

**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

Notice of Funding Opportunity Number DE-FOA-0002234	Procurement Instrument Number DE-EE0009450	NEPA Control Number GFO-0009450-008	CID Number GO9450
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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:

**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.

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 AMECs' organizational structure, participants, and research capabilities, award activities would include performing laboratory and field research.

NEPA REVIEW SUMMARY

DOE previously completed seven NEPA Determinations (NDs) (GFO-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; GFO-0009450-004, 07/22/2022: A9, B3.6, B5.25; GFO-0009450-005, 03/12/2024: A9, B1.31, B3.6, B3.16; GFO-0009450-006 A9, B3.6, B5.15, B5.25, 03/20/2024; GFO-0009450-007, 06/07/24: A9, A11, B1.31) which did not apply to Subtasks 14.2 and Task 15. This ND applies only to Subtask 14.2. DOE would complete the NEPA review for Task 15 when sufficient information is available to conduct a meaningful review.

PROPOSED PROJECT

Proposed activities for Subtask 14.2 would include deploying an approximately 2.5 meter Open-Source Tidal Energy Converter (OSTEC) Turbine at the UNH Tidal Energy Test Site at Memorial Bridge in Portsmouth, NH. The project site contains an existing Turbine Deployment Platform (TDP).

Upgrades

The proposed TDP upgrades would include an expansion of the 2018 DOE-funded project DE-EE0003263 (NEPA Control Number GFO-0003263-003), which established UNH's Tidal Energy Test Site (TETS) at Memorial Bridge, in conjunction with funding from the National Science Foundation and New Hampshire Department of Transportation. In

2018, DOE completed a NEPA review of the proposed project and received a determination of “not likely to adversely affect” (NLAA) listed species under the Endangered Species Act through consultation with NMFS. A 3.2 m diameter cross-flow turbine was deployed under the NSF Living Bridge project and subsequent projects with several National Laboratories from 2018-2024.

DOE is proposing upgrades to the TDP, which would include an expansion of TETS to deploy and test marine energy converters (MECs) from a pontoon-based floating platform with turbine sizes up to approximately 3 meters. The TETS platform is used to perform testing on a variety of MECs, both as a general-purpose testing site and for testing funded by DOE and other entities. MECs and turbine technologies are tested as part of a regular, recurring testing program.

Deployment, Operation, and Maintenance

In addition to the upgrades that would occur at the UNH Tidal Energy Test Site, staging activities (e.g., transfer of personnel and equipment between land and boat) would occur at the UNH Judd Gregg Marine Research Center Pier, an existing facility that serves as docking platform for TDP deployment, installation, maintenance, and uninstallation. The MEC would be an OSTEC turbine measuring 2.5 meters in diameter, and would be installed on an existing Turbine Deployment Platform (TDP), a 15-meter by 6-meter pontoon-based floating platform at the UNH Marine Research Pier in New Castle, NH.

The MEC would be in the retracted (“up”) position for storage or maintenance or while in transit. The MEC would be in the deployed (“down”) position for in-water testing. When there is not a test ongoing, the TDP will be moored at the Judd Gregg Marine Science Complex in New Castle, New Hampshire, near the mouth of the Piscataqua River. During deployment, the TDP would be towed from Newcastle to the project site, a distance of approximately 2.2 miles (3.5 km). After installation, environmental and performance measurements would be taken.

IMPACTS ANALYSIS

Award activities would involve typical hazards associated with engineering laboratories and an open water environment, 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 UNH Environmental, Health, and Safety policies and procedures would be followed at all facilities. The proposed activities would be performed at existing, purpose-built facilities. No modifications to existing facilities, ground disturbing activities, or changes to the use, mission, or operation of existing facilities would be required. No additional permits, licenses, or authorizations would be required.

DOE completed informal programmatic consultation with the National Marine Fisheries Service (NMFS) per Section 7 of the Endangered Species Act (ESA) to determine potential impacts of the proposed project activities on federally listed species (Kemp’s Ridley Turtle, Leatherback Turtle, Loggerhead Turtle, Green Sea Turtle, Atlantic Sturgeon, Shortnose Sturgeon) and critical habitats (Atlantic Sturgeon) under NMFS jurisdiction. DOE received a letter from NMFS on 02/11/2026 stating they concurred that the proposed action is not likely to adversely affect (NLAA) any NMFS ESA-listed species or designated critical habitat given that project activities are conducted in accordance with the Project Design Criteria listed below in this ND. DOE determined that the proposed project activities would have no effect to ESA-listed species under U.S. Fish & Wildlife jurisdiction (Northern Long-eared Bat, Tricolored Bat, Roseate Tern, Rufa Red Knot, Monarch Butterfly) given the nature of the proposed activities. Lastly, because the proposed activities would not physically disrupt bottom sediments or associated features, DOE determined that there would be no effect to Essential Fish Habitat.

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

For Categorical Exclusion Determinations:

- The proposal fits within a class of actions that is listed in Appendix B to 10 CFR Part 1021 or Appendix B and C of DOE’s NEPA Implementing Procedures (June 30, 2025). To fit within the classes of actions listed in Appendix B to 10 CFR Part 1021, or Appendix B of DOE’s NEPA Implementing Procedures, a proposal must satisfy the conditions that are integral elements of the classes of actions in Appendix B of both 10 CFR Part 1021 and DOE’s NEPA Implementing Procedures.
- 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.
- The proposed action is categorically excluded from further NEPA review.

NEPA PROVISION

DOE has made a conditional NEPA determination.

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

Subtask 14.2

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

Task 15

Include the following condition in the financial assistance agreement:

A MEC would be in the retracted (“up”) position for storage or maintenance or while in transit. The MEC would be in the deployed (“down”) position for in-water testing.

In order to be eligible for coverage under this programmatic consultation, DOE will implement the following Project Design Criteria. DOE will verify, through the verification form, inclusion of these measures for each activity submitted for review under this programmatic.

1. Ensure all personnel involved with the proposed project are aware of all environmental commitments, including these PDC, when working in areas federally listed species may be present.
2. No portion of the proposed project, individually or cumulatively, will be likely to adversely affect federally listed species.
3. No portion of the proposed action that may affect shortnose or Atlantic sturgeon will occur in areas identified as spawning grounds² as follows: a. Gulf of Maine: April 1–Aug. 31
4. No portion of the proposed action that may affect shortnose or Atlantic sturgeon will occur in areas identified as overwintering grounds³, where dense aggregations are known to occur, as follows: a. Gulf of Maine: Oct. 15–April 30
5. Within designated Atlantic sturgeon critical habitat, no activities will affect hard bottom substrate (e.g., rock, cobble, gravel, limestone, boulder, etc.) in low salinity waters (i.e., 0.0-0.5 parts per thousand) (PBF 1).
6. If ESA-listed species are (a) likely to pass through the action area at the time of year when project activities occur; or (b) the project will create an obstruction to passage when in-water work is completed, then a zone of passage (~50% of water body) with appropriate habitat for ESA-listed species (e.g., depth, water velocity, etc.) must be maintained (i.e., physical or biological stressors such as turbidity and sound pressure must not create a barrier to passage).
7. The project will not adversely impact any submerged aquatic vegetation (SAV).
8. The proposed project will not result in any changes in water quality including temperature, flow, salinity, or dissolved oxygen levels.
9. The proposed project will not require modifications to permanent structures such as the Memorial Bridge Pier(s), or the Vertical Guide Posts (VGPs) mounted to the bridge pier.
10. The test article will be a marine energy converter as described in Recurring Testing of Marine Energy Converters at the UNH Tidal Energy Test Site, section 2.3.1.2, e.g., an axial or cross-flow turbine, or other such device which would have comparable environmental effects by the same types of stressors.
11. The test article will not exceed the maximum safe size (approximately 3-meter diameter) as determined by the size of the testing envelope of the AMEC TETS test platform.
12. The test article will be securely attached to the Turbine Pitching Mechanism (TPM) on the Turbine Deployment Platform (TDP) in a manner that it was designed to accommodate.
13. Test article operational speed will not exceed 110 rpm at a water current speed of 2.5 m/s.
14. The test article will be equipped with a brake which personnel could easily activate at any moment and would render the test article completely immobile soon after activation.
15. The test article will generate underwater noise that is not likely to result in adverse effects to ESA listed whales, sea turtles, or Atlantic sturgeon (consistent with NMFS’s Marine Mammal Acoustic Technical Guidance and NMFS Summary of ESA Acoustic Thresholds).
16. The test article will not emit visible light.
17. The test article will not generate an electromagnetic field (EMF) or would generate EMF at levels which would have insignificant effects to listed species. Otherwise, sufficient shielding would be used to mitigate effects to insignificant levels.
18. The test article will not pose any risk of entanglement.
19. Additional equipment to support the test article will be above water and secured to the Turbine Deployment Platform (TDP) or the bridge pier and pier cap. This includes grid connection cables.
20. Project-generated power will either be stored in a battery, released through a dissipator, or transmitted to the grid via an existing overhead distribution cable.
21. Lubricants of the test article will be inside a watertight casing. The test article would not introduce pollutants to the aquatic environment.
22. Support vessels will only be used for test article installation, maintenance, routine operation, and uninstallation. The number of project vessels must be limited to the greatest extent possible, as appropriate to size and scale of project.
23. Support vessels will operate out of the UNH Pier in New Castle, NH, and take the shortest reasonable path to and

from the AMEC TETS test platform. Vessels would operate at a speed of 10 knots or less at all times.

When DOE identifies a proposed activity that they believe falls within the scope of this programmatic consultation, they will review the activity to confirm that it is consistent with the activities covered by this consultation, including a review to confirm that all relevant PDCs (as outlined above) will be implemented. They will then send a copy of the verification form (see Appendix A to this letter) to the NMFS Greater Atlantic Regional Fisheries Office (GARFO) (by email: nmfs.gar.esa.section7@noaa.gov).

Notes:

Water Power Technologies Office (WPTO)
NEPA review completed by Alex Colling on 02/12/2026.

SIGNATURE OF THIS MEMORANDUM CONSTITUTES A RECORD OF THIS DECISION.

NEPA Compliance Officer Signature:  Electronically Signed By: Nicole Serio Date: 2/17/2026
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