FINDING OF NO SIGNIFICANT IMPACT
for the Prevailing Wind Park Energy Facility Project

Bon Homme, Charles Mix, Hutchinson, and Yankton Counties, South Dakota
DOE/EA – 2061

AGENCY: U.S. Department of Energy (DOE), Western Area Power Administration (WAPA)

ACTION: Adoption of Environmental Assessment (EA), issuance of Finding of No Significant Impact (FONSI), and selection of Proposed Action for implementation.

SUMMARY: Prevailing Wind Park, LLC (Prevailing Wind Park) proposed to construct the Prevailing Wind Park Energy Facility (Project), a 216.6-megwatt (MW) nameplate capacity wind energy facility located on approximately 50,900 acres of privately owned land in Bon Homme, Charles Mix, Hutchinson, and Yankton Counties, South Dakota. Prevailing Wind Park proposed to interconnect the Project with WAPA's existing Utica Junction Substation. The Project and proposed interconnection are collectively referred to as the Proposed Action.

Prevailing Wind Park prepared an Environmental Assessment (EA) (*Prevailing Wind Park Energy Facility Final Environmental Assessment, DOE/EA-2061*) to analyze the potential environmental impacts of the Proposed 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) §§ 1502.20 and 1508.28. The EA was intended to be read in conjunction with the PEIS, and the EA and PEIS together comprise the NEPA documentation for this Federal action.

WAPA independently reviewed the EA and determined it met DOE NEPA standards. The EA included an assessment of the environmental effects of the individual actions which WAPA has jurisdiction over, as well as an analysis and disclosure of the potential environmental impacts of the Project.

FOR FURTHER INFORMATION, CONTACT: A copy of all associated NEPA documents are available at the following website: https://www.wapa.gov/regions/UGP/Environment/Pages/environment.aspx. For additional information, please contact:

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PROPOSED ACTION: Prevailing Wind Park's Proposed Action is to construct the Project, including the following components:

- Up to sixty one (61) wind turbines with an aggregate nameplate capacity of 216.6-MW,
- Underground electric collector lines,
- Access roads connecting to each turbine,
- Communications systems,
- New Project collector substation,
- Up to four (4) permanent meteorological towers,
- Operations and Maintenance facility,
- Temporary laydown yards,
- New 27.6-mile-long 115-kilovolt (kV) generation-tie (gen-tie) transmission line in Bon Homme and Yankton counties from the collector substation to the Utica Junction Substation, and
- New 115/230-kV substation (step-up substation) near the point of interconnection to step up the voltage to match that of WAPA's facilities.

WAPA's Proposed Action is to execute an interconnection agreement between WAPA and Prevailing Wind Park, in accordance with the Southwest Power Pool Tariff and the Federal Power Act, as well as perform any necessary upgrades within the Utica Junction Substation to accommodate the Project power.

ALTERNATIVES: DOE's NEPA regulations require 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 constructed.

PUBLIC INVOLVEMENT: Throughout the course of the project, there were substantial opportunities for public involvement. Public involvement began with a scoping meeting, held on December 13, 2017, in Tripp, South Dakota. The scoping meeting was advertised through newspaper announcements, a project website, and individual letters to agencies, tribes, and residents within and near the Project area. WAPA circulated the draft EA for public review and comment on January 22, 2019. Comments on the draft EA were accepted through February 25, 2019. Public involvement documentation, including copies of announcement materials and distribution lists, is available upon request and in Appendix Q. A summary of comments received and responses is included in Appendix R of the EA.

Agency coordination with Federal, State and local governments was initiated in 2017 and continues to the present day. Agencies contacted include:

- Advisory Council on Historic Preservation
- Bureau of Indian Affairs
- Bureau of Land Management
- Farm Service Agency
- Federal Aviation Administration
- Federal Emergency Management Agency (FEMA)
- Federal Energy Regulatory Commission
- Federal Highway Administration
- Natural Resources Conservation Service
- Rural Utilities Service
- U.S. Army Corps of Engineers (COE)
- U.S. Environmental Protection Agency (EPA)
- U.S. Fish and Wildlife Service (USFWS)
- U.S. Geological Survey
- U.S. House of Representatives

- U.S. Senate
- Office of the Governor
- Governor's Office of Economic Development
- Bon Homme County Conservation District
- Charles Mix County Conservation District
- Hutchinson County Conservation District
- Yankton County Conservation District
- South Dakota Department of Agriculture
- South Dakota Department of Environment and Natural Resources
- South Dakota Department of Transportation
- South Dakota Game, Fish and Parks Department
- South Dakota House of Representatives
- South Dakota Senate
- South Dakota Public Utilities Commission
- South Dakota School and Public Lands
- South Dakota State Historic Preservation Office (SHPO)
- South Dakota Department of Tribal Relations
- Bon Homme County
- Charles Mix County
- Hutchinson County
- Yankton County
- Avon School District
- Bon Homme School District
- Tripp-Delmont School District
- Wagner Community School District

Tribal coordination was initiated with several American Indian Tribes, beginning on July 10, 2017 and continuing to the present day. The tribal parties that were consulted regarding the Project were:

- Yankton Sioux Tribe
- Santee Sioux Nation
- Rosebud Sioux Tribe
- Ponca Tribe of Nebraska
- Omaha Tribe of Nebraska
- Fort Belknap Indian Community
- Cheyenne and Arapaho Tribes
- Apache Tribe of Oklahoma

Cheyenne and Arapaho Tribes indicated they knew of no historic properties in the Project Area. The Yankton Sioux Tribe indicated their desire to consult with WAPA on the Project. The Omaha Tribe of Nebraska indicated they would like to be informed of any general Project meetings that might be held. The other five tribes did not respond to WAPA's letter announcing the Project. WAPA attended a meeting with the Yankton Sioux Tribe – Business and Claims Committee on April 30, 2018, at the Tribal Council Headquarters in Wagner, South Dakota, as part of the Yankton Sioux's "*Ihanktonwan* Consultation *Wo'ope*" (Protocols for Consultation). WAPA also attended a meeting with the Yankton Sioux Tribal Council on November 15, 2018, in Wagner, South Dakota. Following the November meeting, the Yankton Sioux Tribe submitted a series of written questions to WAPA, indicating that upon receipt of satisfactory responses, Project consultation would be completed. WAPA responded to the Yankton Sioux Tribe on January 24, 2019.

In addition to the consultation meeting, representatives from the Yankton Sioux Tribe conducted Traditional Cultural Property surveys of the Project area during September, October, and November of 2018. Results of the survey were shared with the WAPA archaeologist.

ENVIRONMENTAL IMPACTS: The EA disclosed the potential environmental impacts of the Proposed Action and No Action Alternatives.

Table 1: Summary of Environmental Impacts of Alternatives

Resource Area	***Impacts***	
	Proposed Action Alternative	***No Action Alternative***
Land Cover & Land Use	Temporary disturbance expected on 761 acres of land (622 acres of agricultural/99 acres of non-agricultural). Permanent disturbance expected on 47 acres of land (42 acres of agricultural/5 acres of non-agricultural). No direct impacts to wetland or grassland easements. Indirect effects to wildlife, such as avoidance behaviors, may occur in these areas.	Continuation of current impacts, such as conversion of native land to developed uses, at existing intensity.
Geology and Soils	Temporary soil disturbance (such as compaction, increased erosion) expected on 761 acres. Permanent disturbance to 47 acres of soils, including soil compaction, excavation, and mixing of soil layers.	Continuation of current impacts, such as conversion of native land to developed uses, at existing intensity.
Water Resources	Temporary stream crossings at 11 segments (1,235 linear feet of stream segments) and temporary impacts at 149 wetland areas, totaling up to 34.9 acres. Culverts would be installed as needed at stream crossings to allow continued water flow and would be removed after construction. Less than 0.01 acre (6 square feet) of wetlands would be permanently impacted. Impacts to wetlands and streams would be authorized under COE Nationwide Permit 51 and Nationwide Permit 12. Nationwide Permit 51 allows for permanent impacts to jurisdictional wetlands and waters of up to 0.5 acre for activities associated with development of land-based renewable energy generation facilities; Nationwide Permit 12 allows for permanent impacts of up to 0.5 acre for activities associated with development of utility lines. The Project has coordinated with the COE, including submittal of a pre-construction	Continuation of current impacts, such as increased runoff or degradation of water quality from construction activities or land conversion, at existing intensity.

	notification package on December 19, 2018. Indirect impacts, such as changes in runoff patterns or volume of runoff or contamination of water resources via accidental spills or leaks could occur.	

Air Quality and Climate	Temporary increase in local emissions, including fugitive dust, during construction and decommissioning. During operation, a negligible increase in fugitive dust, vehicle exhaust emission, combustion-related emissions, etc., are expected. Wind power has potential to displace fossil-fueled electrical generation.	Continuation of current impacts, at existing intensity.
Noise	There are 149 potential noise receptors (147 residences; 2 cemeteries) within the Project area. The Bon Homme County zoning ordinance was used as the design goal for the Project. The ordinance limits a source's sound level at a residence to a maximum of 45 A-weighted decibels (dBA). Modeling estimated that operation of wind turbines and transformers would result in a maximum predicted sound level of 41.9 dBA, which is generally perceived as quiet. There are no expected exceedances of the identified regulations due to operation of the Project. Construction and decommissioning of the Project is expected to temporarily increase noise levels. Construction noise will be temporary and limited to daylight hours.	Continuation of current impacts, including noise from farming activities, construction, and transportation traffic, at existing intensity.
Ecological – Plant Communities	Temporary disturbance expected on 761 acres of land (622 acres of agricultural/99 acres of non-agricultural). Permanent disturbance expected on 47 acres of land (42 acres of agricultural/5 acres of non-agricultural), which includes the permanent loss of 0.2 acres of native grassland.	Continuation of current impacts, such as conversion of native plant communities toward agricultural uses, at existing intensity.

	Vehicle traffic and ground disturbance increases the risk of transportation and establishment of invasive vegetation. Project operation would include routine vegetation maintenance, such as mowing, herbicide application, shrub removal, tree clearing, etc. Tree clearing is estimated to total less than 0.9 acres.	
Ecological - Wildlife	Wildlife impacts will likely include behavioral responses (avoidance, primarily) and loss of habitat (foraging, breeding, and shelter habitat). Habitat loss is expected to include temporary loss of 24 acres and permanent loss of 1.5 acres. Direct mortality or injury could occur as a result of collisions, increased predation, and electrocutions. Following construction, common wildlife species are expected to habituate to routine facility operation and maintenance activities similar to relationships with existing farming operations. For the most part, these impacts would be localized; however, some species may permanently avoid the Project Area, putting pressure on adjacent areas, which could lead to population-level effects.	Continuation of current impacts, including disturbance from human activities, at existing intensity.
Ecological - Birds	Construction and operation of Project facilities will likely increase bird collisions and mortality, as well as increase displacement, habitat fragmentation, and habitat loss. Grassland-nesting birds are the most likely to be affected by indirect impacts, such as avoidance, whereas, large birds (including raptors) are more likely to be directly affected by turbine operations such as blade strikes. Large birds would also be at higher risk of electrocution from transmission lines. Based on national estimates of 2.6 to 2.8 bird fatalities per installed megawatt per	Continuation of current impacts, at existing intensity.

	year, the Project is expected to result in a total of 571 to 615 bird deaths per year. Direct impacts to bald and golden eagles are unlikely as a result of low eagle use within the Project area. No eagle nests were found in the Project; however, nests were observed in the surrounding areas.	
Ecological - Bats	Operation of the Project is likely to result in the mortality of some bats. The species most commonly found as fatalities at wind energy facilities include hoary bats, silver-haired bats, and eastern red bats. All of these species may be present in the Project area during migration; use of the Project Area by these species is expected to be low to moderate. Reported estimates of bat mortality at wind energy facilities have averaged 3.4 bats per turbine or 4.6 bats per MW. Based on these estimates, Project fatalities may total approximately 207 bats annually.	Continuation of current impacts, at existing intensity.
Threatened and Endangered Species	WAPA determined the Project *may affect, not likely to adversely affect*, six (6) federally-listed species (Northern Long-eared Bat, Interior Least Tern, Whooping Crane, Rufa Red Knot, Piping Plover, and Western Prairie Fringed Orchid). The USFWS concurred with WAPA's determination on March 28, 2019. WAPA determined the Project would have *no effect* on three (3) federally-listed species (Pallid Sturgeon and Higgins Eye, and Scaleshell Mussel).	Continuation of current impacts, at existing intensity. In particular, Northern Long-eared Bat may see a continued downward trend due to the ongoing spread of white-nose syndrome.
Visual Resources	The Project will have a visual impact on occupied residences within and adjacent to the Project Area, travelers along State Highways 50, 46, and 37, and users of public hunting areas. There are no scenic resources with sensitive viewsheds within the Project area.	Continuation of current impacts, at existing intensity.

	Shadow flicker software was used to estimate Project-generated shadow flicker at the 147 residences and 2 cemeteries in the Project Area. The results were compared to the Bon Homme County zoning ordinance related to shadow flicker. The modeling results indicate that shadow flicker impacts are within the zoning ordinance levels, which limits shadow flicker to 30 minutes per day. The magnitude of the visual impacts associated with the proposed Project would depend on many factors, including distance of the proposed wind energy facility from viewers, weather and lighting conditions, the presence and arrangements of lights on the turbines and other structures, and viewer attitudes. Viewer attitudes are very subjective, and their reactions to visual changes may be influenced by several non-visual factors, such as perceptions of renewable energy and wind power and on financial considerations.	
Paleontological Resources	Construction of turbine and substation foundations could impact fossil-bearing formations. Based upon the geologic formations in the area, the risk to impact paleontological resources is moderate.	Continuation of current impacts, at existing intensity.
Cultural Resources	The Yankton Sioux Tribal Historic Preservation Office has recommended that, so long as features are avoided by ground-disturbing activities and appropriate buffer distances can be implemented, the Project will have no adverse effect on Traditional Cultural Properties (TCPs). Prevailing Wind Park has re-sited Project features to avoid impacts to TCPs. WAPA determined the Project would have “no adverse effect” on historic properties and the SHPO concurred with this determination on January 29, 2019.	Continuation of current impacts, at existing intensity.

Socioeconomics	The Project could result in the creation of up to 245 short-term construction jobs and up to 10 permanent operation jobs. Operation of the Project is expected to generate approximately $60 million in direct economic benefits for local landowners, communities, and the State of South Dakota. Participating landowners would receive a direct economic benefit. WAPA's review did not find broadly accepted or statistical evidence that wind energy development impacted property values. Based upon sales data in appraisal studies, price differentials for residential properties average 5% or less and slightly larger price impacts for agricultural, commercial, and industrial land. Negative socioeconomic effects could occur due to increased road maintenance costs and reduced recreational opportunities. WAPA could not quantify these effects, but since the land on which the Project is to be built is privately owned, the amount of recreation on them is limited.	Continuation of current impacts, at existing intensity.
Environmental Justice	No minority or low-income populations have been identified, and, thus, no disproportionately high and adverse human health or environmental effects are expected as a result of the Project.	No impact.
Health and Safety	Project operation would create electro-magnetic fields (EMFs). However, at present, there is no scientific consensus regarding a cause-effect relationship between continued exposure to EMFs and adverse health consequences. The nearest occupied residences/buildings to an EMF source is 68 feet away. At this distance, the EMF exposure is expected to be less than 1.7 milliGaus, which is less than the exposure limit recommended by the EPA.	Continuation of current impacts, such as exposure to EMF from household appliances, at existing intensity.

	Project operation would create infrasound. The infrasound levels from contemporary wind turbines are lower than those that have been shown to cause harm. Human health effects sometimes attributed to wind farm noise and infrasound include sleep disturbance, vertigo, and stress. However, WAPA found no reliable evidence that 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 is not at an unusual risk for accidents or acts of sabotage or terrorism. Due to current quality control standards and turbine design, ice throw and rotor blade breaks are expected to be a rare occurrence.	
Cumulative Impacts	The construction and operation of the proposed Project, in combination with operation of the existing Beethoven Wind Project, as well as other private and public development occurring in the Project Area, could contribute to cumulative impacts on resources within the UGP Region. In particular, the Project could contribute to the ongoing cumulative impacts to noise, ecological resources, land use, land cover, and visual resources. Considering the impact avoidance and minimization commitments, adverse cumulative impacts will not be significant.	Continuation of present and future activities and associated impacts, at existing intensity.

ENVIRONMENTAL COMMITMENTS:
Environmental commitments have been embedded as a required component of the Proposed Action alternative and are listed in Chapter 4 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 Project, including WAPA's federal actions.

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:

- USFWS wetland and grassland easements will not be disturbed. Additionally, the Project will avoid direct impacts to Game Production Areas and Waterfowl Production Areas.
- There are no FEMA-mapped floodplains within the Project Area.
- Prevailing Wind Park prepared a Bird and Bat Conservation Strategy (BBCS), which includes strategies for mitigating risks to avian and bat species during construction and operation of the Project.
- Using the best available studies, WAPA found conflicting information on the impact of wind development on property values. The general conclusion from many of these studies is that, while there may be a small negative effect on property values in the immediate vicinity of large-scale facilities such as wind farms (i.e., less than 1 mi), this effect is often temporary and often associated with announcements related to specific project phases, such as site selection, the start of construction, or the start of operations.
- While political controversy exists over the impacts of wind development (primarily, low-frequency noise and shadow flicker) on the human environment, WAPA's review found no credible scientific data or reports that substantiated these claims.
- While there are differences of opinion surrounding the project, particularly between non-participating and participating landowners, these opinions are not unusual to wind energy projects. The Project itself is not unique or unusual and does not establish a precedent for future actions.
- Prevailing Wind Park agreed to implement an additional 42 conditions, called Permit Conditions, as part of the South Dakota Public Utilities Commission (SD PUC) permitting process. The SD PUC published their Final Decision and Order Granting Permit to Construct Facilities and Notice of Entry on November 28, 2018.
- Consultation with SHPO has been completed in accordance with Section 106 of the National Historic Preservation Act and concurrence was received on 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 "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.

Because WAPA has found the Project to not constitute a major Federal action significantly affecting the quality of the human environment, 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 §1508.13) and the DOE NEPA Implementing Procedures (10 CFR §1021.322).

DECISION:
WAPA has selected the Proposed Action Alternative, including all applicable avoidance and minimization measures described in DOE/EA-2061, for implementation.

Issued at Billings, Montana on March 29, 2019.

Jody S. Sundsted
Senior Vice President and UGP Regional Manager