



## Department of Energy

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DOE/EA-1815

### FINDING OF NO SIGNIFICANT IMPACT

#### CUYAHOGA COUNTY AGRICULTURAL SOCIETY WIND ENERGY PROJECT BEREA, CUYAHOGA COUNTY, OHIO

**AGENCY:** US. Department of Energy (DOE), Golden Field Office

**ACTION:** Finding of No Significant Impact (FONSI)

**SUMMARY:** The U.S. Department of Energy's (DOE) Proposed Action is to authorize the expenditure of Federal funding appropriated under the *American Recovery and Reinvestment Act* (Recovery Act) to design, permit, and construct the Cuyahoga County Agricultural Society Wind Energy Project (Wind Energy Project), a 660 kilowatt wind turbine at Cuyahoga County Fairgrounds in the center of the fairgrounds complex on 164 Eastland Road, Berea, Ohio.

DOE has made SEP funds available to the Ohio Department of Development's (ODOD's) Energy Resources Division through the State Energy Program (SEP) and to Cuyahoga County through the Energy Efficiency and Conservation Block Grant (EECBG) Program. However, DOE must complete the review of the Wind Energy Project under the National Environmental Policy Act (NEPA) before ODOD and Cuyahoga County may use SEP and EECBG funding for the construction of the Wind Energy Project. DOE has authorized ODOD and Cuyahoga County 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 construction of the Wind Energy Project, the EA also examined at 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 (EA). The Final EA is hereby incorporated by reference.

This FONSI is prepared in accordance with the *National Environmental Policy Act of 1969*, 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 EA examined the potential environmental impacts of the Proposed Action and of a No-Action Alternative. Under the No-Action Alternative, DOE would not authorize the use of SEP or EECBG funds for the Wind Energy Project, which DOE assumes for purposes of the EA would not be constructed or operated.

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The Wind Energy Project would be constructed and operated on existing previously disturbed land located in the central portion of the 100-acre Cuyahoga County Fairgrounds (Fairgrounds). The Wind Energy Project is anticipated to generate 861,890 kilowatts hours per year, offsetting almost 100 percent of electricity used by the Fairgrounds. Using non-DOE funds available from Cuyahoga County, the Agricultural Society would construct an Energy Center that would receive its power from the proposed wind turbine. The Energy Center was analyzed as a connected action in the EA. DOE funds will only be used for the wind energy turbine.

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.

Implementation of the Wind Energy Project would permanently commit 256 square feet and temporarily disturb approximately 4,000 square feet of previously disturbed land. The construction area is a combination of unvegetated and scattered maintained grass that has been part of the Fairgrounds since the 1890s. The area immediately surrounding the wind turbine and Energy Center location contains a grandstand and multiple outbuildings used for fair events. These areas will continue to be used as such after construction of the Wind Energy Project is completed. Any direct or indirect land use impacts or any irretrievable commitment of land beyond the life of the project resulting from the Wind Energy Project would be negligible.

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. The City Berea does not have noise regulations. However, during operations, the predicted turbine sound levels will be in the range of 41 to 49 DNL, which are below the Environmental Protection Agency's Day Night Average Sound Level guidelines of 55 to 65 dBA. An adverse noise impact is considered to occur if the wind turbine noise is predicted to increase the ambient daytime or nighttime  $L_{eq}$  value at residences by more than 3 dBA. The increase in ambient noise levels for daytime and nighttime at the nearest receptors is less than 1 dBA. Therefore, no adverse noise impacts are expected. (See Section 3.2.2.3 of the EA).

The results of the visual analysis indicate that the proposed project would be visible to the nearest receptors, particularly during winter months. However, most of the local community's viewshed is already dominated by existing vertical features. Due to obstruction proximities and densities due to trees and buildings, the local viewshed would not be substantially altered by the proposed project. In the instances where the proposed project could be viewed by the larger community, it would be similar in appearance to the region's existing communication towers. Overall, effects on the local viewshed are anticipated to be minimal.

International standards appear to be consensus that flickering shadows impacting a particular location in exceed of 30 hours per year are considered a potential nuisance. No homes or occupied business structures outside of the Fairgrounds' property within the proposed turbines shadow influence would receive flickering shadows of over 30 hours per year. While some of the surrounding buildings on the Fairgrounds would receive shadows, none of the off-site receptors would receive more than 11 hours of shadowing annually. Some of the Fairgrounds' buildings would receive shadowing, but most of these are out-buildings and do not have windows. The northern part of the track inside the grandstand would

receive moving shadows year round. To mitigate the impact of shadow flicker on the grandstand, turbine will be shut down when shadow flicker occurs simultaneously with an event at the track. Visual impacts that would adversely affect users of the project area and surrounding areas would be minimal through mitigation as a result of the Wind Energy Project. (See Section 3.2.2.2 of the 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 (301 feet - 1.1 times the total turbine height). The blade and tower impact area would have restricted access during construction. Any risk to public safety due to an extremely rare event such as tower collapse or blade throw will be mitigated by limiting access within the fall zone and areas (i.e., portions of the grandstand and track located in the fall zone and are intermittently occupied during certain Fairgrounds' events). Risk of impacts to individuals in these areas as a result of tower collapse or blade throw is highly unlikely. (See Section 3.2.2.7 of the EA).

There are no historic properties listed in or eligible for listing in the National Register within the indirect Area of Potential Effects (APE). A pedestrian survey of the area of ground disturbance was not possible due to snow cover. The Ohio Historic Preservation Office recommended that a Phase 1 survey be conducted within the area of ground disturbance for the foundation of the wind turbine and the Energy Center. The ODOD and Cuyahoga County, through the county's "Agricultural Society" has committed to a preparation of a Phase 1 survey for archaeological resources that would be conducted by a qualified archaeologist and submitted to the OHPO for their review. If archaeological resources are discovered as part of the survey, the Agricultural Society would work in conjunction with the OHPO to develop an appropriate treatment plan that will be in accordance with the National Historic Preservation Act (16 U.S.C. 470 et seq.) (See Section 3.2.2.4 of the 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-listed Indiana bat and would have no adverse effects on other federally listed species. Recommendations as described in the United States Fish and Wildlife Service (USFWS) *Interim Guidelines to Avoid and Minimize Wildlife Impacts from Wind Turbines* (2003) were considered in the siting, design and installation plans for the Wind Energy Project. The Agricultural Society has also committed to conduct voluntary avian and bat mortality monitoring during the first post-construction fall migration season. This monitoring would provide data to the USFWS and Ohio Department of Wildlife on potential levels of avian and bat mortality associated with single turbines. Based on the analysis in the EA, and in consideration of USFWS recommendations, DOE determined that impacts to biological resources were minimal. (See Section 3.2.2.6 of the EA)

DOE evaluated the cumulative impacts of the proposed project and other past, present, and reasonably foreseeable projects in the area. DOE concluded that Cuyahoga County's proposed project, in conjunction with other activities considered, would have no or minimal cumulative impacts on the environmental resources considered.

**PUBLIC PARTICIPATION IN THE EA PROCESS:** In accordance with applicable regulations and policies, DOE sent a scoping notice on August 23, 2010, to Federal, state, and local agencies; tribal governments; elected officials; businesses; organizations and special interest groups; providing 15 days to submit comments regarding the EA's scope. DOE published the Scoping Notice online at the DOE Golden Field Office Public Reading Room. In response to the scoping letters, DOE received a letter from the USFWS that was part of the ongoing consultation between DOE and the USFWS. DOE also received a letter in response to scoping from American Tower Corporation which stated that they believed the wind turbine would interfere with their cell tower service. In response, a Microwave Study was prepared.

DOE published the draft EA online at the DOE NEPA Website for a 15-day review period which ended December 4, 2010. Postcards announcing the Notice of Availability (NOA) were mailed to identified stakeholders and the NOA was published online at the DOE NEPA Website. The NOA was also published in The Cleveland Plain Dealer newspaper on November 19, 2010. DOE received no comments on the Draft EA.

**DETERMINATION:** Based on the information presented in the Final EA (DOE/EA 1815), 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, the preparation of an EIS is not required, and DOE is issuing this FONSI.

Cuyahoga County 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 applicant committed measures are identified in Sections 2.4 and 2.5 of the EA. Mitigation measures, applicant committed measures and other best management practices discussed in the EA are hereby incorporated and are enforceable through DOE's award.

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

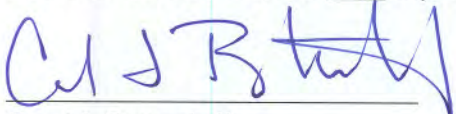
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