

PMC-EF2a

(2.04.02)

**U.S. DEPARTMENT OF ENERGY  
EERE PROJECT MANAGEMENT CENTER  
NEPA DETERMINATION**



RECIPIENT: University of Maine

STATE: ME

**PROJECT TITLE :** Partial Validation of Coupled Models and Optimization of Materials for Offshore Wind Structures (CDP)

<b>Funding Opportunity Announcement Number</b> Congressionally-delegated funds	<b>Procurement Instrument Number</b> DE-EE0003278	<b>NEPA Control Number</b> GFO-0003278-004	<b>CID Number</b> GO3278
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**Based on my review of the information concerning the proposed action, as NEPA Compliance Officer (authorized under DOE Order 451.1A), I have made the following determination:**

**CX, EA, EIS APPENDIX AND NUMBER:**

Description:

**B3.3 Research****related to conservation of fish, wildlife, and cultural resources**

Field and laboratory research, inventory, and information collection activities that are directly related to the conservation of fish and wildlife resources or to the protection of cultural resources, provided that such activities would not have the potential to cause significant impacts on fish and wildlife habitat or populations or to cultural resources.

**B3.16 Research activities in aquatic environments**

Small-scale, temporary surveying, site characterization, and research activities in aquatic environments, limited to: (a) Acquisition of rights-of-way, easements, and temporary use permits; (b) Installation, operation, and removal of passive scientific measurement devices, including, but not limited to, antennae, tide gauges, flow testing equipment for existing wells, weighted hydrophones, salinity measurement devices, and water quality measurement devices; (c) Natural resource inventories, data and sample collection, environmental monitoring, and basic and applied research, excluding (1) large-scale vibratory coring techniques and (2) seismic activities other than passive techniques; and (d) Surveying and mapping. These activities would be conducted in accordance with, where applicable, an approved spill prevention, control, and response plan and would incorporate appropriate control technologies and best management practices. None of the activities listed above would occur within the boundary of an established marine sanctuary or wildlife refuge, a governmentally proposed marine sanctuary or wildlife refuge, or a governmentally recognized area of high biological sensitivity, unless authorized by the agency responsible for such refuge, sanctuary, or area (or after consultation with the responsible agency, if no authorization is required). If the proposed activities would occur outside such refuge, sanctuary, or area and if the activities would have the potential to cause impacts within such refuge, sanctuary, or area, then the responsible agency shall be consulted in order to determine whether authorization is required and whether such activities would have the potential to cause significant impacts on such refuge, sanctuary, or area. Areas of high biological sensitivity include, but are not limited to, areas of known ecological importance, whale and marine mammal mating and calving/pupping areas, and fish and invertebrate spawning and nursery areas recognized as being limited or unique and vulnerable to perturbation; these areas can occur in bays, estuaries, near shore, and far offshore, and may vary seasonally. No permanent facilities or devices would be constructed or installed. Covered actions do not include drilling of resource exploration or extraction wells.

**B5.18 Wind turbines**

The installation, modification, operation, and removal of a small number (generally not more than 2) of commercially available wind turbines, with a total height generally less than 200 feet (measured from the ground to the maximum height of blade rotation) that (1) are located within a previously disturbed or developed area; (2) are located more than 10 nautical miles (about 11.5 miles) from an airport or aviation navigation aid; (3) are located more than 1.5 nautical miles (about 1.7 miles) from National Weather Service or Federal Aviation Administration Doppler weather radar; (4) would not have the potential to cause significant impacts on bird or bat populations; and (5) are sited or designed such that the project would not have the potential to cause significant impacts to persons (such as from shadow flicker and other visual effects, and noise). Covered actions would be in accordance with applicable requirements (such as local land use and zoning requirements) in the proposed project area and would incorporate appropriate control technologies and best management practices. Covered actions include only those related to wind turbines to be installed on land.

**Rational for determination:**

This NEPA review is being conducted to evaluate activities under Task 1 of the University of Maine's offshore project, specifically for activities conducted at the Castine site added as a preliminary testing site prior to the Monhegan site deployment and the preliminary erection of a small wind turbine on the University's campus. Remaining task 1 activities for Monhegan site have been evaluated in previous NEPA reviews, including an environmental assessment (DOE/EA 1792). Tasks 2.0, 3.1, and 4.0 have been categorically excluded in prior NEPA determinations (GFO-10-334 and 10-334-001).

Task 1 involves environmental/ecological monitoring and permitting at the proposed floating offshore wind test site at Castine Harbor. Task 1 also includes the installation of the 20kw turbine on campus prior to the deployment at Castine for sensor and component testing.

The environmental research and monitoring by University of Maine consists of the following, in and around the Castine site and ocean waters:

- \* Deploy a meteocean buoy to record seasonal weather and ocean conditions;
- \* Conduct a diver study to canvas and record conditions of the ocean floor;
- \* Install an anabat bat radar system along the coastline of the site to monitor local bat activity; and
- \* Perform weekly bird and marine mammal visual surveys aboard a chartered vessel.

The environmental monitoring was conducted by the University prior to a NEPA review and approval. However, based on research and background information provided by the University, multiple agency consultations, and in an email from David Bean of the Maine US National Marine Fisheries Service (NMFS), DOE has determined that the activities would not have a negative effect on listed endangered/threatened species or essential fish habitat. Environmental studies such as those listed are also inherently categorically excluded by DOE. In addition, the activities have been ongoing in compliance with an Endangered Species Act scientific research permit (e.g., Section 10 (a)(1)(A)) issued by NMFS to the University of Maine. The effects to the listed species from this research have been considered and analyzed for the issuance of these permits. The anabat and bird and marine mammal surveys would not impact species due to their distances and passive monitoring.

The University is also proposing to install a small wind turbine next to its Advanced Structures and Composites Center and the Offshore Wind Lab. The turbine chosen for the project is 20kW rated and totals 117.0 feet at blade tip. A concrete foundation and an electrical system would be installed to integrate the turbine with the lab's existing electrical system. The turbine also has an automated shut off during icy conditions. The foundation would involve excavating a hole about 6' deep and 25'x25' in area, pouring the foundation, and then backfilling with excavated materials.

The Maine Historical Preservation Office was consulted and determined that the installation of the wind turbine would have "No Affect" on historical or cultural properties. If the turbine is not removed by December 31st, 2012 then the University must notify DOE by December 15th so that Section 106 consultation under the Historical Preservation Act can be reinitiated. In addition, the installation would take place on an existing impervious area on campus grounds as requested by the SHPO.

The US Fish and Wildlife Service (USFWS) was consulted to help understand the affects to protected species and overall avian impacts from the turbine installation. Per an email from Mark McCollough, an Endangered Species Specialist with the USFWS, the test of the turbine would not have affects on species due to its short duration of operation, there are no unique bird resources on campus, migrating species are unlikely to fly through campus, and there are no nesting bald eagles in the vicinity. The USFWS requested that the University contact them immediately if a dead bird is found below the turbine.

The State of Maine's Department of Environmental Permitting was also consulted. The department determined that the turbine install is not subject to state level permitting because it is a state owned university; the associated academic use for the turbine; and its temporary nature as a test feature. No other permits are necessary for this action.

Based on the multiple agency consultations and the research provided by the University, DOE has determined that the impacts related to activities in Task1 at the Castine site are anticipated to have negligible or no affects on the human and natural environment. The proposed project is consistent with actions outlined in B3.3 (field research, inventory, and information collection activities that are directly related to the conservation of fish and wildlife resources), B3.16 (small-scale, temporary surveying, site characterization, and research activities in aquatic environments), and B5.12 (installation, modification, operation, and removal of a commercially available wind turbine, with a total height generally less than 200 feet, located within a previously disturbed or developed area, and that is in accordance with local zoning requirement/permits/approvals) and is, therefore, categorically excluded from further NEPA review.

## NEPA PROVISION

DOE has made a conditional NEPA determination for this award, and funding for certain tasks under this award is contingent upon the final NEPA determination.

Insert the following language in the award:

You are restricted from taking any action using federal funds, which would have an adverse affect on the environment or limit the choice of reasonable alternatives prior to DOE/NNSA providing either a NEPA clearance or a final NEPA decision regarding the project.

Prohibited actions include:

Task 3.2 concerning all deployment activities at the Castine site

This restriction does not preclude you from:

Task 1, task 2, subtask 3.1 and task 4

If you move forward with activities that are not authorized for federal funding by the DOE Contracting Officer in advance of the final NEPA decision, you are doing so at risk of not receiving federal funding and such costs may not be recognized as allowable cost share.

Insert the following language in the award:

You are required to:

Please insert into the Terms and Conditions of the award contract:

Per the State of Maine's Department of Environmental Protection (DEP), the turbine foundation must be constructed on an existing impervious area and that the DEP be notified prior to construction of the foundation and erection of the turbine.

Per the Maine's State Historical Preservation Office, the University of Maine must remove the turbine by the end of December 2012. If it will not be removed by that time, DOE must be notified by December 15 so that Section 106 consultation under the Historical Preservation Act can be reinitiated.

The University of Maine must contact DOE and reinitiate a NEPA review if environmental activities extend beyond the scope of work provided to DOE and if studies are conducted outside the Castine and Monhegan areas. Post-deployment monitoring will be evaluated in the ongoing Environmental Assessment for the Castine site and is not being evaluated in this NEPA review.

Per a request by the US Fish and Wildlife Service, the University must contact them immediately if a dead bird is found near the turbine.

Note to Specialist :

This determination will release \$129,678 of grant funding.

Environmental monitoring activities = \$55,477.

Turbine campus installation = \$74,201.

This project should be on ASAP approval due to NEPA conditions.

Review completed by Laura Margason 10.31.2012

**SIGNATURE OF THIS MEMORANDUM CONSTITUTES A RECORD OF THIS DECISION.**

NEPA Compliance Officer Signature: \_\_\_\_\_

 Electronically Signed By: Lori Gray  
NEPA Compliance Officer

Date: 11/5/2012

**FIELD OFFICE MANAGER DETERMINATION**

Field Office Manager review required

**NCO REQUESTS THE FIELD OFFICE MANAGER REVIEW FOR THE FOLLOWING REASON:**

- Proposed action fits within a categorical exclusion but involves a high profile or controversial issue that warrants Field Office Manager's attention.
- Proposed action falls within an EA or EIS category and therefore requires Field Office Manager's review and determination.

**BASED ON MY REVIEW I CONCUR WITH THE DETERMINATION OF THE NCO :**

Field Office Manager's Signature: \_\_\_\_\_

Field Office Manager

Date: \_\_\_\_\_