Department of Energy
Golden Field Office
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DOE/EA-1820

FINDING OF NO SIGNIFICANT IMPACT

ARCHBOLD AREA LOCAL SCHOOL WIND PROJECT

AGENCY: U.S. Department of Energy (DOE), 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 Archbold Area Local School District (Archbold) for the Archbold Area Local School Wind 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 Archbold Wind Energy Project, a 750-kilowatt wind turbine at Archbold High School, located at 600 Lafayette Street, Archbold, Ohio. The proposed turbine would have a 177-foot rotor diameter and a 213-foot tall tower, resulting in an overall height of 302 feet at its tallest blade tip. The turbine's monopole tower would be sited at the west edge of the Archbold High School campus, near the school's football field. The proposed project would include the installation of approximately 1,000 feet of associated underground electrical transmission lines to connect the 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 Archbold Area Local School Wind Project, Archbold, Fulton County, Ohio* (DOE/EA-1820; 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.

Archbold proposes to construct the Wind Energy Project on previously disturbed land located adjacent to the football stadium parking lot at the Archbold High School campus. The Wind Energy Project is anticipated to generate 1,440,406 kilowatt-hours per year, offsetting approximately 40 percent of electricity used by the school.

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, the 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 Archbold Area Local School District. The construction area is currently a grass lawn and parking lot. The parking lot immediately adjacent to the wind turbine location 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 41 to 49 A-weighted decibels (dBA), 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 would be less than 1 dBA. Therefore, no adverse noise impacts are expected (Section 3.2.2.3 of the Final EA).

The results of the visual analysis indicate that the wind turbine would be visible to some of the local residents especially those in close proximity to the school and project site, such as the Archbold Evangelical Church (approximately 2,100 feet from the proposed turbine location). The proposed turbine would stand out as a contrasting and dominant visual element in the landscape, but would be less visible to residents who are located more distant from the turbine site due to local obstruction proximities such as trees and buildings. The turbine would appear as a very small element of the skyline for most locations and would be similar to the region's existing communication towers and granaries. However, because of the trees and other tall structures in the vicinity of the proposed project, there would be a minimal impact to the local viewshed (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.[1] Although some parts of the school's building would receive flickering shadows up to 30 hours per year (in the late afternoons or sunsets), there are no windows on the turbine side of the building. The results of the study show that portions of the football stadium would receive longer periods of flickering

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

shadows (approximately 210 hours per year); however, the majority of the shadow events would occur when the stadium facility was not in use (considering that the stadium's primary use would be for 1-2 evenings or nights per week during the fall and the shadow events would occur for a few hours in late afternoon/evening). To mitigate potential shadow flicker impacts, Archbold would temporarily shut down the turbine to lessen the shadow's impact on the stadium during periods when shadowing events would overlap scheduled sporting or other use events. The study also shows that diffused shadows may reach the public ball fields 1,200 feet southeast of the project site (less than 28 hours per year). To mitigate potential shadow flicker impacts, Archbold would shut down the turbine during any overlapping events if the shadowing was found to be a nuisance by ball field users or spectators. (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) and based on analysis conducted by the recipient, DOE determined that the Wind Energy Project would not have an adverse effect on historic properties or cultural resources. The Ohio Historic Preservation Office determined 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 for a 15-day review period, which ended February 9, 2011. Postcards announcing the availability of the Draft EA were mailed to identified stakeholders, and the Notice of Availability was published in the *Archbold Buckeye* newspaper on January 26, 2011. DOE received no comments on the Draft EA.

DETERMINATION: Based on the information presented in the Final EA (DOE/EA-1820), 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.

Archbold 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 Archbold 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 Archbold 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, and the DOE NEPA website, http://nepa.energy.gov.

For questions about this FONSI, please contact:

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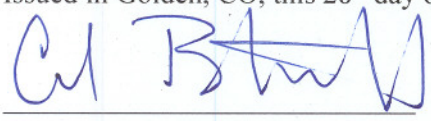

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