

PMC-EF2a

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



RECIPIENT: Oregon State University-NNMREC

STATE: OR

PROJECT TITLE : Pacific Marine Energy Center FY2012 Funding

Funding Opportunity Announcement Number	Procurement Instrument Number	NEPA Control Number	CID Number
GO98030	DE-FG36-08GO18179	GFO-GO18179-004	GO18179

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:

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.)
A11 Technical advice and assistance to organizations	Technical advice and planning assistance to international, national, state, and local organizations.
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.

Rational for determination:

The U.S. Department of Energy (DOE) is proposing to provide federal funding to Oregon State University (OSU) in partnership with the University of Washington (UW) to develop the Northwest National Marine Renewable Energy Center (NW Center) to support wave and tidal energy development for the United States. DOE funding would be used for testing, experiments, modeling and outreach for wave and tidal projects.

DOE made previous determinations for this award; GFO-09-411 (CX A9, B3.1, B3.6, C12 11/5/2009), GFO-09-012-001 (CX A9, B3.6, C12 9/24/2009), GFO-09-411-001 (CX A9, B3.3, B3.1 9/16/2010), GFO-GO18179-003 (CX A9, C12 10/18/2011) and an Environmental Assessment (EA) with a Mitigated Finding of No Significant Impact (FONSI) (DOE/EA 1917 8/15/2012). Previous determinations analyzed Phase I and Phase II (Tasks 1-12) of the award, and have not changed in this modification. This NEPA determination applies to Phase III which includes testing, experiments, modeling and outreach for wave and tidal projects. This NEPA determination does not apply to subtasks *14.2, *16.2, *17.2, *21.2, and *22.1.4 (ocean deployment), due to insufficient information and required consultation with the National Marine Fisheries Service, per Section 7 of the Endangered Species Act.

The tasks for Phase III are as follows:

Task 13: Advanced Wave Forecasting Technologies

Task 14: Device and Array Optimization

- (14.1) Simulations and Wave Energy Conversion (WEC) array modeling.
- *(14.2) Doppler profiling, simulations and modeling.

Task 15: Collaboration/Optimization with Marine Renewable and Other Renewable Energy Sources. Protocols, instrumentation and accreditation plans for WEC testing.

Task 16: Integrated and Standardized Test Facility Development

- (16.1) Routine radar deployments for model validation, planning documents for multiple test berth designs, and collection of data from existing WEC devices at demo site.
- *(16.2) Reporting, field data collection and protocol development.

Task 17: Investigate the Compatibility of Marine Technologies with Environment, Fisheries and other Marine Resources

- (17.1) Electromagnetic field effect workshop, post installation sampling at Newport test facility, WEC array simulation testing.
 - *(17.2) Passive acoustic characterization of full-scale tidal turbine, acoustic model development.
- Task 18: Increased Reliability and Survivability of Marine Power Technologies
- Modeling of anti-fouling coatings and WEC topologies.
- Task 19: Site Selection and Outreach
- Analysis of four potential test sites, including planned layout, electrical/connection requirements, and written descriptions of potential environmental issues with solutions. Outreach includes development of presentation materials and local community input/feedback meetings.
- Task 20: Engineering Studies and Underlying Analysis
- (20.1) Analysis of potential client market as well as availability/accessibility of products and services necessary for further development.
 - (20.2) Preparation of development plan for Pacific Marine Energy Center (PMEC) at selected site. Plan will describe updated project objectives, timeline and budget estimates. Pre-design work will be conducted by a contracted design engineering company to move PMEC towards construction-readiness.
 - (20.3) Maintaining relationships with community as PMEC moves toward permitting process.
- Task 21: Permitting
- (21.1) Development of plans for permitting.
 - *(21.2) Site characterization and collection of baseline data for electromagnetic fields, benthic characteristics/organisms, acoustics and physical parameters (wave and current measurements, bathymetry, backscatter and sub-bottom profiling). A vessel traffic survey will also be conducted.
 - (21.3) Planning/timeline for required utility system and connections.
- Task 22: Critical Infrastructure
- (22.1) Design, building and demonstration of a low-cost payload system comprised of three separate parts (Remotely operated vehicle, Instrumentation, Socket)
 - (22.1.1) Engineering Pre-Design
 - (22.1.2) Final Engineering Design
 - (22.1.3) Material procurement and fabrication of prototype
 - *(22.1.4) Testing:
 - Bench-top
 - Wave Tank
 - *Short term field testing near Admiralty Inlet
 - (22.2) Pre-design for grid emulator, including desktop modeling and design work. No construction.
 - (22.3) Anchor and mooring study including bench top and wave tank testing in research facilities at OSU.
 - (22.4) Composite cable design/desktop modeling.
- Task 23: Project Management and Reporting

The following tasks involve information gathering, analysis and dissemination and therefore qualify for DOE categorical exclusion A9 (CXA9): 13, 14.1, 15, 18, 19, 20.1, 20.2, 20.3, 21.1, 21.3, 22.3, 22.4, and 23.

The following tasks and subtasks involve technical advice and assistance to organizations and therefore qualify for DOE categorical exclusion A11 (CXA11): 19 and 20.3.

The following tasks and subtasks involve small-scale research and development, laboratory operations, and pilot projects and therefore qualify for DOE categorical exclusion B3.6 (CXB3.6): 22.1.1, 22.1.2, 22.1.3, *22.1.4 (tank testing), 22.2, and 22.3. Both OSU and UW submitted an R&D questionnaire for their respective facilities and have provided sufficient information on OSHA practices, waste disposal and safety protocols.

*22.1.4: This NEPA determination applies to tank testing at an existing facility only. No ocean deployment is permitted under this NEPA determination.

Tasks and subtasks 16.1 and 17.1 are a continuation of activities covered under the OSU EA with a Mitigated FONSI (DOE/EA 1917 8/15/2012) and are excluded from further review.

This DOE NEPA Determination does not apply to subtasks 14.2, 16.2, 17.2, 21.2, 22.1.4 (ocean deployment), which are associated with the proposed deployment of in-water equipment, maintenance of in-water equipment and/or in-water data collection and sampling as potential impacts to aquatic environments and species related to these tasks have not been evaluated. These tasks require consultation with the National Marine Fisheries Service, per Section 7 of the Endangered Species Act and are subject to further NEPA review prior to DOE authorizing expenditure of federal funds.

DOE has determined that activities within tasks and subtasks 13, 14.1, 15, 18, 19, 20.1, 20.2, 20.3, 21.1, 21.3, 22.1.1, 22.1.2, 22.1.3, 22.1.4 (tank testing), 22.2, 22.3, 22.4, and 23 are consistent with actions defined in DOE categorical exclusion A9, "information gathering," A11, "technical advice and assistance to organizations," and B3.6, "small-scale research and development," and are 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:

Tasks and subtasks: 14.2, 16.2, 17.2, 21.2, 22.1.4 (ocean deployment)

Any actions associated with the proposed deployment of in-water equipment, maintenance of in-water equipment and/or in-water data collection and sampling.

This restriction does not preclude you from:

Tasks and subtasks: 13, 14.1, 15, 18, 19, 20.1, 20.2, 20.3, 21.1, 21.3, 22.1.1, 22.1.2, 22.1.3, 22.1.4 (tank testing), 22.2, 22.3, 22.4, and 23

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.

Note to Specialist :

This project has activities that are conditioned under NEPA. We recommend that this project be placed on ASAP Approval and that funding for tasks 14.2, 16.2, 17.2, 21.2, 22.1.4 (ocean deployment) be unallowable.

Kelly Daigle 12/5/2012

SIGNATURE OF THIS MEMORANDUM CONSTITUTES A RECORD OF THIS DECISION.

NEPA Compliance Officer Signature: _____
NEPA Compliance Officer

Date: 12/10/2012

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: _____