North Dakota Department of Environmental Quality – Division of Waste Management.
7. OTP must complete an architectural survey for the Upgrade Project, as requested by the SHSND. OTP may not begin construction until it obtains and files with the Commission a letter from the SHSND concurring that there are no architectural

properties affected by the Upgrade Project or that any impacts have been or will be properly mitigated in consultation with the SHSND.

8. All applicable provisions and requirements in the Commission's 2008 Order, 2009 Order, and Certificate of Site Compatibility No. 10 (Case No. PU-09-53) continue to apply except where amended by this Order.

PUBLIC SERVICE COMMISSION



Sheri Haugen-Hoffart
Commissioner



Randy Christmann
Chair



Julie Fedorchak
Commissioner