



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

FINDING OF NO SIGNIFICANT IMPACT

LEEDCo Project Icebreaker, Lake Erie, City of Cleveland, Cuyahoga County, Ohio

DOE/EA-2045

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

ACTION: Finding of No Significant Impact (FONSI)

SUMMARY: DOE is proposing to provide funding to the Lake Erie Energy Corporation (LEEDCo) to support the development of a demonstration-scale offshore wind project that would be located approximately 8 miles off the shore of Cleveland, Ohio in Lake Erie (Proposed Project).¹ In compliance with the National Environmental Policy Act (NEPA), DOE was the lead federal agency, and the U.S. Army Corps of Engineers (USACE), and U.S. Coast Guard (USCG) were cooperating agencies, in the development of the Environmental Assessment (EA) titled *Environmental Assessment for LEEDCo Project Icebreaker, Lake Erie, City of Cleveland, Cuyahoga County, Ohio*; DOE/EA-2045.

DOE evaluated the potential environmental impacts of providing federal funding to the Proposed Project (DOE's Proposed Action). The analysis provided in the EA supports DOE's determination 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.

DOE places a strong emphasis on avoiding, minimizing, and mitigating potentially adverse environmental impacts. As set forth in Chapter 2, Section 2.7 *Applicant-Committed Measures* of the EA, LEEDCo has committed to incorporating certain measures, including project design decisions, to ensure that the potential for adverse impacts to natural and cultural resources are minimized. These commitments and project design decisions, along with any additional measures identified through the federal, state and local permitting processes, (collectively "measures"), would be incorporated and binding through the DOE funding agreement. The measures are not necessary to decrease the level of impact below significant, but the measures are intended to further reduce the likelihood of impacts and to ensure the Proposed Project is carried out in an environmentally responsible manner.

Context of Potential Impacts

DOE must evaluate the significance of an action in several different contexts as significance varies with the setting of the proposed action. Both short- and long-term effects are relevant.

¹ Prior to the issuance of this FONSI, DOE authorized LEEDCo to use federal funding for preliminary activities, which include EA preparation, information gathering, site analysis, design simulations, permitting, and environmental surveys. These activities are associated with the Proposed Project and do not significantly impact the environment nor represent an irreversible or ir retrievable commitment by DOE in advance of its completion of the EA and subsequent decision to issue this FONSI.

The Proposed Project is a demonstration-scale offshore wind project that would be located approximately 8 miles off the shore of Cleveland, Ohio in Lake Erie. It would consist of six wind turbine generators that would generate approximately 21 megawatts (MW) of electricity. Inter-array cables (connecting the wind turbines) and an export cable (transmitting electricity generated by the wind turbines to the shore) would be buried in the lakebed, and the export cable would be brought ashore under the Cleveland Harbor and the Cleveland Harbor breakwater to a new electrical substation that would be located at the existing Lake Road Substation.

The Proposed Project Area considered in the EA includes the proposed turbine sites, the inter-array and export cable routes, the proposed substation site, the proposed construction laydown area, and the operation and maintenance center. The Proposed Project Area would include approximately 4.2 acres of open lakebed and .22 acre of existing industrial land. The proposed wind turbine generators and the proposed substation would be visible from the shoreline. However, due to the distance that the wind turbine generators would be constructed from shore and the existing industrial uses of the proposed onshore project sites, adverse visual impacts associated with the Proposed Project would be minor.

The Proposed Project would not cause any significant adverse effects nationally, within the Great Lakes region, or the onshore or offshore area within or near the Proposed Project Area.

Intensity of Potential Impacts

The following discussion is organized around the ten (10) intensity factors, described in the Council for Environmental Quality (CEQ) National Environmental Policy Act (NEPA) Implementing Regulations, 40 Code of Federal Regulations (CFR) 1508.27, which refer to severity of impact.

1) Impacts that may be both beneficial and adverse:

The EA evaluated adverse effects of the Proposed Project separately from beneficial effects, to evaluate whether such adverse effects would have been significant in their own right, and no such effects were found to be significant. The analysis in the EA did not use beneficial effects to offset the potential significance of any adverse effect.

The beneficial impacts of the Proposed Project would include a contribution toward the reduction of regional greenhouse gas emissions, diversification of regional energy supply, and economic revitalization of key sectors of the regional economy.

Adverse impacts, summarized in Section 3.15 *Summary of Environmental Impacts* of the EA, include minor short-term impacts to lake water quality, fish resources, public health and safety, lake use, traffic and transportation, and noise that would occur during construction. Moderate short-term adverse impacts to benthos would be expected during construction. The Proposed Project would also result in negligible, short-term and long-term impacts to insects (butterflies), aquatic and terrestrial protected species, waste management, hazardous materials, economics and socioeconomics, and climate change during construction and for the operational life of the project. Minor long-term impacts to birds and bats, cultural resources, aesthetic and visual resources would be associated with the presence and operations of the turbines.

Applicant-committed measures, which include project design decisions such as using flashing red lights and other “smart” lighting on the turbines to avoid attracting nocturnally migrating birds and post construction monitoring plans, have been established to minimize or eliminate potential adverse impacts to sensitive resources.

The Proposed Project will not result in any significant adverse or beneficial impacts.

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

The Proposed Project must comply with all state and federal regulations. Air emissions would not exceed National Ambient Air Quality Standards (NAAQS) and criteria pollutant emissions would be less than the de minimis thresholds during construction, operation, and decommissioning activities. In addition, the turbines would be equipped with all of the required navigational safety equipment, including (but not limited to) a fog detector and foghorn in order to facilitate the safe passage of boats and other marine traffic. Therefore no adverse effects to public health or safety are anticipated. As presented in the EA, the Proposed Project will not cause any significant effects on public health and safety.

Installation and operation of the Proposed Project does not involve the transportation, storage, or use of radioactive, explosive or toxic materials. The Proposed Project is not located near any national defense infrastructure or in the immediate vicinity of any other substantial national structure; and is a single component of a diversified power grid. Therefore, the Proposed Project would not be a likely target for intentional destructive acts that could further affect public 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 EA identified unique characteristics in the vicinity of the Proposed Project and evaluated the potential impacts of the Proposed Project on natural and cultural resources. There are no wetlands, prime farmlands, park lands, or wild and scenic rivers in the Proposed Project area.

The Proposed Project is located approximately 4.5 miles from the Cleveland Lakefront Audubon Ohio Important Bird Area (IBA). The area was selected as an IBA because of the large concentration of birds that congregate there during spring and fall migration. The Proposed Project would also be located within the Lake Erie Central Basin IBA, which is designated as a Global IBA. This area was selected as an IBA primarily because of the large concentration of red-breasted mergansers and other migratory water birds that use the Lake as a migratory stopover site. The EA evaluated potential impacts to migratory birds and concluded, primarily due to the small size of the project, that there would be both short- and long-term impacts but those impacts would be minor. There would be no potential for population-level impacts to any species of bird as a result of the Proposed Project.

The Proposed Project has the potential to impact both lake- and land-based cultural resources (archaeological and historic-architectural resources). Submerged historic-period archaeological resources are typically shipwrecks. The National Oceanic and Atmospheric Administration's (NOAA) Automated Wreck and Obstruction Information System (AWOIS) maintains a record of vessel losses and obstructions to shipping. The NOAA AWOIS lists 13 wrecks and obstructions in the Cleveland area. Additionally, the Ohio Historic Preservation Office (OHPO) online mapping system was consulted to locate any inventoried cultural resources identified within the APE for direct effects. No properties or districts listed in the OHPO mapping system are present within the lake-based Area of Potential Effect (APE). There are four shipwrecks located within 3.5 nautical miles of the APE for direct effects. However, no shipwrecks are present within the APE for direct effects. The Proposed Project would not require or result in the demolition or physical alternation of any buildings or other potential historic-architectural resource or properties.

Based on the analysis provided in the EA, DOE has concluded that the Proposed Project would not cause any adverse effects to 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:

Some commenters questioned DOE's use of bird and bat data that was not specific to the Proposed Project Area; however, those concerns did not rise to a substantial dispute. Though not site-specific, the bird and bat data that is available for the greater project area, particularly in light of the small size of the Proposed Project, provides adequate support of the analysis and conclusions presented in the EA. Further, as acknowledged by the U.S. Fish and Wildlife Service (USFWS), in the absence of precise site-specific data concerning how birds and bats are using the airspace in and around the project area, due to the small size of the Proposed Project it is reasonable to conclude the total impacts of the project on birds and bats will be minor.

There is no known credible scientific controversy over the impacts of the Proposed Project. Accordingly, the effects on the quality of the human environment are not likely to be highly controversial.

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

The impact analyses in Chapter 3 *Affected Environment and Environmental Impacts* of the EA show effects of the Proposed Project are not uncertain; they do not involve unique or unknown risks. While this would be the first offshore wind project in the Great Lakes, potential impacts associated with construction and operation of the project are understood and are largely similar to land-based projects in the Great Lakes region, the existing offshore wind project off the coast of Rhode Island, and offshore wind projects that have been deployed in Europe. Impacts associated with the proposed turbine foundations are expected to be similar to, but overall less than, those observed for offshore oil rigs in the Gulf of Mexico and offshore wind facilities in Europe. All vessels that are proposed for use during construction and maintenance are common. Impacts associated with wind energy projects are well studied. Applicant-committed measures, permit requirements, monitoring, and adaptive management would ensure effects are within the expected parameters.

Although some elements of the Proposed Project involve relatively new technology, testing and scientific peer reviewed research on the technology are sufficient to support the findings and assessment of effects in the EA. The potential impacts to the human environment are fully analyzed and supported by previous projects, studies and publications, as referenced in the EA. There is a low probability of highly uncertain effects or unique or unknown risks resulting from the Proposed Project.

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:

DOE is seeking to verify innovative designs and technology developments and validate full performance and cost under real operating and market conditions. The Proposed Project, a demonstration scale project, would provide performance, engineering, environmental monitoring, operations and cost data to further the existing knowledge base concerning offshore wind projects. Implementation of the Proposed Project does not establish a precedent for future actions or represent a decision in principle about a future consideration. Some public and agency comments expressed that DOE should consider the Proposed Project precedent setting for commercial scale offshore wind development in Lake Erie. However, while DOE's decision to fund this demonstration scale project is intended to result in information and data that could be beneficial to offshore wind projects, by supporting this Proposed Project, DOE is not establishing a precedent or making a decision with respect to any future offshore wind project.

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

The EA analyzed the proposed project in the context of other past, present and reasonably foreseeable actions. The Proposed Action, when evaluated together with other past, present, or reasonably foreseeable activities in the area, would not result in other cumulatively significant impacts. It is noted that industry goals to further develop offshore wind in this region are speculation at this point, which does not establish a reasonably foreseeable future project that could be analyzed.

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 (NRHP) or may cause loss or destruction of significant scientific, cultural, or historical resources:

Section 3.11 *Aesthetics and Visual Resources* of the EA identifies historic resources that are listed in or eligible for listing in the NRHP. A viewshed analysis was conducted to evaluate the indirect visual effects of the Proposed Project on districts, sites, highways, structures or objects listed in or eligible for listing in the NRHP. The turbines will be visible from seven National and/or State Registered Historic Places located within the APE. Four NRHP properties, including one National Landmark, would have direct views of the Proposed Project. DOE engaged in consultation with property owners, stakeholders, the Department of the Interior, Tribes, and the State Historic Preservation Office, as well as sought a disputed effects determination from the Advisory Council on Historic Preservation. Based on the analysis presented in the EA, DOE concludes the Proposed Project would have no adverse effect on districts, sites, highways, structures, or objects listed or eligible for listing in the NRHP.

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 (ESA) of 1973:

DOE determined the Proposed Project *may effect but is not likely to adversely affect* the following five federally listed species: Indiana bat, northern long-eared bat, Kirtland's warbler, piping plover, and rufa red knot. Further, DOE determined that because no critical habitat is designated in the Proposed Project area, none would be affected by the proposed action. Per Section 7 of the Endangered Species Act, DOE requested and received concurrence from USFWS on this determination.

The Proposed Project will not significantly adversely affect any 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 human environment:

The Proposed Project does not violate any federal, state, or local law or requirement imposed for the protection of the environment. The federal funding would be contingent on LEEDCo obtaining and complying with all appropriate federal, state, and local authorizations required for of the Proposed Project.

Conclusion

DOE finds that the Proposed Action is not a major action that constitutes a significant effect on the human environment. This finding and decision is based on the consideration of DOE's NEPA implementing regulations (10 CFR Part 1021) and the CEQ's criteria for significance (40 CFR 1508.27), both with regard to the context and the intensity of impacts analyzed in the EA. Accordingly, the Proposed Action does not require the preparation of an environmental impact statement.

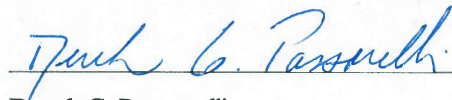
For questions about this FONSI or the Final EA, please contact:

U.S. Department of Energy
Golden Field Office
15013 Denver West Parkway
Golden, Colorado 80401
GONEPA@ee.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>

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Derek G. Passarelli
Director, Golden Field Office