

North Bend Wind Project

*Finding of No Significant Impact and
Decision Document*

Hughes and Hyde Counties, South Dakota



**Western Area
Power Administration**

DOE/EA-2161

May 2023

AGENCY: U.S. Department of Energy (DOE), Western Area Power Administration (WAPA), Upper Great Plains Region (UGP).

ACTION: Determination of Finding of No Significant Impact and selection of Proposed Action for implementation.

SUMMARY: North Bend Wind Project, LLC (North Bend) proposes to construct the North Bend Wind Project (Project), an approximately 200-megawatt (MW) wind farm. The Project would be located within a roughly 47,000-acre area (Proposed Project Area) within which North Bend has found landowners willing to participate in the Project. The Proposed Project Area is located south of Harrold in Hughes County and south of Holabird in Hyde County, South Dakota. North Bend proposed to interconnect the Project with Western Area Power Administration's (WAPA's) existing Fort Thompson-Oahe230-kilovolt #2 transmission line. The Project and proposed interconnection are collectively referred to as the Proposed Action.

WAPA's decision to grant or deny the interconnection request is considered a federal action under the National Environmental Policy Act (NEPA). Therefore, an Environmental Assessment (EA) (*North Bend Wind Project, DOE/EA-2161*) was prepared to analyze the potential environmental impacts of the action. The EA tiered from the analysis conducted in the Upper Great Plains Wind Energy Final Programmatic Environmental Impact Statement (PEIS), a document prepared jointly by WAPA and the U.S. Fish and Wildlife Service (USFWS) (2015). Applicable material from the PEIS was incorporated by reference in the EA, in accordance with 40 Code of Federal Regulations (CFR) § 1501.11. The EA is intended to be read in conjunction with the PEIS, and the EA and PEIS together comprise the NEPA documentation for this Federal action.

A copy of all associated NEPA documents are available at the following website:

<https://www.wapa.gov/regions/UGP/Environment/Pages/environment.aspx>.

FOR FURTHER INFORMATION, CONTACT:

John Russell
Environmental Manager, Upper Great Plains Regional Office
Western Area Power Administration
2900 4th Avenue North
Billings, MT 59101
Email: jrussell@wapa.gov
Phone: (406) 255-2810

PROPOSED ACTION: The Proposed Action is for North Bend to construct and operate the Project, including the following components:

- 71 wind turbines
- 35 miles of new access roads to each wind turbine
- one meteorological (met) tower
- 68 miles of underground electrical collector systems
- a fiber optic communication system
- a new WAPA-owned point of interconnection (POI) facility on a 22-acre South Dakota School and Public Trust Land parcel
- a new North Bend-owned 7-acre substation near the WAPA POI facility
- up to 500 feet of 230-kilovolt (kV) overhead transmission (gen-tie) line from the substation to the WAPA POI facility
- a 10-acre temporary laydown/staging area and concrete batch plant and
- use of an existing, adjacent five-acre operations and maintenance (O&M) facility.

WAPA would enter into an Interconnection Agreement with Southwest Power Pool and North Bend to allow the Project to interconnect to WAPA’s existing Fort Thompson-Oahe 230-kV #2 transmission line at a newly constructed WAPA switchyard. , WAPA would make any necessary design or equipment changes to WAPA-owned facilities, as specified in the Interconnection Agreement, to accommodate the interconnection.

ALTERNATIVES: DOE requires that EAs include a “No Action” alternative (10 CFR §1021.321(c)). The EA presented a “No Action” alternative, which assumed the Project would not be built.

PUBLIC INVOLVEMENT: Multiple opportunities for public involvement were offered. Public involvement began with a virtual scoping meeting on January 28, 2021. The scoping meeting was advertised through newspaper announcements, the project website, and individual letters to agencies, tribes, and residents within and near the Project area. The public scoping meeting documentation is included in Appendix A of the EA. WAPA circulated the draft EA for public review and comment on March 14, 2022. Comments on the draft EA were accepted through April 14, 2023. Comments and responses are included in Appendix M of the EA.

TRIBAL INVOLVEMENT: Pursuant to Section 106 of the National Historic Preservation Act, WAPA initiated tribal consultations, by letter, with the following 11 tribes on January 27, 2021:

- Apache Tribe of Oklahoma
- Cheyenne and Arapaho Tribes
- Cheyenne River Sioux Tribe
- Crow Creek Sioux Tribe
- Fort Belknap Indian Community
- Lower Brule Sioux Tribe
- Oglala Sioux Tribe
- Rosebud Sioux Tribe
- Standing Rock Sioux Tribe
- Santee Sioux Tribe of Nebraska
- Yankton Sioux Tribe

WAPA received responses from the Yankton Sioux, Crow Creek Sioux, and Rosebud Sioux tribes, which also participated in cultural resource surveys during the cultural resource surveys in 2020 and 2021. No other tribes provided a response.

ENVIRONMENTAL IMPACTS: The EA disclosed the potential environmental impacts of the Proposed Action and No Action alternatives. A summary of environmental impacts for each resource area is described in Table 1, below.

Table 1: Summary of Environmental Impacts of Alternatives

| Resource Area | Proposed Action Alternative Impacts | No Action Alternative Impacts |
|-----------------------------|--|---|
| Soil and Geologic Resources | Temporary soil disturbances include 586 acres, which includes six acres of prime farmland. Permanent soil disturbances include 88 acres during operations, which includes 0.7 acre of prime farmland. | No Project-related impacts to soil or geologic resources would occur, but ongoing impacts related to agriculture and gravel mining are expected to continue at existing intensities and can result in soil erosion, compaction, and/or loss of topsoil. |
| Water Resources | Construction would impact less than one mile of creeks and approximately four acres of ponds. All USFWS Wetland Easements would be avoided. During operations, access roads and the POI facility will result in impacts to 0.2 mile of creeks. An estimated 7.8 acres of wetlands would be temporarily impacted during construction due to access roads and collector lines. One-half acre of | No Project-related impacts to surface or groundwater resources would occur, but ongoing impacts, primarily related to agriculture, are expected to continue at existing intensities. Fertilizers and pesticides used for agriculture can potentially be transported to local streams, rivers, and |

Table 1: Summary of Environmental Impacts of Alternatives

| Resource Area | Proposed Action Alternative Impacts | No Action Alternative Impacts |
|---------------------------|---|---|
| | wetlands would permanently be impacted during operations due to access roads. | groundwater, leading to degradation of water quality. |
| Air Quality | An increase in emissions is expected during construction, operation, and decommissioning. Cumulatively, these emissions would contribute to other emissions on the local scale but are not expected to occur at a measurable level | Current emissions are expected to continue at a similar rate. |
| Vegetation and Land Cover | <p>The Project would affect up to 296 acres of cropland, 273 acres of herbaceous vegetation, and 18 acres of other (developed, hay/pasture, shrub/scrub) land cover types during construction. If alternate turbine locations are selected, they could impact up to eight acres of cropland and six acres of herbaceous grasslands depending on the selected turbine location. During operations, up to 38 acres of cropland, 46 acres of herbaceous vegetation, and four acres of other land cover types would be permanently removed and converted to developed uses.</p> <p>About 264 acres of untilled grassland would be temporarily disturbed by crushing or trampling from vehicles, equipment, and workers during Project construction. About 43 acres would be affected long term during Project operation due to conversion of existing vegetation into developed Project facilities.</p> | No Project-related impacts to vegetation resources would occur, but ongoing impacts, such as conversion of herbaceous land cover types to cropland, are expected to continue at existing intensities. |
| Wildlife | <p>Impacts could occur during all Project phases of construction, operations, maintenance, and decommissioning. Impacts are broadly categorized as: 1) injury or mortality, 2) habitat modification, and 3) disturbance.</p> <p>Collisions with turbines would most likely involve resident birds, including breeding birds and juveniles, who forage and fly in the Analysis Area (i.e., the Proposed Project Area unless stated otherwise below for specific species), or migrant birds who seasonally move through the area. Post-construction fatality monitoring reports at wind energy facilities from the Mountain-Prairie region of North America, which includes South Dakota, show a wide variation in levels of bird mortality, ranging from 0.3 to 9.15 birds per MW per year.</p> | No Project-related impacts to wildlife would occur, and ongoing impacts, mostly agriculture related, are expected to continue at existing intensities. |

Table 1: Summary of Environmental Impacts of Alternatives

| Resource Area | Proposed Action Alternative Impacts | No Action Alternative Impacts |
|-----------------------------------|--|---|
| | <p>Wildlife could be injured or die if they collide with wind turbines during operations, or if they are hit by a vehicle during construction or maintenance activities. All species in the area could be exposed to reduction, alteration, and fragmentation of habitat for the operational life of the Project due to the added infrastructure and layout of turbines and roads. Wildlife in the area could be temporarily disturbed by noise from the presence of equipment and workers during construction, or during maintenance activities for operations. Potential for mortality from construction equipment is expected to occur but would be minimal. Project construction and operations could temporarily affect wildlife, including big game, game birds, general avian species, small mammals, and pollinators, through habitat loss.</p> <p>WAPA compared fatality estimates from a similar wind energy facility that shares a portion of its footprint with the North Bend Project Area. At the adjoining facility, Engie estimated 3.43 birds/turbine/year and 2.46 bats/turbine/year fatalities. Extrapolating these estimates, over the 30-year lifespan of the Project, it can be assumed North Bend turbines may cause approximately 7,500 bird and approximately 5,500 bat fatalities.</p> | |
| Threatened and Endangered Species | <p>WAPA, in informal consultation with the USFWS and based on adherence to avoidance, minimization, and mitigation measures in the PEIS and Programmatic Biological Assessment, has determined the Project may affect but is not likely to adversely affect the whooping crane, northern long-eared bat, piping plover, and rufa red knot. WAPA has also determined the Project would result in no effect to pallid sturgeon and any designated critical habitat for these five species.</p> <p>The Project adheres to the conservation measures outlined in the UGP Wind PEIS and PBA, including mitigation offsets to 1,310.8 acres of impacted wetlands within 0.5 miles of turbines located within suitable whooping crane habitat, valued at an estimated \$2,529/acre plus</p> | No Project-related impacts to threatened or endangered species would occur, but ongoing impacts are expected to continue. |

Table 1: Summary of Environmental Impacts of Alternatives

| Resource Area | Proposed Action Alternative Impacts | No Action Alternative Impacts |
|-----------------------------|---|---|
| | administrative costs. The Project proponent must complete the mitigation obligation, or contribute necessary funding to the third-party entity, prior to interconnection with WAPA. | |
| Socioeconomic | <p>Direct impacts occur because of expenditures of wages and salaries, procurement of goods and services, and sales and income tax. Indirect impacts occur as Project wages, salaries, and procurement expenditures subsequently circulate through the economy, creating additional employment, income, and tax revenue. Other impacts discussed include recreation and property values.</p> <p>The number of short-term construction jobs created is expected to be approximately 400 jobs over an estimated 8-month peak construction period, of which 130 jobs would be onsite at any given time. Construction of the Project would require skilled labor, such as foremen, carpenters, iron workers, electricians, millwrights, and heavy equipment operators, as well as unskilled laborers. This diverse workforce would be needed to install the Project components, such as the wind turbines, access roads, underground collection line, and substation.</p> | No Project-related impacts to socioeconomics would occur under the No Action Alternative. Existing socioeconomic activities in Hughes and Hyde counties, primarily related to agriculture, would likely continue. |
| Environmental Justice | No disproportionately high and adverse human health or environmental effects on minority or low-income populations are expected. | No disproportionately high and adverse human health or environmental effects on minority or low-income populations are expected. |
| Transportation and Aviation | <p>Direct impacts occur because of increased transportation activities during construction and operation. The primary impact to transportation would be increased traffic on Highway 200 and Highway 649, which are the routes workers would likely use to travel to and from the construction area and that would be used to transport necessary construction materials and equipment. Impacts would be temporary, lasting the duration of construction.</p> <p>Commercial air traffic would not be negatively impacted by the development and operation of the Project. Helicopters and airplanes flying within the Project vicinity for personal or</p> | No Project-related impacts to transportation or aviation would occur under the No Action Alternative. Existing transportation and aviation activities, including spray applications for agriculture, would likely continue. |

Table 1: Summary of Environmental Impacts of Alternatives

| Resource Area | Proposed Action Alternative Impacts | No Action Alternative Impacts |
|-------------------------------------|---|---|
| | <p>business use would also have additional tower obstacles. Due to the height of the turbines, a notification was submitted to the FAA, as required prior to construction. Based on distance to the nearest airports (Harrold Municipal and Highmore Municipal airports) and Project implementation of FAA compliance measures, the FAA determined the Project would present no hazard to aircraft.</p> <p>The Project turbines could interfere with aerial applicators.</p> | |
| Noise | <p>Construction of the Project may cause short-term and unavoidable noise impacts. Sound levels would vary depending on the type and age of equipment, specific manufacturer and model, operations being performed, and overall condition of the equipment and exhaust system mufflers. Noise generated by construction would occur intermittently depending on the phase of construction and equipment in use at any given time and location. Each piece of equipment is expected to contribute to noise levels in the range of 73 to 88 dBA at 50-foot distance, and 41 to 56 dBA at a 2,000-foot distance. Construction activity would also generate traffic, such as trucks travelling to and from the site on public roads, which would also have noise effects.</p> | <p>No Project-related impacts related to noise would occur under the No Action Alternative. Existing noise levels typical of rural and undeveloped areas would likely continue.</p> |
| Visual Resources and Shadow Flicker | <p>Visual impacts to the landscape would depend on the extent to which the existing landscape is already altered from its natural condition, the number of viewers (e.g., residents, travelers, visiting recreational users) within visual range of the area, and the degree of public or agency concern for the quality of the landscape. Turbine visibility is influenced by several factors: distance of the turbines from viewers, direct line of sight, topography, tree vegetation, existing overhead powerlines, existing structures, and weather and lighting conditions, and viewer attitudes.</p> | <p>No Project-related impacts to visual resource would occur under the No Action Alternative. The existing viewshed, dominated by open vistas, gently rolling topography, agriculture, and the existing Triple H Wind Project located east of the Project Area, would likely remain relatively unchanged.</p> |
| Cultural Resources | <p>WAPA anticipates the Project would not adversely affect any of the 13 cultural resources or Tribal Cultural Properties (TCP) identified during the 2020 and 2021 surveys because these cultural resources would be avoided by re-routing</p> | <p>No Project-related impacts to cultural resources or TCPs would occur, but ongoing impacts are expected to continue at existing intensities.</p> |

Table 1: Summary of Environmental Impacts of Alternatives

| Resource Area | Proposed Action Alternative Impacts | No Action Alternative Impacts |
|--------------------|---|--|
| | <p>Project facilities. The South Dakota State Historic Preservation Office (SHPO) has concurred with a determination of “No Adverse Effect” provided that all eligible archaeological properties and TCPs will be avoided by a minimum of a 50-foot buffer marked with construction fencing, and that changes in the location or nature of Project activities, such as the need to construct additional access roads or other ancillary features, would require the submission of additional documentation pursuant to 36 Code of Federal Regulations [CFR] 800.4 (2000) and 36 CFR 800.11 (2009).</p> <p>The Crow Creek Sioux Tribe has also concurred with the determination of “No Adverse Effect to Historic Properties”. No other tribes responded to WAPA’s request for concurrence with its determination of effect.</p> | <p>Ongoing impacts likely include loss or damage to cultural resources and TCPs due to existing land use practices, such as agriculture.</p> |
| Health and Safety | <p>There are no Project-specific health or safety concerns beyond an increase in the number of obstructions for aerial spray applicators to avoid.</p> | <p>No Project-related impacts to health and safety would occur.</p> |
| Cumulative Impacts | <p>The Project would incrementally contribute to impacts on various resources within the region along with five other wind energy facilities within 60 miles. In particular, the Project would contribute to ongoing cumulative impacts to wildlife (such as whooping crane habitat loss and bird fatalities), the loss or degradation of grassland, and changes in the visual landscape. Table 4.1-1 of the EA summarizes potential cumulative effects associated with the Project.</p> <p>Cumulative impacts from the project would be similar to those addressed in the UGP PEIS. With the implementation of environmental commitments, the Project would avoid or reduce impacts to the resources described above.</p> | <p>Continuation of present and future activities and associated impacts, at existing intensity.</p> |

ENVIRONMENTAL COMMITMENTS: Environmental commitments have been incorporated as a required component of the Proposed Action alternative and are listed in Chapter 3 of the EA.

FINDING: WAPA evaluated the potential environmental impacts at a variety of contexts, including national, regional, and local scales and intensities. WAPA identified no significant impacts to environmental resources or the human environment, either individually or cumulatively with other actions in the general area, which would result from the Proposed Action or No Action alternative.

WAPA has found that neither alternative constitutes a major Federal action significantly affecting the quality of the human environment. As a result, a Finding of No Significant Impact (FONSI) is warranted, and an Environmental Impact Statement will not be prepared. This FONSI was prepared in accordance with Council on Environmental Quality Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act (40 CFR §1501.6) and the DOE NEPA Implementing Procedures (10 CFR §1021.322).

Regarding the Proposed Action alternative, the principal reason for the lack of significant environmental impacts is the use of avoidance measures and environmental commitments as a required component of the Project. Additionally:

- In compliance with Section 404 of the Clean Water Act, it is anticipated that Project impacts to jurisdictional wetlands and streams would be authorized under U.S. Army Corps of Engineers (USACE) Nationwide Permit 12. North Bend would coordinate with the USACE to adhere to Nationwide Permit 57 conditions.
- The Project would comply with the Hughes County and Hyde County ordinances for sound levels sound limits and setback limits. The Project would not install any wind turbine that would exceed the shadow flicker levels, unless waived in writing by the owner of the occupied residence, as agreed to in the Hyde County Ordinance Section 9-104-A-20.
- Because the Project would avoid surface disturbance to USFWS Grassland Easements, it would not need to obtain a permit(s) from USFWS for impacts to Grassland Easements.
- An Unanticipated Discovery Plan has been prepared outlining the procedures that should be followed if previously unknown archaeological sites or possible human remains are discovered during construction or operation activities.
- Human health effects sometimes attributed to wind farm noise and infrasound include sleep disturbance, vertigo, and stress. However, reliable evidence has not provided a link between infrasound and these adverse health effects. While studies have not reliably shown that wind farms cause direct health effects, negative attitudes about wind farms have been correlated with health effects such as sleep disturbance.

- The Project itself is typical of wind generation projects across the nation. It is not unique or unusual and does not establish a precedent for future actions.
- North Bend agreed to implement an additional 45 conditions, called Permit Conditions, as part of the South Dakota Public Utilities Commission (SD PUC) permitting process. The SD PUC published their permit approval on January 10, 2023.
- Consultation with SHPO has been completed in accordance with Section 106 of the National Historic Preservation Act, and SHPO has concurred with WAPA’s determination of “no adverse effect.”
- Consultation with the USFWS was completed in accordance with Section 7 of the Endangered Species Act, and concurrence was received on WAPA’s determinations of “no effect” and “may affect, not likely to adversely affect.”
- The Project does not violate any known federal, state, local or tribal law or requirement imposed for the protection of the environment. State, local, and tribal interests were given the opportunity to participate in the environmental analysis process. Consistent with requirements under 10 CFR § 1022 for federal agencies to avoid supporting development in a floodplain or new construction in a wetland wherever there are practicable alternatives, all Project infrastructure would be located outside mapped floodplains, and construction in wetlands was avoided where feasible.

DECISION RECORD: WAPA has selected the Proposed Action alternative, including all environmental commitments and minimization measures described in DOE/EA-2161, for implementation. Issued in Billings, Montana on .

Lloyd A. Linke
Senior Vice President and
Upper Great Plains Regional Manager