

# Lookout Solar Park Project

*Finding of No Significant Impact and Decision Document*

*Custer and Oglala Lakota Counties, South Dakota*



**Western Area  
Power Administration**

*DOE/EA-2075*

*July 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:** Lookout Solar Park I, LLC (Lookout Solar) proposes to construct and operate the Lookout Solar Project (Project) on 810-acres, partially located on the Pine Ridge Indian Reservation and partially located on private off-Reservation lands in South Dakota. Because the Project would be partially located on the PRIR, the Bureau of Indian Affairs (BIA), as required by their tribal trust responsibilities, reviewed the project to ensure that it complied with the National Environmental Policy Act (NEPA), supported tribal sovereignty and self-determination, and met the BIA's mission. BIA prepared an Environmental Assessment (EA) in 2016 to analyze the parts of the Project within the PRIR. On June 7, 2016, the BIA determined the Project met the requirements listed above and issued a Finding of No Significant Impact (FONSI).

Since 2016, Lookout Solar submitted an interconnection request to Southwest Power Pool (SPP) to connect the Project to WAPA's transmission system. WAPA's decision whether or not to enter into an interconnection agreement is considered a federal action under NEPA. Therefore, WAPA prepared an EA (*Lookout Solar Park Project, DOE/EA-2075*) to analyze the impacts of the interconnection, as well as portions of the Project located outside of the PRIR boundary, which were not analyzed in the BIA EA.

**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>.

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**PROPOSED ACTION:** WAPA's Proposed Action is to enter into an Interconnection Agreement with SPP and Lookout Solar to allow the Project to interconnect to WAPA's existing New Underwood to Wayside 230 kV transmission line. 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 and an interconnection agreement would not be executed.

**PUBLIC INVOLVEMENT:** Multiple opportunities for public involvement were offered. In 2016,

the BIA requested public comments from 32 local, state, and federal agencies; seven comments were received in response. The BIA provided public notice of the EA and FONSI, also in 2016.

Additionally, WAPA conducted public scoping between December 5, 2018 and February 16, 2019. WAPA requested public comments via a letter mailed to 52 local, state, and federal agencies and 19 private landowners in the vicinity of the Project; seven comments were received in response. In addition, two open-house style public scoping meetings were held, including a meeting on December 5, 2018 and a second meeting on January 16, 2019. Both public meetings were held at the Hot Springs Public Library, in Hot Springs, SD. The second public scoping meeting was scheduled because of the national day of mourning to honor the passage of George H.W. Bush, which prohibited WAPA personnel from attending the December 5, 2018 meeting. Approximately twenty members of the public attended the December 5, 2018 meeting and thirty members of the public attended the January 16, 2019 meeting. Newspapers announcements were published 15 days prior to both meetings, including publications in the Rapid City Journal, Hot Springs Star, the Custer County Chronicle, and the Lakota Country Times. In advance of both meetings, notification letters were mailed to landowners within and adjacent to the Project boundary, as well as other Federal, state, local, and tribal stakeholders.

Lastly, WAPA distributed the draft EA for public review and comment. Comments were accepted between November 19<sup>th</sup>, 2019 and December 23<sup>rd</sup>, 2019. WAPA announced the review and comment period via letters to individual landowners and interested agencies and notices in the local newspapers. Four comments were received.

Public notice and other project materials are posted at WAPA's website, available at the following link: <https://www.wapa.gov/regions/UGP/Environment/Pages/LookoutSolar.aspx>.

**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>Impacts</i>	
	<i>Proposed Action Alternative</i>	<i>No Action Alternative</i>
Geology and Soils	Temporary soil disturbance expected on 275 acres. Permanent disturbance to 250 acres of soils, including soil compaction, excavation, and mixing of soil layers.	Continuation of current impacts, such as livestock grazing practices. Livestock over-grazing is known to increase erosion and runoff.
Paleontology	Oral traditions among the Oglala Lakota Nation note the discovery of fossilized bones, turtle shells, and seashells throughout the area. Although the presence of paleontological resources is unknown, it is assumed they could exist in the area due to the high occurrence of these resources in surrounding areas.  Lookout Solar intends to have a qualified construction/archaeologist monitor present during ground disturbing activities.	No impact.
Air Quality and Emissions	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	Permanent removal of 250 acres of short- and mid-grass prairie, predominantly Northwestern Great Plains Mixedgrass Prairie grassland.  During all phases of the project, vehicles and equipment could introduce or spread seed from invasive species.	No new impacts to vegetation would be expected, although current land use (i.e., livestock grazing) and the trend towards converting land to developed uses would continue to impact vegetation.
Water Resources	All water resources in the area could be impacted by an accidental release of pollutants, such as fuel spills and/or runoff.  Direct impacts to 0.3 acres of wetlands and drainages would occur during installation of the transmission line. This disturbance is allowable under U.S. Army Corps of Engineers Nationwide Permit (NWP) 12 for Utility Line Activities.  The transmission line ROW intersects three flood zone areas and the substation temporary access road would cross the Cottonwood Creek flood zone. Lookout Solar obtained a floodplain development permit from Custer County for the transmission line and the substation in May 2019. Impacts from the burial of the transmission line and temporary access road are authorized under the permit.	No new impacts to water resources are anticipated

<i>Resource Area</i>	<i>Impacts</i>	
	<i>Proposed Action Alternative</i>	<i>No Action Alternative</i>
Threatened and Endangered Species	WAPA determined both the Alternatives would have “no effect” on whooping crane, northern long-eared bat, rufa red knot, western prairie fringed orchid, and black footed ferret.	
Fish and Wildlife	<p>Construction would result in habitat modification and could subject individuals to disturbance, injury, or mortality.</p> <p>Permanently, 250 acres of grasslands would be impacted. Although grass and forb cover beneath solar panels is expected to reestablish following construction, the presence of the panels would reduce the productivity and fragment habitat. In addition to the actual footprint of the panels, wildlife movement may change or be restricted due to fences around the substation and solar generating facility that further fragment the area by creating barriers. The burrowing owl, upland sandpiper, long-billed curlew, western meadowlark, sharp-tailed grouse, grasshopper sparrow, and yellow-billed cuckoo are the sensitive species associated with grasslands and, as such, the most likely to be affected by the reduction of available grasslands. Effects of fragmentation include avoidance of the area and could result in decreased density, survival, and/or reproduction. Sharp-tailed grouse are most likely to be impacted at the eastern edge of the project where the solar facility would remove above-average habitat.</p> <p>There would be no operational risk of avian collisions or electrocutions with above-ground power lines because the transmission line would be buried. There is a risk of bird death, injury, or electrocution through collision with solar panels which would be highest during times of poor visibility. However, this risk is reduced because the solar generating facility is not located near a water body, known roost site, or concentrated food source, so birds are not expected to take off or land near the solar panels in large numbers.</p> <p>A review of 13 PV solar facilities in desert and grassland habitats of California and Nevada concluded that the average annual fatality rate at PV solar facilities is 1.82 bird fatalities per MW per year. Another study concluded that overall solar facility fatalities rates were 2.49 bird fatalities/MW/year. Using these two examples, the mortality rate is expected to range between 6,000 and 11,000 birds during the lifetime of the Project.</p>	No new impacts to wildlife are expected as a result of the No Action Alternative, although continued wildlife habitat loss, habitat fragmentation, and human disturbance is expected.

<i>Resource Area</i>	<i>Impacts</i>	
	<i>Proposed Action Alternative</i>	<i>No Action Alternative</i>
Cultural Resources	<p>With the use of buffers and directional drilling, no direct impacts to cultural resources is expected.</p> <p>WAPA determined the Project would have no adverse impact on historic properties. The SHPO concurred with WAPA's determination on April 24, 2019. The THPO concurred with WAPA's determination on May 2, 2019. The BIA previously reached a determination of no historic properties affected for the generating facility when it completed its NEPA review in 2016. The BIA's determination was communicated to the THPO on June 18, 2015, and the THPO concurred on August 10, 2015.</p>	No new impacts to cultural resources are expected.
Land Use	<p>Approximately 250 acres at the solar generating facility would change from agricultural to commercial land use.</p> <p>The primary land use at the substation site is livestock grazing and therefore 10 acres of privately-owned rangeland would be converted from agricultural to commercial use. The transmission line would be located within existing County ROWs and roads; therefore, no change in land use would occur.</p> <p>During the life of the Project, approximately 187 acres of Prime Farmland if Irrigated and 178 acres of Farmland of Statewide importance would be unavailable for farming. These lands are not irrigated and are not currently used for farming, so there would be no loss of existing farmlands. The NRCS reviewed the Project and concluded that no impact would occur to prime or important farmland.</p>	There would be no changes to land use. It is expected that cattle grazing and farming would continue to occur in and around the area.
Socioeconomic Conditions and Environmental Justice	<p>The Project would likely cause beneficial short-term and long-term socioeconomic impacts as a result of increased employment and income. Increased jobs and income for the local community would likely benefit minority and low-income populations in Oglala and Custer counties.</p> <p>One potential adverse impact would be the landowners' loss of grazing income due to the change in land use within the Project Area. However, the lease payments, while not publicly disclosed, are greater than the grazing income payments.</p> <p>Both minority and low-income populations would be impacted by the Project; no disproportionately high and adverse human health or environmental effects are expected as a result of the Project.</p>	There would be no impacts to the socioeconomic conditions of Oglala Lakota or Custer Counties, or the Reservation; population and employment rates would be expected to stay the same.

<i>Resource Area</i>	<i>Impacts</i>	
	<i>Proposed Action Alternative</i>	<i>No Action Alternative</i>
Visual Resources	<p>The Lookout Solar generating facility would be visible from BIA Route 2 (located to the south of the Project) and possibly from Red Shirt Table Overlook in the Badlands National Park. However, since the overlook is positioned to face the opposite direction of the Project and the topography of the area between the Project and Badlands National Park is dominated by a series of smooth hills and ridges with mixedgrass prairie, the Project is not likely to impact the viewshed from the overlook. In addition, the proposed Lookout Solar generating facility could be observed from the highest buttes in the Badlands National Park Stronghold South Unit (South Unit).</p> <p>Overall, potential impacts to visual resources immediately surrounding the Project (whether they are adverse or beneficial) would be limited because of the area's sparse population, low volume of travelers along the roadways, and limited number of visitors the South Unit receives each year.</p>	There would be no new impacts to visual resources.
Roads and Traffic	When the location and rural setting of the Project is considered with the additional traffic (both construction and operational), impacts are expected to be long-term but minimal.	There would be no new or additional impacts to roads and traffic
Cumulative Impacts	<p>Reasonably foreseeable actions include potential development of additional solar power facilities in Custer and Oglala Lakota Counties, on the Reservation, and across the state, as well as the continued promotion of renewable energy at the Red Cloud Renewable Energy Center. The U.S. EIA (2018) indicates the PRIR has some of the greatest solar power potential in the state.</p> <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.</p> <p>Considering the impact avoidance and minimization commitments, adverse cumulative impacts will not be significant.</p>	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 Proposed Action or No Action alternatives.

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:

- The EA included a floodplain assessment and determined the Proposed Action would impact four flood zone areas. Lookout Solar obtained a floodplain development permit from Custer County for the transmission line and the substation in May 2019. Impacts to the flood zone areas are authorized under the permit.
- The impacts of solar facilities on birds (particularly, bird fatalities as a result of collisions) is not well studied. The EA provides information on fatalities at other solar projects across the nation and uses it to estimate bird fatalities as a result of the Proposed Action. The Proposed Action’s post-construction monitoring will contribute to the body of knowledge regarding the severity of solar impacts. The anticipated effects are not highly uncertain nor highly controversial in the available literature.
- The Project itself is typical of solar generation projects across the nation. It is not unique or unusual and does not establish a precedent for future actions.
- Lookout Solar agreed to implement an additional 37 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 February 14, 2020.
- Consultation with SHPO and THPO 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 “no effect.”
- 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.

WAPA has found the Project does not constitute a major Federal action significantly affecting the quality of the human environment. As a result, a 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 RECORD:** WAPA has selected the Proposed Action Alternative, including all environmental commitments and minimization measures described in DOE/EA-2075, for implementation.

Issued in Billings, Montana on \_\_\_\_\_, 2021.

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Acting Senior Vice President and UGP Regional Manager