



Department of Energy
Golden Field Office
15013 Denver West Parkway
Golden, Colorado 80401

FINDING OF NO SIGNIFICANT IMPACT

KANSAS STATE UNIVERSITY'S ZOND WIND ENERGY PROJECT

DOE/EA-1903

AGENCY: U.S. Department of Energy (DOE), Office of Energy Efficiency and Renewable Energy

ACTION: Finding of No Significant Impact (FONSI)

SUMMARY: DOE is proposing to provide federal funding to Kansas State University (KSU) in support of their Zond Wind Energy Project (Proposed Project)¹. In compliance with the National Environmental Policy Act (NEPA), DOE completed an Environmental Assessment (EA or DOE/EA-1903) that identified and evaluated the potential environmental impacts of providing funds to KSU to refurbish, install, and operate a 750-kilowatt wind turbine. The analysis completed in the EA supports DOE's finding that providing federal funding for the Proposed Project will not significantly affect the quality of the human and natural environment. The EA is hereby incorporated into this FONSI by reference.

KSU's Proposed Project involves refurbishing a Zond Z-50 model wind turbine that was donated to the University by Westar Energy and installing it on KSU property for research and educational opportunities with energy production as an ancillary benefit. The Proposed Project includes refurbishing the Zond wind turbine; improving the existing access road to the site; constructing the turbine foundation; trenching and placing an electrical distribution line; transporting the tower and blades to the site; assembling the Zond wind turbine; installing the transformer and communication equipment; and conducting all associated testing and operational activities. The total turbine (tower and blades) height would be 75 meters (246 feet). Approximately two acres would be disturbed temporarily for construction and installation, whereas the permanent footprint for the tower foundation and transformer would be approximately one-quarter acre. Construction and installation activities are estimated to take two to four months to complete.

DOE places a strong emphasis on avoiding, minimizing, and mitigating potential adverse environmental impacts. KSU has committed to obtain and comply with appropriate federal, state, and local permits required for the Proposed Project, and to minimize or avoid potential environmental effects to land uses, biological resources, cultural resources, visual resources, transportation, and the health and safety of construction workers, faculty, students, and the public through the implementation of the protection measures detailed in section 2.5 of the EA. These commitments by KSU shall be incorporated and enforceable through DOE's financial assistance agreement.

¹ Prior to the issuance of this FONSI, DOE authorized KSU to use a percentage of the federal funding for preliminary activities, which included initial planning and design, environmental studies, and preparation of the EA. These activities are associated with the Proposed Project and do not significantly impact the environment nor represent an irreversible commitment by DOE in advance of this finding for KSU's wind energy project.

Context of Potential Impacts

DOE must evaluate the significance of an action in several different contexts, such as society as a whole (human, national), the affected region, the affected interests, and the locality. Significance varies with the setting of the proposed action. For instance, in the case of a site-specific action, significance would usually depend upon the effects in the locale rather than in the world as a whole. Both short- and long-term effects are relevant.

The project site is located on a bluff north of Purcell Road and west of U.S. Highway 24 in Riley County, Kansas. The site is part of a larger rural parcel owned by KSU located approximately three miles north of the main campus in the City of Manhattan. The site is native prairie grassland used as pasture by KSU and has been disturbed recently for installation of transmission lines and towers. Other uses of the KSU property adjacent to the project site include the Cox Communications tower and the Westar Energy Substation with overhead transmission lines. Approximately two acres of grassland would be disturbed temporarily to construct and install the wind turbine, with a permanent footprint for the turbine of approximately one-quarter acre.

Based on the analysis in the EA, impacts of the Proposed Project would range from negligible to minor due to the nature of the proposed activities. The effects are limited to the local geographic area, are short-term in duration, and small-scale in nature. In addition, KSU has committed to implementing the measures listed in Section 2.5 of the EA to minimize or avoid potential environmental effects. The Proposed Project itself would not cause any significant or cumulative adverse effects nationally, regionally, locally, or at the statewide level.

Intensity of Potential Impacts

The determination of impact significance also considers the intensity, or severity or extent, of the impact. Intensity is evaluated against the factors listed in 40 CFR 1508.27, including:

1) Impacts that may be both beneficial and adverse:

DOE considered and analyzed in the EA the beneficial and adverse impacts of the Proposed Project. Construction and operation of the Proposed Project would result in minimal or unmeasurable adverse impacts to land uses, native vegetation, common wildlife, cultural resources, visual landscape, noise conditions, transportation network, and health and safety of construction workers, faculty, students, and the public. The measures committed to by KSU (EA, Section 2.5) would further minimize or eliminate the potential for adverse impacts to these resources.

The EA evaluated adverse effects of the Proposed Project separately from beneficial effects, to determine whether such adverse effects would have been significant in their own right, and no such effects were found to be significant. The Proposed Project would have potential beneficial, yet minimal or unmeasurable effects to air quality, the local economy, and to KSU's electric utility consumption. In no cases did the analysis in the EA use beneficial effects to offset the potential significance of any adverse effect. In addition, the EA did not use any long-term beneficial effects to offset the potential significance of any short-term adverse effects.

Accordingly, DOE concludes the Proposed Project will not have any significant adverse impacts and that the Proposed Project would have negligible to minor beneficial impacts to the resources evaluated in the EA.

2) The degree to which the proposed action affects public health or safety:

The EA evaluated and concluded that the Proposed Project would have no disproportionately high or adverse human health or environmental effects, and that it would not be a likely target for intentional destructive acts that could affect public safety. The EA addressed several potential impacts that the Proposed Project could have on public health and safety – exposure to electromagnetic fields (EMF), interference with radar signals, hazards to airspace and aircraft, and hazards from ice throws. Analysis in the EA determined that the impacts to these resources would either be non-existent or negligible.

KSU's committed measures for public health and safety (EA, Section 2.5.5), will further reduce the potential for adverse impacts to occur. KSU will ensure that all contractors adhere to construction specific health and safety plans and that the wind turbine would be marked according to Federal Aviation Administration airspace safety regulations. KSU would prepare a risk management and safety plan to ensure that established University policies and procedures are followed for a safe work environment for faculty and students conducting research with the wind turbine.

Based on the findings in the EA and implementation of KSU's committed measures, DOE concludes that there will be no adverse effects to public health or safety. The Proposed Project would not be a likely target for intentional destructive acts and it will not cause any significant, cumulative or long-term effects on public health and safety.

3) Unique characteristics of the geographic area such as proximity to historic or cultural resources, park lands, prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas:

The Proposed Project is not located in any unique geographic or ecologically critical area, and there are no park lands, wetlands, or protected rivers nearby that would be affected. The soils of statewide importance on the project site are of low relative value and are not considered prime farmland.

A possible cultural resource site was found during an archaeological survey of the project area. KSU will maintain temporary fencing and erosion control measures around this feature during construction and will develop a cultural awareness program for those who may have access to the project area. With the implementation of these measures, the Kansas State Historic Preservation Officer concurred with DOE that the Proposed Project would have no effect on historic properties as defined in 36 CFR 800.4(d)(1).

Based on the analysis provided in the EA, DOE has concluded that the Proposed Project would not cause any adverse effects on unique characteristics of the geographic area.

4) The degree to which the effects on the quality of the human environment are likely to be highly controversial:

The analysis in the EA demonstrates that the effects of the Proposed Project on the natural and human environment would be minimal. Input received from federal, state, and local agencies and from the public during the scoping process and EA public comment period did not reveal any controversial issues.

5) The degree to which the possible effects on the human environment are highly uncertain or involve unique or unknown risks:

The possible effects on the human environment from wind turbine installations have been fully analyzed and supported by previous projects, studies, and publications (EA, Section 5.0). The Proposed Project does not involve new technology, and therefore, possible effects are readily ascertainable and would not involve unique or unknown risks.

6) The degree to which the action may establish a precedent for future actions with significant effects or represents a decision in principle about a future consideration:

The Proposed Project would provide student researchers with educational opportunities to compare developing wind technologies, study the efficiency of renewable energy generators, and explore methods of power grid integration. Although this research could benefit future wind energy projects, the Proposed Project would not set a precedent for or represent decisions on future actions that could have significant effects.

7) Whether the action is related to other actions with individually insignificant but cumulatively significant impacts:

DOE considered and analyzed in the EA the cumulative effects of the Proposed Project with other past, present, and reasonably foreseeable future actions. The impacts of the Proposed Project are expected to be minor and localized so the spatial extent of potential cumulative impacts was limited to the general area of the project location. DOE has determined that there are no potential impacts to resources identified in the EA that would be cumulatively significant.

8) The degree to which the action may adversely affect districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register of Historic Places or may cause loss or destruction of significant scientific, cultural, or historical resources:

A possible cultural resource site was found during an archaeological survey of the project area. KSU will maintain temporary fencing and erosion control measures around this feature during construction and will develop a cultural awareness program for those who may have access to the project area. By letter dated November 7, 2012, the Kansas State Historic Preservation Officer concurred with DOE's determination of no historic properties affected as a result of the Proposed Project (EA, Appendix B).

Based on analysis provided in the EA and consultations with the Kansas State Historic Preservation Officer, DOE has concluded that the Proposed Project will not adversely affect historic resources in the area.

9) The degree to which the action may adversely affect an endangered or threatened species or its habitat that has been determined to be critical under the Endangered Species Act of 1973:

DOE consulted with the U.S. Fish and Wildlife Service regarding the potential presence of listed species and critical habitat in the area. The project site does not provide suitable habitat for the listed species known to occur in the area. By a letter dated September 24, 2012, the Service concurred with DOE's determination that the Proposed Project would not adversely affect any federally listed threatened or endangered species or critical habitat, thereby concluding agency consultation pursuant to Section 7 of the Endangered Species Act (EA, Appendix B).

Based on analysis provided in the EA and consultations with the USFWS, DOE has concluded that the Proposed Project will not adversely affect an endangered or threatened species or any critical habitat.

10) Whether the action threatens a violation of federal, state, or local law or requirements imposed for the protection of the environment:

The Proposed Project would not violate any federal, state, or local laws or requirements imposed for the protection of the environment. KSU has committed to obtaining and complying with all appropriate federal, state, and local permits required for the Proposed Project, including the Riley County Section 22

Special Use Permit for zoning approval, and to minimizing potential impacts by implementing the best management practices as detailed in Section 2.5 of the EA. These commitments shall be incorporated and enforceable through DOE's financial assistance agreement.

CONCLUSION: Based on the analysis in the EA and the above considerations, DOE finds that the decision to provide federal funding for the Proposed Project is not a major federal action that constitutes a significant effect on the human environment. This finding and decision are based on the considerations of DOE's regulations (40 CFR Part 1021) implementing the National Environmental Policy Act (42 U.S.C. 4321 *et seq*) and the Council on Environmental Quality's criteria for significance (40 CFR 1508.27), both with regard to the context and intensity of impacts analyzed in the EA. Accordingly, the Proposed Project does not require the preparation of an environmental impact statement.

For questions about this FONSI or the final EA, please contact:

Laura A. Margason
NEPA Document Manager
U.S. Department of Energy
Golden Field Office
15013 Denver West Parkway
Golden, Colorado 80401
gonepa@go.doe.gov

For information about the DOE NEPA process, please contact:

Office of NEPA Policy and Compliance
U.S. Department of Energy
1000 Independence Avenue, SW
Washington, DC 20585
<http://energy.gov/nepa/office-nepa-policy-and-compliance>

Issued in Golden, Colorado this 6th day of February, 2014.



^{FON}
Carol J. Battershell
Manager