

**U.S. DEPARTMENT OF ENERGY  
OFFICE OF ENERGY EFFICIENCY AND RENEWABLE ENERGY  
NEPA DETERMINATION**



**RECIPIENT:** University of New Hampshire

**STATE:** NH

**PROJECT TITLE :** An Atlantic Marine Energy Center (AMEC) for Advancing the Marine Renewable Energy Industry and Powering the Blue Economy

<b>Funding Opportunity Announcement Number</b>	<b>Procurement Instrument Number</b>	<b>NEPA Control Number</b>	<b>CID Number</b>
DE-FOA-0002234	DE-EE0009450	GFO-0009450-004	G09450

**Based on my review of the information concerning the proposed action, as NEPA Compliance Officer (authorized under DOE Policy 451.1), I have made the following determination:**

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

Description:

**A9 Information gathering, analysis, and dissemination**

Information gathering (including, but not limited to, literature surveys, inventories, site visits, and audits), data analysis (including, but not limited to, computer modeling), document preparation (including, but not limited to, conceptual design, feasibility studies, and analytical energy supply and demand studies), and information dissemination (including, but not limited to, document publication and distribution, and classroom training and informational programs), but not including site characterization or environmental monitoring. (See also B3.1 of appendix B to this subpart.)

**B3.6 Small-scale research and development, laboratory operations, and pilot projects**

Siting, construction, modification, operation, and decommissioning of facilities for smallscale research and development projects; conventional laboratory operations (such as preparation of chemical standards and sample analysis); and small-scale pilot projects (generally less than 2 years) frequently conducted to verify a concept before demonstration actions, provided that construction or modification would be within or contiguous to a previously disturbed or developed area (where active utilities and currently used roads are readily accessible). Not included in this category are demonstration actions, meaning actions that are undertaken at a scale to show whether a technology would be viable on a larger scale and suitable for commercial deployment.

**B5.25 Small-scale renewable energy research and development and pilot projects in aquatic environments**

Small-scale renewable energy research and development projects and small-scale pilot projects located in aquatic environments. Activities would be in accordance with, where applicable, an approved spill prevention, control, and response plan, and would incorporate appropriate control technologies and best management practices. Covered actions would not occur (1) within areas of hazardous natural bottom conditions or (2) 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, use of large-scale vibratory coring techniques, or seismic activities other than passive techniques.

Rationale for determination:

The U.S. Department of Energy (DOE) is proposing to provide funding to the University of New Hampshire (UNH) to lead a consortium which would include UNH, Stony Brook University (SBU), Lehigh University (LU), and the Coastal Studies Institute (CSI; administered by East Carolina University) to establish the Atlantic Marine Energy Center (AMEC). In addition to establishing AMEC organizational structure, participants, and research capabilities, award activities would include laboratory and field research.

DOE previously completed three NEPA Determinations (NDs) (GFO-0009450-001, 08/20/2021: A9, A11, B3.6, B5.15; GFO-0009450-002, 03/03/2022: A9, B3.6; GFO-0009450-003, 03/14/2022: A9, B3.6) which did not apply to Subtasks 4.2, 9.4, 9.5, and Budget Period (BP) 2 activities. This NEPA Determination (ND) applies only to Subtasks 9.4 and 9.5. DOE will complete the NEPA review for Subtask 4.2 and BP2 activities when sufficient information is available to conduct a meaningful review.

Activities would involve continued handling and operation of a wave-powered water pump ("device") (from Subtasks

9.1, 9.2, and 9.3; ND GFO-0009450-001). UNH personnel would prepare the device (approximately 5' x 5' x 22') at their laboratory facilities (Durham, NH) for transportation and deployment activities. After completion of preparation activities, the device would be transported to the Judd Gregg Marine Research Complex ("UNH Pier") (New Castle, NH), loaded onto a marine vessel, transported to the open water test site (approximately 42.987867, -70.619283) at the Isles of Shoals, and secured to an existing mooring. The device would be deployed for up to two weeks. A passive, metocean data collection buoy (approximately 1.3' x 1.3' x 1.0') would be secured to a separate mooring during the device deployment period. The device and data collection buoy would be recovered at the end of the deployment period and transported back to UNH laboratory facilities.

Data collected during deployment would be analyzed and used in numerical models to assess potential modifications to the device for improved performance. If findings indicate certain modifications may yield significant improvements, UNH may modify the device accordingly. Such modifications would be completed in UNH laboratory facilities.

All UNH facilities are preexisting purpose-built facilities for the type of work to be conducted for this award. Facility modifications would not be required. Award activities would involve typical hazards associated with engineering laboratories and open water deployments, including handling of tools, laboratory equipment, collisions associated with a water vessel, slipping, falling, drowning, and traumatic injury associated with operation and handling of heavy equipment and materials. Existing university health, safety, and environmental policies and procedures would be followed at all facilities, including: personnel training, proper personal protective equipment (PPE), engineering controls, monitoring, and internal assessments.

DOE completed informal consultations with the National Marine Fisheries Service (NMFS) and the U.S. Fish and Wildlife Service (FWS) per Section 7 of the Endangered Species Act (ESA) to determine potential impacts on federally listed species and critical habitats. DOE received letters of concurrence (LOCs) from NMFS (06/21/2022) and FWS (07/13/2022) stating their concurrence that the award activities would not likely adversely affect listed species or critical habitats.

DOE has considered potential impacts on resources, including those of an ecological, historical, cultural, and socioeconomic nature. DOE does not anticipate adverse impacts on these resources.

Any work proposed to be conducted at a federal facility may be subject to additional NEPA review by the cognizant federal official and must meet the applicable health and safety requirements of the facility.

## NEPA PROVISION

DOE has made a conditional NEPA determination.

The NEPA Determination applies to the following Topic Areas, Budget Periods, and/or tasks:

Subtask 9.4  
Subtask 9.5

The NEPA Determination does not apply to the following Topic Area, Budget Periods, and/or tasks:

Subtask 4.2  
Budget Period 2

Notes:

Water Power Technologies Office (WPTO)  
NEPA review completed by Dan Cahill, 07/21/2022.

## FOR CATEGORICAL EXCLUSION DETERMINATIONS

The proposed action (or the part of the proposal defined in the Rationale above) fits within a class of actions that is listed in Appendix A or B to 10 CFR Part 1021, Subpart D. To fit within the classes of actions listed in 10 CFR Part 1021, Subpart D, Appendix B, a proposal must be one that would not: (1) threaten a violation of applicable statutory, regulatory, or permit requirements for environment, safety, and health, or similar requirements of DOE or Executive Orders; (2) require siting and construction or major expansion of waste storage, disposal, recovery, or treatment facilities (including incinerators), but the proposal may include categorically excluded waste storage, disposal, recovery, or treatment actions or facilities; (3) disturb hazardous substances, pollutants, contaminants, or CERCLA-excluded petroleum and natural gas products that preexist in the environment such that there would be uncontrolled or unpermitted releases; (4) have the potential to cause significant impacts on environmentally sensitive resources, including, but not limited to, those listed in paragraph B(4) of 10 CFR Part 1021, Subpart D, Appendix B; (5)

involve genetically engineered organisms, synthetic biology, governmentally designated noxious weeds, or invasive species, unless the proposed activity would be contained or confined in a manner designed and operated to prevent unauthorized release into the environment and conducted in accordance with applicable requirements, such as those listed in paragraph B(5) of 10 CFR Part 1021, Subpart D, Appendix B.

There are no extraordinary circumstances related to the proposed action that may affect the significance of the environmental effects of the proposal.

The proposed action has not been segmented to meet the definition of a categorical exclusion. This proposal is not connected to other actions with potentially significant impacts (40 CFR 1508.25(a)(1)), is not related to other actions with individually insignificant but cumulatively significant impacts (40 CFR 1508.27(b)(7)), and is not precluded by 40 CFR 1506.1 or 10 CFR 1021.211 concerning limitations on actions during preparation of an environmental impact statement.

A portion of the proposed action is categorically excluded from further NEPA review. The NEPA Provision identifies Topic Areas, Budget Periods, tasks, and/or subtasks that are subject to additional NEPA review.

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

NEPA Compliance Officer Signature:  **Electronically Signed By: Casey Strickland** Date: 7/22/2022  
NEPA Compliance Officer

**FIELD OFFICE MANAGER DETERMINATION**

- Field Office Manager review not required
- Field Office Manager review required

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

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