

Sweetland Wind Farm Project

*Finding of No Significant Impact and Decision
Document*

Hand County, South Dakota



**Western Area
Power Administration**

*DOE/EA-2095
September 2021*

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

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

SUMMARY: Sweetland Wind Farm, LLC (Sweetland) proposes to construct the Sweetland Wind Farm Project (Project), an approximately 200-megawatt (MW) wind farm. The Project would be located within a 21,006-acre area southeast of the City of Miller in Hand County, South Dakota. Sweetland proposed to interconnect the Project with Western Area Power Administration's (WAPA's) existing Fort Thompson to Huron 230-kV 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)(*Sweetland Wind Farm Project, DOE/EA-2095*) 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.

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: The Proposed Action is for Sweetland to construct and operate the Project, including the following components:

- Up to 71 wind turbines;
- Access roads to each wind turbine;
- An operations and maintenance (O&M) facility;
- Up to three permanent meteorological towers;
- Underground power collection lines and communications system;
- A substation;
- An up to 7-mile-long, 230-kV transmission line (gen-tie line);
- A WAPA owned and operated switchyard; and

- Additional temporary construction areas, including crane paths, pull sites, access roads, and a laydown yard.

WAPA would enter into an Interconnection Agreement with Southwest Power Pool and Sweetland Wind to allow the Project to interconnect to WAPA’s existing Fort Thompson to Huron 230-kV transmission line at a newly constructed WAPA switchyard. Additionally, 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 scoping meeting on August 7, 2018, in Miller, 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. The public scoping meeting documentation is included in Appendix P of the EA.

WAPA circulated the draft EA for public review and comment on November 18, 2019. Comments on the draft EA were accepted through December 20, 2019. Comments and responses are included in Appendix Q of the EA.

TRIBAL INVOLVEMENT: Pursuant to Section 106 of the National Historic Preservation Act, WAPA initiated tribal consultations, by letter, with the following eight tribes on August 3, 2018:

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| • Apache Tribe of Oklahoma | • Fort Belknap Indian Community |
| • Cheyenne and Arapaho Tribes | • Lower Brule Sioux Tribe |
| • Cheyenne River Sioux Tribe | • Standing Rock Sioux Tribe |
| • Crow Creek Sioux Tribe | • Yankton Sioux Tribe. |

WAPA received several tribal responses. Both the Crow Creek Sioux and Yankton Sioux tribes participated in cultural resource surveys during October 2018 and May 2019. In fall 2019, additional archaeological and joint tribal field surveys were conducted.

On December 12, 2019, WAPA sponsored a Tribal Meeting at the Crossroads Convention Center in Huron, South Dakota. A second Tribal Meeting occurred at the Crossroads Convention Center in Huron, South Dakota on February 27, 2020.

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

<i>Resource Area</i>	<i>Proposed Action Alternative Impacts</i>	<i>No Action Alternative Impacts</i>
Geology, Soil Resources, and Paleontology	<p>Temporary soil disturbance expected on 810 acres, which includes 134 acres of farmland of statewide importance. Permanent disturbance to 73 acres of soils, which includes 10 acres of farmland of statewide importance.</p> <p>The risk for impacts to paleontological resources is moderate.</p>	Existing activities, such as farming and the trend toward conversion of undeveloped land to agriculture, would likely continue. These types of activities can impact soil, geology, or paleontological resources.
Water Resources	<p>Surface structures would avoid or span wetlands in USFWS Wetland Easements. Underground collection lines would cross USFWS Wetland Easements via directional boring to avoid direct impacts.</p> <p>Project construction would cross up to 18 ephemeral and 3 intermittent stream segments totaling up to 420 square feet of temporary crossings across stream channels, and temporarily impact up to 20 wetlands totaling up to 1.5 acres. Total permanent impacts to both wetlands and streams are anticipated to be less than 0.10 acre.</p> <p>All water resources in the area could be impacted by an accidental release of pollutants, such as fuel spills and/or runoff.</p>	Existing activities, such as farming and the trend toward conversion of undeveloped land to agriculture, would likely continue. These types of activities can impact water resources by removing or altering vegetation, which can increase erosion and sedimentation, as well as introducing pollutants from agricultural operations (hormones, pesticides, animal waste) into water bodies.
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.
Noise	<p>A temporary increase in noise is expected during construction. During operation, the Project's wind turbines and substation would be a permanent source of sound.</p> <p>The modeled sound levels are generally perceived as quiet.</p>	No new impacts to noise are anticipated.

<i>Resource Area</i>	<i>Proposed Action Alternative Impacts</i>	<i>No Action Alternative Impacts</i>
Vegetation	<p>During all phases of the project, vehicles and equipment could introduce or spread seed from invasive species.</p> <p>Construction of the Project would temporarily disturb up to 810 acres of vegetation, about half agricultural land and half non-agricultural land, including 18 acres of Above Average grasslands.</p> <p>Underground collection lines and crane paths would temporarily impact USFWS Grassland Easements but there would be no direct impacts to USFWS Wetland Easements.</p> <p>Operation of the Project would permanently remove approximately 73 acres of vegetation, about half agricultural land and half non-agricultural land. This includes up to 37 acres of grasslands, including 1 acre of Above Average grasslands.</p>	Existing activities, such as farming and the trend toward conversion of undeveloped land to agriculture, would likely continue. These types of activities can alter vegetation.
Threatened and Endangered Species	WAPA has determined the Project would have no effect to the Topeka shiner and rufa red knot. The Project may affect, but is not likely to adversely affect northern long-eared bat and whooping crane.	The No Action alternative would have no effect to federally threatened or endangered species.
Environmental Justice	No disproportionately high and adverse human health or environmental effects are expected.	No disproportionately high and adverse human health or environmental effects are
Health and Safety	While the Project could potentially result in impacts associated with EMFs, noise and infrasound, shadow flicker, and physical hazards, the best available science has not reliably shown that wind farms cause direct health effects.	The No Action alternative would have no direct or indirect impacts on health and safety.
Socioeconomic Conditions	While the Project is expected to produce a net positive socioeconomic effect, there could be minor negative effects such as decreased property values or increased maintenance on roads due to construction traffic.	The No Action alternative would have no direct or indirect impacts on socioeconomics.
Land Use and Public Facilities	<p>The function of 356 acres of agricultural land would be temporarily altered for up to 12 months. Following construction, approximately 32 acres would be permanently converted to a different land use.</p> <p>Public roads would be negatively impacted during construction due to increased heavy equipment use.</p>	Existing activities, such as farming and the trend toward conversion of undeveloped land to agriculture, would likely continue. These types of activities can impact land uses and public facilities.

<i>Resource Area</i>	<i>Proposed Action Alternative Impacts</i>	<i>No Action Alternative Impacts</i>
Wildlife	<p>Wildlife species would be impacted locally during the construction phase of the Project. Habitat alteration, degradation, fragmentation, and removal would occur from grading and clearing or introduction of invasive vegetation.</p> <p>During Project operation, direct mortality or injury would occur if wildlife collides with vehicles or turbines. There is a probability of death and reproductive failure if occupied breeding habitat is removed or altered, habitat is fragmented by the presence of aboveground Project facilities, or increased noise or physical disturbance occurs in proximity to vulnerable breeding wildlife. Less common wildlife species may be impacted by the Project, although impacts are expected predominantly to occur to common species adapted to agricultural and edge habitats. Population-level impacts are not anticipated.</p> <p>Based on a review of other wind projects in the region, fatalities for all birds (including waterfowl) are expected to average 4.57 fatalities/MW/year.</p> <p>It is assumed that bat mortality at the Project would be relatively low and follow similar patterns as those observed at these other facilities within the region.</p>	<p>No new impacts to wildlife are expected, although continued activities, such as farming and the trend toward conversion of undeveloped land to agriculture, would likely continue. These types of activities can impact wildlife.</p>
Cultural Resources	<p>The Project will physically avoid National Register of Historic Places (NRHP)-eligible and unevaluated archaeological sites during construction, operations, and decommissioning. The Project will also physically avoid NRHP-eligible and unevaluated Traditional Cultural Properties during construction, operations, and decommissioning.</p> <p>WAPA developed a Memorandum of Agreement (MOA) for resolving adverse effects to TCPs that includes site avoidance, monitoring, cultural sensitivity training, tribal monitor training, and inadvertent discovery procedures. The MOA was fully executed on October 30, 2020.</p> <p>WAPA determined the Project would not adversely affect historic architectural resources and SHPO concurred on August 1, 2019.</p>	<p>No new impacts to cultural resources are expected.</p>

<i>Resource Area</i>	<i>Proposed Action Alternative Impacts</i>	<i>No Action Alternative Impacts</i>
Visual Resources	<p>The magnitude of the visual impacts 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 financial considerations.</p> <p>Modeling indicates that three participating residences could experience annual shadow flicker levels above 30 hours per year.</p>	<p>The No Action alternative would have no direct or indirect impacts on visual resources.</p>
Cumulative Impacts	<p>The Project would incrementally contribute to impacts on various resources within the region. In particular, the Project would contribute to ongoing cumulative impacts to fish and wildlife (such as habitat fragmentation, habitat conversion, and bird fatalities), to conversion of land from native uses to developed uses, and changes in the visual landscape. Table 4-1 of the EA summarizes potential cumulative effects associated with the Project.</p> <p>With the implementation of environmental commitments, the Project would avoid or reduce impacts to the resources described above and are not expected to measurably contribute to cumulative effects on resources from other past, present, and reasonably foreseeable future actions.</p>	<p>Continuation of present and future activities and associated impacts, at existing intensity.</p>



ENVIRONMENTAL COMMITMENTS: Environmental commitments have been embedded 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, without a pre-construction notification. Sweetland would coordinate with the USACE to adhere to Nationwide Permit 12 conditions.
- The Project would comply with the Hand County Development Agreement 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 Hand County Development Agreement.
- 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 (included as part of the cultural resources report in Appendix O of the EA) outlining the procedures that should be followed if previously unknown archaeological sites or possible human remains are discovered during construction or operation activities.
- The stipulations outlined in the MOA (Appendix R of the EA) will be adhered to during Project implementation.
- 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.
- Sweetland 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 July 26, 2019.
- Consultation with SHPO has been completed in accordance with Section 106 of the NHPA 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 “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.
- Under 10 C.F.R. Part 1022, WAPA has determined the Project is not located in/does not affect floodplains or wetlands.

DECISION RECORD: WAPA has selected the Proposed Action alternative, including all environmental commitments and minimization measures described in DOE/EA-2095, for implementation.

Issued in Billings, Montana on 9/24/21, 2021.

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