

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



RECIPIENT: Pacific Ocean Energy Trust

STATE: OR

PROJECT TITLE : Network Director for the TEAMER Program

Notice of Funding Opportunity Number

Procurement Instrument Number
DE-EE0008895

NEPA Control Number
GFO-0008895-043

CID Number
GO8895

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 federal funding to the Pacific Ocean Energy Trust (POET) to administer the Testing and Access for Marine Energy Research (TEAMER) program. POET would collaborate with a Technical Board (TB) which would include representatives from DOE, DOE National Laboratories, and National Marine Renewable Energy Centers. The primary objective of TEAMER is to provide marine energy (ME) technology developers access to a network of facilities within the U.S. which provide testing and modeling assistance for ME technologies. Developers would apply for assistance through a competitive process.

Project activities included in this review would be carried out in facilities previously approved for the TEAMER network. Any facility that requests to join the network or modify their existing support capabilities is subject to additional NEPA review in addition to a separate review conducted by POET and the TB. Similarly, any Technical Support Recipients (TSRs) have to be approved for work at one of the approved TEAMER facilities by TEAMER technical board before submitting an EQ1.

For this review, POET has identified fourteen (14) TSRs to receive support through the TEAMER program:

1. CalWave Inc. would work with the National renewable Energy Laboratory (NREL) in Golden, CO to conduct cost modeling for marine energy technologies. The focus of this effort is to obtain technical assistance from NREL to conduct a techno-economic analysis to estimate capital expenditures and operational expenditures for CalWave's xWave wave energy converter (WEC) deployment.
2. Cetus Energy Inc. would work with Integral Consulting Inc. to develop a desktop environmental assessment to provide critical information to support an environmental Impact Statement for a current energy conversion device that would be placed off the southeast coast of Florida during a future project-related effort.
3. Coastal Studies Institute (CSI) would work with Sandia National Laboratories (SNL) in Albuquerque, NM on meteorological and oceanographic (met-ocean) characterization for the CSI's wave energy test facility. This project would include conducting a comprehensive met-ocean characterization and assessment of wave test sites and would focus on the conditions at two Atlantic Marine Energy Center scaled wave energy sites in North Carolina nearest to Jennette's Pier. Post-processing and analysis scripts would be applied at SNL to compute a broad spectrum of metrics, statistics and plots used to characterize the wave, wind and ocean current attributes of these sites.
4. Instream Energy Systems would complete a technology evaluation and advisement effort with assistance from the SNL in Albuquerque, NM and NREL in Golden, CO. Sandia National Laboratories and NREL would provide a third-party technology evaluation and development advisory to critically review Instream's technology performance drivers and improvement opportunities from an innovative and holistic perspective.

5. iProTech would complete pitch inertial water coil power take-off and hydraulic power measurement analysis at NREL, in Golden, CO, using the lab's Large Amplitude Motion Platform (LAMP). The water coil is part of iProTech's Pitching Inertial Pump (PIP) wave energy converter, which captures energy in ocean waves using its pitching motion. This effort would serve to find how much power can be captured by the PIP by simulating different sea states on the LAMP.

6. The Mirza WEC would be tested at one of two Wave Energy Converter SIMulators (WEC-Sims) facilities either at NREL in Golden, CO or SNL in Albuquerque, NM. The WEC-Sim facility in this project would be utilized to develop and test a Mirza WEC to verify estimates of electrical energy capture and loads on critical components in sea-states of interest.

7. Mississippi State University staff would work with the American Bureau of Shipping (ABS) in Alexandria, VA, and the Idaho National Laboratory (INL) in Idaho Falls, ID. This project would advance tidal energy technology through comprehensive qualification and reliability assessment of an innovative Infinitely Variable Transmission (IVT) system. The IVT enables optimal energy harvesting by providing continuously variable speed ratios while maintaining 98% mechanical efficiency. The ABS would execute New Technology Qualification protocols to validate commercial viability, while the INL would implement advanced reliability engineering frameworks for rigorous performance characterization.

8. Optical Waters staff would work with the Pacific Northwest National Laboratory (PNNL) facility in Richland, WA. This project would include laboratory testing to validate the effectiveness of UV fibers in preventing biofilm growth in two test tanks for application in sensor channels to eliminate chemical management, enhance operational performance, reduce maintenance costs, and extend the lifespan of marine technologies. The UV fibers would be created by Optical Waters and the testing would occur at PNNL.

9. Pacific Northwest National Laboratory (PNNL) would complete a techno-economic analysis (TEA) for marine energy and aquaculture at the NREL facility in Golden, CO. The TEA would compare the cost and performance of different power supply systems, including wave energy and photovoltaic solar.

10. Pterofin, Inc. would complete numerical modeling at NREL in Golden, CO. The project would include employing multiple computational models—mid-fidelity Blade Element Momentum and high-fidelity Computational Fluid Dynamics—to optimize the design and efficiency of the Pterofin Skimmer with assessment of the limitations of each model. Objectives would include enhancing performance metrics and improvement validation.

11. Sandia National Laboratories staff would investigate biofueling effects on WEC performance at the University of Massachusetts in Amherst, MA. Tank testing would occur at the University of Massachusetts' wave tank to gather data on biofouling effects. This project aims to reduce performance uncertainty, optimize WEC designs, and lower the Levelized Cost of Energy.

12. Water Bros Desalination, LLC (WBD) would conduct a performance-level assessment of wave-powered desalination technology at SNL and NREL facilities in Albuquerque, NM and Golden, CO, respectively. The two national laboratories would provide a third-party technology evaluation and development advisory to review WBD's technology performance drivers and improvement opportunities from an innovative and holistic perspective to help WBD achieve commercial viability of wave-powered desalination.

13. Wave Energy Collective (WECO) would develop and analyze a wave energy model at the SNL facility in Albuquerque, NM. The project would include SNL staff training WECO staff in the use of a WEC design optimization toolbox (WecOptTool). A detailed representation of the power take-off system (PTO) and mooring systems would be integrated and WECO's existing models would be examined, and further refined/optimized using the WecOptTool.

14. Wavewatts, Inc. would develop, model, analyze and demonstrate a wave energy air compression PTO WEC-Sim at either at NREL in Golden, CO or SNL in Albuquerque, NM.

If additional TSRs are identified beyond those reviewed in this or previous determinations, or if the type of assistance offered by an approved facility is modified, additional NEPA reviews must be completed regarding those proposed changes.

All project-related activities would consist of desktop efforts or would occur in purpose-built facilities. No modification of existing facilities, ground disturbances, changes in use of facilities or outdoor equipment installations would occur. No additional permits, licenses, or authorizations would be required for these efforts. DOE does not anticipate any impacts to resources of concern due to the proposed project activities.

All project work would follow institutional health and safety policies including mandatory employee training, the use of personal protective equipment, adherence to safety protocols, regular safety audits, and risk assessments. Additionally, all applicable federal, state, and local health, safety, and environmental regulations would be adhered to.

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.

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.
- A portion of 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:

All tasks are approved; however, selection of additional facilities, new activities, and Technical Support Recipients (TSRs) are subject to additional NEPA review. The following TSRs are approved to receive technical support for activities proposed in the applications that were part of this review:

1. CalWave Inc.
2. Cetus Energy Inc.
3. Coastal Studies Institute
4. Instream Energy Systems
5. iProTech
6. Mirza WEC
7. Mississippi State University
8. Optical Waters
9. Pacific Northwest National Laboratory
10. Pterofin, Inc.
11. Sandia National Laboratories
12. Water Bros Desalination, LLC
13. Wave Energy Collective
14. Wavewatts, Inc.

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

Selections of additional facilities, new activities, and TSRs. Such additions are subject to additional NEPA review. All technical support activities must be completed by pre-approved facilities and must be the type of work that a signed NEPA Determination applies to.

Notes:

Water Power Technologies Office (WPTO)
NEPA review completed by Chris Akios, 10/16/25

SIGNATURE OF THIS MEMORANDUM CONSTITUTES A RECORD OF THIS DECISION.

NEPA Compliance Officer Signature: _____

 Electronically
Signed By: **Nicole Serio**

NEPA Compliance Officer

Date: 10/16/2025

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: _____