



## Department of Energy

Golden Field Office  
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Golden, Colorado 80401-3393

DOE/EA-1818

### FINDING OF NO SIGNIFICANT IMPACT

### PETTISVILLE WIND ENERGY PROJECT

**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 to the Ohio Department of Development (ODOD) under the State Energy Program (SEP). ODOD proposes to provide \$1,225,000 of its SEP funds to the Pettisville Local Schools (Pettisville) for the Pettisville Local Schools Wind Energy Project (Wind Energy Project). DOE's Proposed Action is to authorize the expenditure of Federal funding under State Energy Program to design, permit, and construct the Pettisville Wind Energy Project, a 750-kilowatt wind turbine at the Pettisville Pre-Kindergarten through Twelfth Grade School located at 255 Summit Street, Pettisville, Ohio. The wind turbine would fulfill 98 percent of the school's annual electricity demands and help to reduce greenhouse gas emissions. Pettisville has selected the Aeronautica 750 model with a 177-foot rotor diameter and a 213-foot tower height. Overall, the turbine would stand 302 feet at its tallest blade tip extent. Approximately 1,000 linear feet of associated underground electrical transmission equipment would be installed to connect the wind turbine to the existing school switchgear.

Before ODOD can award a sub-grant for the Wind Energy Project, DOE must examine the potential environmental impacts of DOE's Proposed Action in compliance with the *National Environmental Policy Act* (42 U.S.C. 4321 et seq.; NEPA). DOE has authorized ODOD to use a percentage of the Federal funding for preliminary activities related to the Wind Energy Project, which include preparation of this EA, conducting analysis, and agency consultation. Such activities are associated with the proposed project and would not significantly impact the environment nor represent an irreversible or irretrievable commitment by DOE in advance of completing the EA. In addition to the design, permitting, and construction of the Wind Energy Project, the EA also examined the potential environmental impacts associated the operation and decommissioning of the turbine as connected actions to the Proposed Action.

All discussion, analysis, and findings related to the potential impacts of construction, operation, and eventual decommissioning of the Wind Energy Project, including the applicant-committed measures, are contained in the *Final Environmental Assessment for Pettisville Local Schools Wind Energy Project, Pettisville, Fulton County, Ohio* (DOE/EA-1818; Final EA). 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 SEP funds for the Wind Energy Project, which DOE assumes for purposes of the EA, would not proceed without SEP funding.

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Pettisville proposes to construct the Wind Energy Project on previously disturbed land located across the street from the school in an area adjacent to school ball fields currently under construction.

Based on the information presented within the EA and using the sliding-scale approach, DOE concludes that the Wind Energy Project would not impact the following resources: water resources, waste management, and intentional destructive acts. Therefore, these resource areas were dismissed from a more detailed analysis in the EA. DOE discusses all resource areas in the EA, but only carries through for detailed discussion impacts on land use, visual quality, noise, cultural resources, geology and soils, biological resources, human health and safety, transportation, socioeconomics and environmental justice, air quality and climate change, and utilities and energy. The discussion below summarizes impacts for select resource areas that are generally of particular concern for wind turbine projects.

First, implementation of the Wind Energy Project would permanently commit 256 square feet of land and temporarily disturb an additional 3,400 square feet associated with installation of the foundation and underground transmission line on property owned by the Pettisville Local School District. The construction area for the Proposed Wind Project was historically used as cultivated row crops and has recently been disturbed for construction of the school ball fields. The area immediately surrounding the wind turbine location will be ball fields and beyond that are cultivated fields that would continue to be used as such after construction of the Wind Energy Project is completed. The Wind Energy Project would not result in any direct or indirect land use impacts or any irretrievable commitment of land beyond the life of the project (Section 3.2.2.1 of the Final EA).

Noise would be generated by construction equipment during the Wind Energy Project's short-term construction phase. However, construction noise is not expected to substantially increase existing ambient noise levels. During operations, the predicted turbine sound levels would be in the range of 42 to 47 A-weighted decibels (dBA), (at a distance equal to or less than 395 feet) which are below the U.S. Environmental Protection Agency guidelines of 55 to 65 dBA. An adverse noise impact is considered to occur if the wind turbine noise could increase the ambient daytime or nighttime noise level by more than 3 dBA. The increase in ambient noise levels for daytime and nighttime at the nearest receptors ranges from 0.7 dBA to 1.3 dBA. Therefore, no adverse noise impacts are expected (Section 3.2.2.3 of the Final EA).

The visual simulation shows that the Wind Energy Project would be readily seen in the foreground from vantages within the school property and the adjacent residents along County Road D. Because of trees, buildings and other tall structures in the vicinity of the proposed project, there would be a minimal impact to the remainder of the local viewshed and much of the broader community would not be able to see the turbine. However, the turbine would be a dominant feature in the viewshed to the adjacent property owners (Section 3.2.2.2 of the Final EA).

The shadow flicker study completed for the Wind Energy Project indicated that no homes or occupied business structures located beyond the school property would receive flickering shadows of over 30 hours per year.<sup>1</sup> A portion of the farm located southwest of the turbine site would receive summer morning shadows; however, the farm's outbuildings would block most of the shadows from reaching the farmhouse. There are proposed ball fields to the east and west of the proposed project. If constructed and, based on additional analysis, if it is found that shadow flicker affects participants or spectators, Pettisville would temporarily shut down the turbine to lessen the shadow's impact during periods when shadowing

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1. The wind turbine's shadow influence is calculated at 10 rotor diameters or 1,770 feet.

events would overlap scheduled sporting or other use events. None of the non-school receptors would receive an excess of 30 hours of shadow flicker per year. However, should a local resident find shadow flicker to be an annoyance, Pettisville would plant screening trees or purchase window coverings for the resident. (Section 3.2.2.2 of the Final EA).

Appropriate safety training, precautions, and best management practices would be applied during construction, operation, and decommissioning of the turbine in an effort to reduce or eliminate health and safety issues. No residences are located within the fall zone of the turbine (1.1 times the total turbine height). Based on the extreme rarity of tower collapse or blade throw and the fact that persons would not be located within the fall zone for extended periods of time, the risk to public safety due to such occurrences would be minimal (Section 3.2.2.7 of the Final EA).

There are no historic properties within the project site. In accordance with Section 106 of the *National Historic Preservation Act* (16 U.S.C. 470 *et seq.*; NHPA), DOE determined that the Wind Energy Project would not have an adverse effect on historic properties or cultural resources. The Ohio Historic Preservation Office concurred that no historic properties would be adversely affected by the Wind Energy Project (Section 3.2.2.4 of the Final EA).

A primary area of environmental concern for the operation of wind turbines is the potential to injure or kill birds and bats. Analysis in the EA indicates that the Wind Energy Project may affect, but is not likely to adversely affect, the Federally- and State-listed Indiana bat and would have no adverse effects on other Federally-listed species. Recommendations as described in the U.S. Fish and Wildlife Service (USFWS) *Interim Guidelines to Avoid and Minimize Wildlife Impacts from Wind Turbines* were considered in the siting, design, and installation plans for the Wind Energy Project. Based on the analysis in the EA, and in consideration of USFWS recommendations, DOE determined that impacts to biological resources were minimal (Section 3.2.2.6 of the Final EA).

**PUBLIC PARTICIPATION IN THE EA PROCESS:** In accordance with applicable regulations and policies, DOE sent a scoping notice on August 19, 2010, to Federal, State, and local agencies; tribal governments; elected officials; businesses; organizations; and special interest groups, providing 15 days to comment on the scope of the EA. DOE published the Scoping Notice online at the DOE Golden Field Office Reading Room website. One response to the public Scoping Notice was received from the USFWS regarding potential impacts to the Indiana bat.

DOE published the Draft EA online at the DOE Golden Field Office Public Reading Room website at [http://www.eere.energy.gov/golden/NEPA\\_DEA.aspx](http://www.eere.energy.gov/golden/NEPA_DEA.aspx) and the DOE NEPA website at <http://nepa.energy.gov> for a 15-day review period, which ended February 25, 2011. Postcards announcing the availability of the Draft EA were mailed to identified stakeholders and the Notice of Availability (NOA) was published online at the DOE Golden Field Office Public Reading Room website. The NOA was also published in *Archbold Buckeye* and the *Crescent News* and on the Pettisville Local School District website and newsletter. DOE received no comments on the Draft EA.

**DETERMINATION:** Based on the information presented in the Final EA (DOE/EA-1818), DOE determined that the Proposed Action would not constitute a major Federal action, significantly affecting the quality of the human environment within the context of NEPA. Therefore, preparation of an environmental impact statement is not required, and DOE is issuing this FONSI.

The Pettisville has committed to obtain and comply with all Federal, State, and local permits and applicable regulations required for construction, operation, and eventual decommissioning of the Wind

Energy Project. Necessary permits and project proponent-committed practices are identified in Sections 2.4 and 2.5 of the Final EA.

The environmental protection measures committed to by Pettisville and identified in the EA and FONSI shall be incorporated and enforceable through DOE's funding award documents to the State of Ohio through ODOD. ODOD will be required to flow down and ensure compliance with the requirement that Pettisville implement the project proponent-committed practices, BMPs, and mitigation measures identified in the EA and FONSI.

The Final EA is available at the DOE Golden Field Office Reading Room website, [http://www.eere.energy.gov/golden/Reading\\_Room.aspx](http://www.eere.energy.gov/golden/Reading_Room.aspx), and the DOE NEPA website, <http://nepa.energy.gov>.

For questions about this FONSI, please contact:

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For further information about the DOE NEPA process, contact:

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Issued in Golden, CO, this 28<sup>th</sup> day of February 2011.



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