

October 10, 2022

VIA E-MAIL AND FEDERAL EXPRESS

Mr. Steven Kahl
Executive Secretary
North Dakota Public Service Commission
600 E. Boulevard, Dept. 408
Bismarck, ND 58505-0480

**Re: Northern States Power Company
Border Winds Energy Project Repower – Rolette County
Case Nos. PU-22-173**

Dear Mr. Kahl:

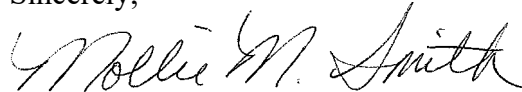
Northern States Power Company submits the following for filing in the above-referenced matter:

1. Proposed Order; and
2. State Historical Society of North Dakota Concurrence Letter, dated July 14, 2022.

An original and six copies of this letter and the above-referenced documents are enclosed. Electronic copies of the enclosed documents and this letter were filed with the Commission today via e-mail.

If you have any questions, please let me know.

Sincerely,



MOLLIE M. SMITH

MMS/77123374

Enclosures

cc: Victor Schock (w/ enclosures, via e-mail)
Brian Johnson (w/ enclosures, via e-mail)
Ellen Heine (w/ enclosures, via e-mail)

27 PU-22-173 Filed 10/10/2022 Pages: 7
Letter enclosing proposed Order and agency correspondence
Northern States Power Company
Mollie Smith, Fredrikson&Byron, P.A.

STATE OF NORTH DAKOTA
PUBLIC SERVICE COMMISSION

Northern States Power Company
Border Winds Energy Project Repower – Rolette County
Siting Application

Case No. PU-22-173

ORDER

_____, 2022

Preliminary Statement

On May 5, 2011, the Public Service Commission (Commission) issued Findings of Fact, Conclusions of Law and Order (2011 Order) and Certificate of Site Compatibility No. 21 (Case No. PU-08-797) to Sequoia Energy US, Inc., designating a location in Rolette County, North Dakota for the construction, operation, and maintenance of up to 150 megawatts (MW) of wind turbines. The site is known as the Border Winds Energy Project (Project).

On April 9, 2014, the Commission issued an Order Reissuing and Amending Certificate (2014 Order) (Case Nos. PU-08-797 and PU-14-31), approving a request for a turbine model change and resulting layout changes, granting the request to transfer Certificate of Site Compatibility No. 21 to Border Winds Energy, LLC, and issuing First Reissued and First Amended Certificate of Site Compatibility No. 21 to Border Winds Energy, LLC.

On August 20, 2014, the Commission issued Certificate of Public Convenience and Necessity No. 5842 to Northern States Power Company (NSP) authorizing the purchase and operation of the Project (Case No. PU-13-743).

On December 3, 2015, Border Winds Energy, LLC was merged into NSP.

On January 10, 2018, the Commission issued an Order on Reissuing Certificate (2018 Order) approving the transfer of Certificate of Site Compatibility No. 21 from Border Winds Energy, LLC to NSP and issued the Second Reissued First Amended Certificate of Site Compatibility No. 21 to NSP (Case No. PU-17-362).

On November 5, 2021, NSP filed a Certification relating to N.D.C.C. § 49-22-03(3), 49-22-16.4(3), and 49-22-17, providing information and maps related to the installation of an Aircraft Detection Lighting System (ADLS) at the Project (Case No. PU-17-362).

On March 31, 2022, NSP filed an Application to Amend Orders and Certification relating to N.D.C.C. § 49-03-03(a)(4) stating that it intends to improve the turbines operating at the Project by replacing the existing Vestas V100-2.0 blades, hub, gearbox, pad mount transformer, and generator with a new repower package of Vestas V110-2.2 blades, hub, gearbox, pad mount transformer, and generator (Repower Project). The

total nameplate generating capacity of the Repower Project will be 165 MW, but NSP will limit the output at the point of interconnection to 150 MW in accordance with its Generator Interconnection Agreement (GIA).

On April 1, 2022, NSP filed an Application for Protection of Information related to cultural resource location information.

On May 6, 2022, the Commission issued a Notice of Filing and Notice of Opportunity for Hearing, requesting comments and requests for hearing by June 17, 2022. 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. Are the proposed facilities compatible with the environmental preservation and the efficient use of resources?
3. Will the proposed facility locations 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 June 2, 2022, the State Historical Society of North Dakota (SHSND) filed comments.

On June 7, 2022, Commission Staff filed a response to NSP's Application for Protection of Information.

On June 13, 2022, NSP filed additional correspondence from SHSND.

On June 29, 2022, NSP filed its presentation for the informal hearing.

On June 29, 2022, an informal hearing was held at the Commission hearing room on the 12th Floor of the Capitol Building in Bismarck, North Dakota.

On July 27, 2022, the Commission filed an Order on Protection of Information, granting NSP's Application for Protection of Information.

On August 10, 2022, NSP filed supplemental information regarding serrated trailing edge (STE) technology and NSP's plans for disposal of turbine components removed during the repowering of the Project. NSP also filed additional SHSND correspondence.

On October 10, 2022, NSP filed a concurrence letter from the SHSND and a proposed Order.

Discussion

1. NSP is a public utility duly authorized to conduct business in North Dakota. NSP provides retail electric and natural gas service in five upper Midwest states, including North Dakota where it serves retail electric customers under the regulatory jurisdiction of the Commission.
2. NSP currently owns and operates 75 Vestas V100-2.0 MW turbines at the Project, with a nameplate capacity of 150 MW.
3. NSP proposes to improve the 75 turbines at the Project by replacing the current turbine technology (Vestas V100-2.0 MW turbines) with new technology (Vestas V110-2.2 MW turbines). Repowering the Project will consist of removing and replacing the existing Vestas V100-2.0 blades, hub, gearbox, pad mount transformer, and generator with a new repower package of Vestas V110-2.2 blades, hub, gearbox, pad mount transformer, and generator. Replacing these mechanisms may require full nacelle replacement. The total nameplate generating capacity of the Repower Project will be 165 MW, but NSP will limit the output at the point of interconnection to 150 MW in accordance with its GIA.
4. NSP requests that the Commission amend the Commission's 2011 Order (Case No. PU-08-797), as amended in the 2014 Order (Case No. PU-14-31), and the 2018 Order (Case No. PU-17-362), along with the Second Reissued First Amended Certificate No. 21, to remove the designated nameplate megawatt limitation.
5. All 75 of the Vestas V110-2.2 turbines will reuse the 75 existing 95 meter (311.7 feet) structural steel towers and, as a result, turbine locations will not change. NSP plans to use the existing turbine foundations (with reinforcement, if needed), collection and communications systems, permanent access roads, and Project substation (with upgrades to accommodate the repower technology, as needed). Other associated facilities will remain unchanged.
6. The hub height of the turbines will remain at 95 meters (311.7 feet); however, the installation of new blades will increase the rotor diameter from 100 meters (328.1 feet) to 110 meters (360.9 feet).
7. Existing access roads will be temporarily widened during installation of the repowering technology 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 located near the existing operations and maintenance building will also be used during installation. Temporarily impacted areas will be restored in compliance with applicable provisions of the Commission's 2011 Order (Case No. PU-08-797).

8. The repowering activities will occur wholly within the site designated by the Commission for the Project.
9. NSP conducted a new sound assessment. Initial modeling (with standard edge blades) determined that the sound may exceed 45 dBA within 100 feet of six occupied residences. To address this issue, STE blades were added to 10 turbines (T11, T15, T16, T17, T18, T19, T37, T57, T58, and T60). With STE blades on the 10 turbines, sound levels for the Repower Project do not exceed 45 dBA within 100 feet of any occupied residence or community building.
10. NSP also completed a shadow flicker assessment. Shadow flicker levels from the Repower Project will be 30 hours per year or less at all occupied residences.
11. NSP performed Class I cultural resource literature reviews and Class III cultural resource surveys. SHSND has concurred with the Class III reports. The Repower Project activities will occur within areas previously surveyed for cultural resources, and the Repower Project will not impact cultural resources.
12. NSP provided information regarding its plan for disposal of turbine components removed in connection with the Repower Project. Options for disposal of blades and hub spinners include waste-to-energy, reuse or recycling. NSP will not dispose of blades or hub spinners at the Repower Project site.
13. The Commission's 2011 Order (Case No. PU-08-797) predates the Commission's current wind facility setback rules.
14. Repower Project construction will not affect any Exclusion or Avoidance Areas.
15. Turbine T-57 does not meet the current exclusion area of one and one-tenth the height of the turbine from the property line of a nonparticipating landowner. However, NSP plans to obtain a written waiver from the affected nonparticipating landowner, and requests that the Commission grant a variance of the nonparticipating property line setback conditioned on obtaining and filing a copy of the written waiver with the Commission prior to installation of repower technology on Turbine T-57. Absent receipt of a waiver, NSP will not install repower technology at Turbine T-57.
16. The Project is currently operating with an ADLS. Subject to Federal Aviation Administration approval, NSP will continue to operate an ADLS or other technology suitable to the Commission on the Project in accordance with N.D.C.C. § 49-22-16.4.
17. NSP will continue to comply with all applicable conditions and protections in the siting laws and rules and Commission Orders previously issued for the Project.
18. 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.

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

20. 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.

Having considered this matter, the Commission finds the Commission's 2011 Order (Case No. PU-08-797), as amended in the 2014 Order (Case No. PU-14-31), and 2018 Order (Case No. PU-17-362), along with the Second Reissued First Amended Certificate No. 21 should be amended to remove the 150 MW nameplate capacity limitation. Therefore, the Commission issues the following:

Order

The Commission orders:

1. The Commission's 2011 Order (Case No. PU-08-797), as amended in the 2014 Order (Case No. PU-14-31) and 2018 Order (Case No. PU-17-362), is amended to remove the 150 MW nameplate capacity limitation.
2. Second Amended Certificate of Site Compatibility No. 21 is issued to Northern States Power Company, removing the 150 MW designated capacity threshold.
3. A variance of the nonparticipating property line exclusion area of one and one-tenth the height of the turbine is granted for Turbine T-57 so long as NSP obtains and files with the Commission a copy of a written waiver from the affected landowner prior to installation of repower technology on Turbine T-57.
4. NSP will dispose of turbine components in accordance with the disposal plan outlined in NSP's Supplemental Information: Disposal of Removed Turbine Components, filed August 10, 2022. 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.
5. All applicable provisions and requirements in the Commission's 2011 Order (Case No. PU-08-797), as amended in the 2014 Order (Case No. PU-14-31), and the 2018 Order (Case No. PU-17-362), along with the Second Reissued First Amended Certificate No. 21 continue to apply except where amended by this Order.

PUBLIC SERVICE COMMISSION

Randy Christmann
Commissioner

Julie Fedorchak
Chair

Sheri Haugen-Hoffart
Commissioner



July 14, 2022

Dean Sather
Westwood Professional Services, Inc.
12701 Whitewater Dr
Minnetonka, MN 55343

ND SHPO Ref.: 22-0151 Border Winds Energy Repower Project in portions of 128 sections in Towner and Rolette Counties, North Dakota

Dear Dean,

We reviewed ND SHPO Ref.: 22-0151 Border Winds Energy Repower Project in portions of 128 sections in Towner and Rolette Counties, North Dakota. There are no significant sites affected provided the project occurs in the location and manner described in the documentation.

Thank you for the opportunity to review this project under North Dakota cultural resources consultation. This letter does not serve as federal agency consultation or SHPO consultation for compliance with Section 106 of the National Historic Preservation Act of 1966, as amended, (36 CFR Part 800), or the National Environmental Policy Act, as amended, (42 U.S.C. §§ 4321- 4347).

If you have any questions, please contact Lorna Meidinger, Historic Preservation Specialist at (701) 328-2089 or lbmeidinger@nd.gov

Sincerely,

for William D. Peterson PhD
Director, State Historical Society of North Dakota

22-0151