Department of Energy
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FINDING OF NO SIGNIFICANT IMPACT

UNIVERSITY OF MAINE'S DEEPWATER OFFSHORE FLOATING WIND TURBINE TESTING AND DEMONSTRATION PROJECT – CASTINE

DOE/EA-1792-S1

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

ACTION: Finding of No Significant Impact (FONSI)

SUMMARY: The U.S. Department of Energy (DOE) has completed a Supplemental Environmental Assessment (Supplemental EA) DOE/EA-1792-S1 for the University of Maine's (UMaine) Deepwater Offshore Floating Wind Turbine Testing and Demonstration Project - Castine. DOE prepared the Supplemental EA to evaluate the potential environmental impacts of providing funding to the UMaine for their proposed project offshore of Dyce Head in Castine, Hancock County, Maine (Castine site).

UMaine originally proposed to use federal funding to fabricate and temporarily deploy up to two, 1/3-scale turbines in Gulf of Maine, in waters south of Monhegan Island, Maine. DOE completed an earlier Environmental Assessment (DOE/EA-1792) and issued a FONSI specific to the Monhegan site in September 2011. UMaine has since proposed to downscale the size of the tower and turbine from 1/3 scale to 1/8 scale. Because of this proposed change to a smaller turbine, UMaine is proposing to deploy the tower and turbine at a more sheltered nearshore location just west of Castine, Maine prior to testing at the Monhegan site in the summer and fall of 2013. DOE determined that due to the addition of a new test site, a Supplemental EA was required prior to the authorization of federal funding[1].

All discussions, analyses, and findings related to UMaine's proposed project, including applicant committed measures, for both the Monhegan and Castine sites, are documented in DOE/EA-1792 and DOE/EA-1792-S1. UMaine will implement the applicant committed measures listed in

[1] Prior to the issuance of this FONSI, DOE authorized UMaine to use a percentage of the federal funding for preliminary activities, which include preparing this Supplemental EA, conducting analyses, and agency consultations, and has approved similar deployment, testing, and retrieval activities at the Monhegan site. These activities are associated with the proposed project yet do not significantly impact the environment nor represent an irreversible or irretrievable commitment by the DOE in advance of this finding for UMaine's proposed testing at the Castine site.

Chapter 2.5 of DOE/EA-1792-S1 to minimize or avoid potential environmental effects to biological resources, ocean and land use, and cultural resources[2]. No DOE required mitigation was developed through public review of the draft Supplemental EA or interagency consultations. DOE/EA-1792 and DOE/EA-1792-S1 are hereby incorporated into this FONSI by reference.

Based on the analysis in the Supplemental EA, DOE has determined that the decision to authorize the expenditure of Congressionally directed federal funding by UMaine to proceed with the deployment, testing, and retrieval of one small-scale floating turbine at the Castine site, analyzed under DOE's Proposed Action and UMaine's proposed project, will not significantly affect the quality of the human and natural environment and that the preparation of an Environmental Impact Statement is not required. This finding and decision is based on the consideration of DOE's NEPA implementing regulations (10 CFR Part 1021) and the Council on Environmental Quality's criteria for significance (40 CFR 1508.27), both with regard to the context and the intensity of impacts analyzed in the Supplemental EA.

CONTEXT

The UMaine is proposing to use Congressionally directed federal funding administered through DOE to deploy a 20-kW, 57-foot-tall wind turbine on a floating platform in state waters, 500 to 1,000 feet offshore of Dyce Head in Castine, Maine for a period of approximately four months in the spring and summer of 2013.

Because the effects of the project are limited to the local geographic area, short-term in duration, small-scale in nature, and the applicant committed measures listed in Chapter 2.5 of the final Supplemental EA are designed specifically to minimize or avoid potential environmental effects to biological resources, cultural resources, and ocean and land use; DOE has determined that there no direct, indirect, or cumulative effects of sufficient size or duration to be significant at the local, regional, or national level.

INTENSITY

Impacts that may be both beneficial and adverse:

In the Supplemental EA, DOE considered and analyzed the beneficial and adverse impacts for the four-month turbine deployment at the Castine site. Due to the short term deployment and small size of the turbine and platform, the potential for adverse impacts to affected resources would be minimal. Applicant committed measures have been established to minimize potential adverse impacts to biological resources, cultural resources, and ocean and land use.

[2] The applicant committed measures listed in Chapter 2.5 of DOE/EA-1792-S1 will be incorporated and enforceable through the award terms and conditions. UMaine agrees to abide by the conditions, limitations, mitigation requirements, monitoring requirements and reporting responsibilities specified in DOE/EA-1792-S1.

As an innovative technological and research related renewable energy project, UMaine's project may result in the beneficial effects of exploration towards reductions in fossil fuel use, improvements in renewable energy production, and meeting the DOE Wind and Water Power Program's mission and goals for offshore wind advancement.

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

In the Supplemental EA, DOE considered that there would be no disproportionately high or adverse human health or environmental effects related to the project and that it would not be a likely target for intentional destructive acts that could further affect public safety. In consultation with the US Coast Guard (USCG) Waterways Management Division, UMaine developed a navigation safety plan that would minimize impacts to public safety specific to commercial or recreational vessel traffic. The safety plan would include the use of best management practices during towing, deployment, and removal of the turbine and floating platform. Notice will be given to the Maine Marine Patrol and USCG to alert fishermen about towing operations and to advise for the removal of gear from the planned tow route to further minimize impacts to the public.

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:

Historic and cultural resources have been identified in the UMaine project area, and are described further in the Supplemental EA (Chapter 3.5). The proposed project site has no known unique or significant geographic resources and would avoid neighboring cultural resources identified in Chapter 3.5.

No other unique characteristics of the area would be altered or otherwise affected.

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

Deployment of deepwater offshore floating wind turbines is relatively new to coastal Maine, but because of the small scale and short term of the deployment, this project has not been highly controversial. No public comments were received on the Draft Supplemental EA when it was available for public review, and the Town of Castine and Maine Maritime Academy have demonstrated their support of the project.

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

Although some elements of this 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 Supplemental EA. The potential impacts to the human environment are fully analyzed and supported by previous projects, studies and publications, as referenced in the Supplemental EA. There is a low probability of highly uncertain effects or unique or unknown risks resulting from the proposed project.

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:

Because of the nature of this research project, it could beneficially influence future development and deployment of deepwater, offshore wind turbines. However, the small scale and short term of the proposed project deployment do not represent significant effects nor do they represent a decision in principle about a future consideration.

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

Operation of the small scale turbine might temporarily contribute to the cumulative mortality of individual birds and bats caused by this and other existing man-made structures in the region. However, it is anticipated that few birds or bats would be harmed by the project because the rotor diameter of the turbine would be small and the turbine would be deployed at the Castine site for only four months. The proposed action when evaluated together with other past, present, or reasonably foreseeable land disturbing activities in the area would not result in other cumulatively significant impacts at the local or regional scale.

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:

Surveys have been conducted by UMaine to ensure that shipwrecks and other underwater historic properties would not be disturbed by deployment of the turbine. The turbine would be located so that it would not be visible, or would appear small, from historic properties in the surrounding area. Therefore, deployment and retrieval of the floating platform would not adversely alter the viewshed from those properties or otherwise adversely affect districts, sites, or other properties listed or eligible for listing, or cause loss or destruction of significant scientific, cultural or historical resources. The Maine Historic Preservation Officer has concurred with this conclusion in a letter dated January 2, 2013. The Penobscot Indian Nation and the Aroostook Band of Micmacs each responded to DOE in transmittals dated November 29, 2012 that the project would not have impacts to any structure or site significant to those tribal nations.

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:

There would be no significant adverse impacts to threatened, endangered, or State of Maine sensitive species or associated habitat within the assessment areas. The National Marine Fisheries Service (NMFS) and the U.S. Fish and Wildlife Service (USFWS) were consulted in the development of the Supplemental EA. DOE consulted with each agency per the requirements set forth in Section 7 of the Endangered Species Act. In a letter dated February 20, 2013, NMFS concurred with DOE's findings that impacts from the proposed project to ESA listed species, essential fish habitat, and marine mammals would be insignificant or minimal. The USFWS also concurred with DOE findings, in a letter dated March 7, 2013, that the proposed project is not likely to adversely affect avian and bat species under their jurisdictional responsibilities.

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

The proposed action does not violate any federal, state, or local law or requirement imposed for the protection of the environment. UMaine's commitment to obtain and comply with all appropriate federal, state, and local permits required for the project and to minimize potential impacts through the implementation of best management practices detailed in the Supplemental EA, shall be incorporated and enforceable through DOE's financial assistance agreement.

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

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