

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



RECIPIENT: Baldwin Wallace University

STATE: OH

PROJECT TITLE: Unique Opportunities, Local Solutions: User-Centered Design of Marine Energy for Lake Erie

Notice of Funding Opportunity Number
DE-FOA-0003097

Procurement Instrument Number
DE-EE0011696

NEPA Control Number
GFO-0011696-001

CID Number
GO11696

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:

B3.6 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.

Rationale for determination:

The U.S. Department of Energy (DOE) is proposing to provide funding to Baldwin Wallace University (BWU) to design, develop, fabricate, and test prototype marine energy devices as part of a course curriculum that includes a senior capstone project.

The proposed activities for this award are separated into 11 Tasks. This NEPA Determination (ND) would apply Tasks 1, 2, 3, 4 and 11. Activities in Tasks 1 – 4 and 11 would include coordinating with the University Marine Energy Research Community, creating and revising the course curriculum, taking measurements in Lake Erie with existing sensors, initial stakeholder interviews, student recruitment, offering the updated course, prototyping and laboratory bench scale work, and information dissemination. These activities must be completed to obtain sufficient information and finalize design, which would be needed to inform Tasks 5 to 10.

As part of Tasks 1-4 and 11, BWU (Berea, OH) would conduct design, development, fabrication, and laboratory testing, including bench top and water tank activities. Outreach and education would occur with BWU and David Aerospace and Maritime Highschool (Cleveland, OH) students in collaboration with Argonaut (Cleveland, OH). All project activities would be carried out in existing facilities that are purpose-built and would require no modifications, such as laboratories and classrooms.

Tasks 1-4 and 11 would inform Tasks 5 – 10. Tasks 5-10 would include developing and deploying a marine energy device for hours to days within Lake Erie, and utilizing ongoing results to improve prototyping over time. The testbed for field testing of marine energy prototypes in Lake Erie would be the Cleveland Water Alliance Water Accelerator (Cleveland, OH), which includes a 7,750 square foot telecommunications network and more than 13 moored sensor buoys. Tasks 5-10 would require further NEPA review before integration into the existing sensor buoy system for open water testing.

Potential exposure to hazardous materials includes metals and industrial solvents. Water tanks would pose a risk of drowning or electric shock. All such handling would occur in-lab and would follow existing university health and safety policies, including training, proper protective equipment, engineering controls, monitoring, and internal assessments. Open water hazards would be mitigated by a safe vessel operating environment and the requirement of life jackets.

DOE has considered the scale, duration, and nature of the proposed activities to determine potential impacts on sensitive resources, including those of an ecological, historical, cultural, and socioeconomic nature, and found no effects that would be expected to result from the proposed project activities.

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 DOE's

NEPA Implementing Procedures (June 30, 2025). To fit within the classes of actions listed in Appendix B to 10CFRPart 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:

Tasks 1, 2, 3, 4, and 11

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

Tasks 5, 6, 7, 8, 9, and 10

Notes:

Water Power Technologies Office
NEPA review completed by Alex Colling on 12/11/2025.

SIGNATURE OF THIS MEMORANDUM CONSTITUTES A RECORD OF THIS DECISION.

NEPA Compliance Officer Signature: _____

 Electronically Signed By: **Nicole Serio**
NEPA Compliance Officer

Date: 12/16/2025

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: _____

Field Office Manager

Date: _____