



Department of Energy

Golden Field Office
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DOE/EA-1812

FINDING OF NO SIGNIFICANT IMPACT FOR THE HAXTUN WIND ENERGY PROJECT LOGAN AND PHILLIPS COUNTIES, COLORADO

AGENCY: U.S. Department of energy, Golden Field Office

ACTION: Finding of No Significant Impact (FONSI)

SUMMARY: The U.S. Department of Energy (DOE) provided federal funding, appropriated under the *American Recovery and Reinvestment Act of 2009*, to Phillips County under the Community Renewable Energy Development program (CRED). Phillips County proposes to use \$2.55 million in CRED funding to facilitate and partially fund the design, permitting, and construction of the Haxtun Wind Project (proposed project). The proposed project is an approximately 30-megawatt wind energy project and would be located within Phillips and Logan counties in northeastern Colorado. DOE's Proposed Action is to authorize the expenditure of federal funding under CRED for the proposed project.

Before Phillips County can provide funding for the proposed project, DOE must examine the potential environmental impacts of DOE's Proposed Action in accordance with the *National Environmental Policy Act of 1969* (NEPA). All discussion, analysis, and findings related to the potential impacts of construction, operation, and eventual decommissioning of the Haxtun Wind Energy Project are contained in the *Final Environmental Assessment for the Haxtun Wind Energy Project, Logan and Phillips Counties, Colorado* (Final EA; DOE/EA-1812). The Final EA is hereby incorporated by reference.

DOE prepared this FONSI in accordance with NEPA, the Council on Environmental Quality regulations for implementing NEPA, as amended (40 CFR Parts 1500 to 1508), and DOE NEPA regulations (10 CFR Part 1021).

ENVIRONMENTAL IMPACTS: The Final EA examined the potential environmental impacts of the Proposed Action and a No-Action Alternative. Under the No-Action Alternative, DOE would not authorize the use of CRED funds for the Wind Energy Project, which DOE assumes for purposes of the EA would not proceed without CRED funding.

Phillips County and its contractor, Haxtun Wind, LLC, are proposing to construct a wind energy project that would produce approximately 30 megawatts of electricity located in Phillips and Logan counties in Northeastern Colorado. The proposed project would be located just to the south of the town of Haxtun, Colorado.

During the development of the proposed project, Haxtun Wind, LLC submitted an interconnection request to the DOE Western Area Power Administration (Western) and Western was initially a cooperating agency in the Draft EA. This interconnection would have required substantial infrastructure upgrades. Subsequently, Haxtun Wind, LLC submitted an application with Highline Electric Cooperative for a new system study based on an alternative, and more feasible, interconnection plan that would interconnect the

DOE/EA-1812
Finding of No Significant Impact
Page 1 of 6



proposed project to Highline's transmission system at the Haxtun Substation located in the Town of Haxtun, Phillips County, Colorado and Western's action is not analyzed in the Final EA.

Based on the information in the Final EA and using the sliding-scale approach, DOE concludes the proposed project would not impact the following resources: air quality, paleontology, groundwater, streams, wetlands and floodplains, land use, aviation, environmental justice, and intentional destructive acts.

DOE considered the following resources in more detail as part of its analysis: geology and soils, cultural resources, biological resources, socioeconomics, aesthetics and visual resources, roads, recreation, and communications interference, public health and safety, noise, and shadow flicker.

With regard to geology and soils, a substantial amount of the acreage in the project vicinity is used for agricultural production (tame pasture and cropland) and disturbed by cultivation. Approximately 139 acres would be disturbed or impacted during initial construction and approximately 14 acres would remain committed for the life of the project. Adverse impacts during construction will be avoided, minimized, and mitigated by compliance with applicable Best Management Practices (BMPs). Disturbance related to construction will be restored to pre-construction conditions. After construction, all soils that were disturbed or compacted in areas not needed for operation will be re-graded, loosened and re-vegetated in accordance with landowner wishes, easement agreements, and BMPs. Based on the above and the analysis contained in the Final EA, DOE has determined that long-term impacts to soils would be minor.

With regard to cultural resources, there are several isolated archeological finds located in and around the project vicinity. Most of the isolated finds do not exhibit sufficient features to qualify them as archaeological sites requiring further evaluation or preservation under State and Federal law. The historic archaeological site in Logan County does exhibit sufficient archaeological integrity and characteristics to potentially qualify for listing on the National Register of Historic Places (NRHP). Haxtun Wind, LLC will avoid this site by selecting an alternative location for the underground collector cable. The historic archaeological site in Phillips County also has high potential for intact subsurface deposits and potentially could be eligible for listing on the NRHP. Haxtun Wind LLC will avoid this site by selecting an alternative location for the access road. With these alterations, no substantive impacts to potentially significant cultural resources would occur as a result of the proposed project. All structures within one-mile of proposed turbine locations were visually assessed for the possibility of an adverse visual impact. Most structures were less than 50 years old and the few that were older than 50 years were not remarkable examples of regional architectural styles. The Office of Archeology and Historic Preservation (OAHP) recommended a finding of no adverse effect for the proposed project. Should unanticipated or unidentified archaeological resources be encountered, Haxtun Wind, LLC will halt construction and contact OAHP. DOE has determined that impacts to historic and cultural resources would be negligible.

With regard to biological resources, due to its location in an intensively disturbed agricultural area, it is unlikely that any of Federally-listed threatened or endangered bird species would utilize or travel through the proposed project area. The native short grass habitat is highly fragmented and is generally present only in steep areas and adjacent to drainage ways. The nearest potential extensive wetland habitat required by whooping cranes and piping plovers lies along the South Platte River and areas of sand hills approximately 20 miles northwest and 20 miles southeast of the proposed project area, respectively. The proposed project is not expected to adversely affect the few rare mammals with potential to occur in the project area (black-tailed prairie dog, northern pocket gopher, and swift fox) because these animals are not in danger of direct mortality due to wind turbine impact, none have been observed in the area, potential habitat is very limited and the turbine sites are in areas that provide little or no habitat for these species. The yellow mud turtle, common garter snake, and northern leopard frog could be associated with

the two small stock ponds and intermittent streams within the project area. However, project impacts associated with two underground cable crossings of intermittent streams would be minor and temporary. Listed fish and plant species would only be associated with downstream reaches of the South Platte River, which is entirely outside the project area. Therefore, listed reptiles, amphibians, fish, and plants are not expected to be adversely affected by the proposed project.¹ No construction will occur during primary migratory bird nesting season. Based on the above and the analysis in the Final EA, DOE has determined the proposed project will have no or negligible impacts on biological resources.

With regard to socioeconomics, there would be a short-term and a minor long-term economic benefit to the area. Approximately 125 construction jobs would be required during the approximately 4- to 6-month construction phase. Operation of the proposed project would require up to three full-time personnel for the life of the project. Most construction workers are expected to be from the surrounding communities. The proposed project would generate sales and use taxes for goods and services purchased during construction and operation and property taxes to the town of Haxtun and to Logan and Phillips Counties. Finally, the proposed project would generate revenue for the private landowners on whose land the turbines are located. DOE has determined the added employment and associated revenue represents a minor, beneficial impact to the local community.

With regard to aesthetics and visual resources, the proposed wind would be new and dominant visual features in the project vicinity. The rotors would be ~328 feet in diameter and would be mounted on a 262-foot tall tower, with a maximum height of ~427 feet and would be neutral white to blend in with the sky. The proposed turbines would be screened from view from the town of Haxtun and would be located some distance from State Highway 59 and US Highway 6. Visual impacts also include short-term direct effects due to construction of the proposed project and would be minor because construction is projected to last no longer than 6 months. The transformer substation would also be visible to local landowners and travelers, and it would represent an industrial-type facility in a rural landscape. DOE has determined the visual impacts associated with this project would be minor and are consistent with the current viewshed in this part of Colorado.

With regard to roads, recreation, and communications interference, traffic would increase on the roads leading to and within the proposed project area during the construction while equipment and materials are transported into the area. The estimated maximum construction workforce would generate ~25 additional vehicle trips per day for workers and turbine foundations would require an average of 40 truckloads of concrete, and an additional 20 trucks to access the site. Oversized loads such as turbines and rotor blades may temporarily slow traffic on U.S. Highway 6, State Highway 59, and some county roads. This additional heavy traffic would also cause additional wear on existing roads. All such transportation will be conducted in accordance with Colorado Department of Transportation and county regulations. Additional traffic from construction traffic would be short term, occurring during the pouring of the foundation and erection of the turbines. Hunting is the only common recreational activity within the proposed project area that may be affected by the project and would be restricted in the immediate vicinity of wind turbines to reduce the potential for damage to blades and other facilities. However, because the turbines would be located in fields and there are ample hunting opportunities, the proposed project would have little or no detectable effect on hunting opportunities in the area. There are no AM or FM transmitters located near the proposed turbine locations. The underground collector lines for the proposed project would not impact radio and television signals. Three microwave transmission sites are located within 3 miles of the project area. Turbine placement has been designed to avoid line-of-sight corridors between these tower locations. Therefore, the proposed project would not impact microwave

¹ Haxtun Wind, LLC will not accept water trucked from the Platte River; therefore the project will not adversely impact threatened or endangered species in the Platte River Basin. If there are no other sources of water consultation with the USFWS will be initiated.

signals. Based on the above and the analysis contained in the Final EA, DOE has determined the proposed project would have minor impacts to roads, recreation, and communications interference.

With regard to public health and safety, the proposed project would be located on private land and public access is restricted. This prohibits members of the general public from accessing the turbine locations. Wind turbines have minimal risk related to fire or explosions. All transformers employed at the turbine sites and the electrical substation will incorporate fire protection elements into their design. The wind turbine nacelles incorporate additional fire suppression equipment to control. Lastly, all wind turbines, blades, and towers will be fully grounded for lightning strikes. The delivery of the erection cranes and wind turbine generators could affect traffic temporarily due to the size of the crane and turbine tower components and blades. These oversized loads of equipment would be transported on flatbed truck and escorted for added public safety. This would help alert drivers to the presence of oversized loads and minimize the risk to the public. The proposed, new, 115-kV transmission line would produce a magnetic field; however even if operated at maximum current and thermal capacity, the levels would be well below state thresholds and are comparable to magnetic fields measured near common household appliances. DOE has determined that there would be minimal impact to public health and safety as a result of the construction and operation of the proposed project.

With regard to noise, the proposed project area is rural farmland, grazing land and prairies, where agricultural activities, travel on state and county roads and the wind are the major contributors to ambient noise levels. In its analysis, DOE considered noise construction noise and operational noise. Noise levels during construction would be that of diesel-powered machinery, gasoline or diesel powered vehicles, cement trucks, cranes and auguring equipment. This increase in noise would be noticeable to local residents. Overall, the noise produced during construction would be similar in type and degree to noise currently produced by farm machinery, trucking, highway noise, and other construction projects. Noise levels during construction will be reduced by attenuation (most residents are some distance from construction zones) and by limiting the hours of construction to 7:00AM to 7:00PM. During operation of the proposed project, and when rotating, the turbines would produce noise. When analyzing potential noise impacts related to operation, DOE used a “worst case scenario” (wind speed 8.0 m/s, continuous operation, receptors downwind of the turbine). The closest wind turbine to a residence is 1,605 feet (minimum setback for the proposed turbines is 1,278 feet) and there are 6 residences within 3,000 and 2 residences within 2,000 feet. The noise level related to operation of the proposed turbines at any of these closest receptors is under 45 dBA – the sound of a quiet home at night. DOE has concluded impacts related to noise are minor.

With regard to shadow flicker, the WindPRO “Shadow” program was used to calculate the number of days and maximum number of hours per day and cumulatively per year that receptor residences would experience shadow flicker. Modeling for shadow flicker typically uses 10 times the rotor diameter, in this case 3,280 feet. Under the worst-case scenario, 10 of the 39 residences may experience shadow flicker for some part of the year. Worst case simulations do not account for weather (cloudy days), expected turbine shut-down periods, and screening. These worst-case results indicated the absolute maximum number of hours any receptor could experience shadow flicker would be ~43 hours/year; however, this number would be substantially reduced due to weather, screening, clouds, and turbine shut-down; therefore no receptor will experience flicker over 30 hours per year. Based on the above and the analysis in the Final EA, DOE has determined impacts related to shadow flicker would be minimal.

PUBLIC PARTICIPATION IN THE EA PROCESS: In accordance with applicable regulations and policies, DOE sent scoping letters to potentially interested local, State, and Federal agencies, including the Governor of Colorado, the Office of Archaeology and Historic Preservation, Colorado Historical Society (SHPO), U.S. Fish and Wildlife Service (USFWS), the Colorado Division of Wildlife (CDOW) the U.S. Army Corps of Engineers (USACE), and to representatives of the Arapahoe, Ute, Southern Ute,

and Cheyenne Native America Tribes. DOE also sent scoping letters to other potentially interested individuals, potentially affected landowners, and organizations to solicit public comment, published the scoping letter on DOE's Golden Field Office's Electronic Public Reading Room, and advertised the scoping comment period from, in the *Haxtun Fleming Herald*. The scoping letter described DOE's Proposed Action and requested assistance in identifying potential issues to be evaluated in the EA.

In response to the scoping letter, DOE received three comments. Those comments, which are included in Appendix A of the Final EA, were from the SHPO, the USFWS, and the CDOW. For each comment, DOE and Haxtun Wind have followed the guidance provided.

DOE also conducted a public scoping meeting on May 27, 2010 and forty-one members of the public attended, to discuss the proposed project. Meeting notification was sent to over 1,000 interested parties and a meeting notice was published in the *Haxtun Fleming Herald*. Nine oral comments and three written comments were received.

A Notice of Availability for the Draft EA was placed in the *Haxtun Fleming Herald* on October 19, 2011. A postcard of the Notice of Availability was also mailed to Federal, State, tribal, and local agencies, as well as to special interest groups and members of the general public who previously had requested notification or expressed interest in the proposed project. The Notice informed recipients that the Draft EA was available on the DOE Golden Field Office Reading Room Website at http://www.eere.energy.gov/golden/Reading_Room.aspx and that DOE would accept comments until November 3, 2011.

DOE received 2 comment documents during the public comment period. Comment documents included an email from the USFWS and an anonymous letter. The Final EA summarized the comments and, as appropriate, included specific DOE responses or modifications to Draft EA text.

DETERMINATION: Based on the information DOE presented in the Final EA (DOE/EA-1812), DOE determined that providing Federal funding to the Haxtun Wind Energy Project for the design, permitting, and construction of a 30 MW wind farm does not constitute a major Federal action that significantly affects the quality of the human environment in the context of NEPA. Therefore, the preparation of an environmental impact statement is not required, and DOE is issuing this FONSI.

Haxtun Wind's commitment to obtain and comply with all appropriate Federal, State, and local permits necessary for construction and operation of the project, and to avoid or minimize potential impacts through the implementation of the applicant-committed measures, detailed in the EA, shall be incorporated and enforceable through DOE's financial assistance agreement.

The Final EA is available at http://www.eere.energy.gov/golden/Reading_Room.aspx.

For questions about this FONSI, contact:

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Issued in Golden, Colorado, this 4th day of January 2012.


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