

PMC-EF2a

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



(2010)

RECIPIENT: Ocean Power Technologies, Inc.

STATE: OR

PROJECT TITLE : Reedsport PB150 Deployment and Ocean Test Project

Funding Opportunity Announcement Number	Procurement Instrument Number	NEPA Control Number	CID Number
DOE-FOA-0000293	DE-EE0003646	GFO-0003646-001	0

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 (including, but not limited to, literature surveys, inventories, audits), data analysis (including computer modeling), document preparation (such as conceptual design or feasibility studies, analytical energy supply and demand studies), and dissemination (including, but not limited to, document mailings, publication, and distribution; and classroom training and informational programs), but not including site characterization or environmental monitoring.
- B3.1** Onsite and offsite site characterization and environmental monitoring, including siting, construction (or modification), operation, and dismantlement or closing (abandonment) of characterization and monitoring devices and siting, construction, and associated operation of a small-scale laboratory building or renovation of a room in an existing building for sample analysis. Activities covered include, but are not limited to, site characterization and environmental monitoring under CERCLA and RCRA. Specific activities include, but are not limited to:
- B5.1** Actions to conserve energy, demonstrate potential energy conservation, and promote energy-efficiency that do not increase the indoor concentrations of potentially harmful substances. These actions may involve financial and technical assistance to individuals (such as builders, owners, consultants, designers), organizations (such as utilities), and state and local governments. Covered actions include, but are not limited to: programmed lowering of thermostat settings, placement of timers on hot water heaters, installation of solar hot water systems, installation of efficient lighting, improvements in generator efficiency and appliance efficiency ratings, development of energy-efficient manufacturing or industrial practices, and small-scale conservation and renewable energy research and development and pilot projects. The actions could involve building renovations or new structures in commercial, residential, agricultural, or industrial sectors. These actions do not include rulemakings, standard-settings, or proposed DOE legislation.
- C12** Siting, construction, and operation of energy system prototypes including, but not limited to, wind resource, hydropower, geothermal, fossil fuel, biomass, and solar energy pilot projects.

Rational for determination:

Ocean Power Technologies is proposing to use DOE funding to deploy and test their full scale 150kW PowerBuoy, a wave energy conversion (WEC) technology, in the Oregon Territorial Sea.

The following tasks are proposed:

- Task 1: PB150B2 Mobilization and Deployment
 - *Task 1.1: Pre-deployment Activities
 - *Task 1.2: Deployment Activities
- Task 2: PB150B2 PowerBuoy Commissioning
- Task 3: PowerBuoy Ocean Testing
- Task 4: PB150B2 Removal and Demobilization
- Task 5: Environmental Studies
 - *Task 5.1: Pre-deployment Study Work (Acoustic and EMF monitoring)
 - *Task 5.2: Post-deployment Study Work
- Task 6: Manufacturing Plans
- Task 7: PB150B2 Redeployment
- Task 8: Project Management

The project would consist of the assembly, deployment and commissioning of a single, autonomous WEC device, OPT's PB150B2, at Reedsport, Oregon. The PB150B2 would undergo two years of ocean testing at the site and would be continuously monitored for power production capability, reliability, mooring system performance, and sea-state responsiveness. Acoustic and electromagnetic frequency (EMF) testing would be performed before and after on the single buoy in accordance with the Reedsport Settlement Agreement Study Plans. Additional environmental and biological studies designed to study the potential impacts from a larger deployment of devices. At the end of the two year ocean test period the buoy would be removed from the moorings. At the end of the project, OPT would deliver a

final report on the ocean testing period of performance, which would have direct applicability to a larger, 10-buoy array planned for the future (Phase II); the single power buoy would then be incorporated into the Phase II array.

The future 10-buoy array would be connected to the electrical grid, therefore, OPT has applied to FERC for an operating license for the larger project. That application included extensive environmental analyses, which FERC used to prepare and issue an environmental assessment (EA) in December 2010 (FERC Project No. 12713-002). Although the Phase I single power buoy project would not be connected to the electrical grid as part of the initial 2-year deployment, it would be incorporated into the Phase II, 10 buoy array and is considered part of that future project.

Task 1.1 consists of pre-deployment activities involving shore side assembly and pre-deployment testing of the PowerBuoy, which primarily includes assembly of the float, truss, heave plate, and bridge to the buoy spar to ready the buoy for deployment. The buoy system components are staged and ready for assembly by an OPT subcontractor. Task 1.1 is consistent with actions outlined in categorical exclusion B5.1 (small-scale conservation and renewable energy research and development and pilot projects) and is therefore categorically excluded from further NEPA review.

Activities associated with Task 5.1 consist of pre-deployment monitoring of background environmental acoustic and EMF conditions at the proposed project site. Consultations with applicable agencies (including US Fish and Wildlife and the National Marine Fisheries Service) for the monitoring effort were conducted and completed in January 2010 with no adverse issues identified. In addition, a negotiated, multi-party settlement agreement includes requirements for acoustic and EMF monitoring. The data from the monitoring program will be used to further evaluate the effects associated with deployment of additional buoys during Phase II. Task 5.1 is consistent with actions outlined in categorical exclusion B3.1 (onsite and offsite site characterization and environmental monitoring) and is therefore categorically excluded from further NEPA review.

Tasks 6 and 8 consist of OPT and subcontractor overall project management and technical reporting tasks, and are consistent with actions outlined in categorical exclusion A9 (information gathering, data analysis, dissemination) and are therefore categorically excluded from further NEPA review.

The impacts related to the above four tasks are anticipated to have negligible or no effects on the human and natural environment. All remaining tasks consist of actions associated with ocean deployment of the single buoy and subsequent incorporation into the Phase II project. Taken alone, the single power buoy project would not appear to pose any adverse effects to environmental resources. However, since the buoy would eventually become part of the larger project, which has additional potential for environmental consequences, further NEPA review is required. Per the DOE NEPA implementing regulations (Appendix C to Subpart D to 10 CFR Part 1021 – C12, as noted above), preparation of an EA is required prior to release of federal funds for the remaining project tasks (1.2, 2, 3, 4, 5.2, and 7) as identified below; therefore a C12 determination is applicable.

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:

DOE funds are not authorized for activities, including ocean deployments, associated with Tasks 1.2, 2, 3, 4, 5.2, and 7

This restriction does not preclude you from:

Conducting efforts associated with Tasks 1.1, 5.1, 6 and 8

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 :

EF2a prepared by Laura Margason 5.26.2011

CX'd Task Cost Breakdown:

Task 1.1 = \$865,000 (DOE \$355,515/Recipient \$509,485)

Task 5.1 = \$100,080 (DOE \$041,133/Recipient \$058,947)
Task 6.0 = \$800,000 (DOE \$400,000/Recipient \$400,000)
Task 8.0 = \$286,600 (DOE \$117,793/Recipient \$168,807)

Total Tasks CX'd = \$2,051,680 (DOE \$914,440/ Recipient \$1,137,240)

Total Project Cost = \$5,684,096 (DOE \$2,409,293/Recipient \$3,274,803)

SIGNATURE OF THIS MEMORANDUM CONSTITUTES A RECORD OF THIS DECISION.

NEPA Compliance Officer Signature: 
NEPA Compliance Officer

Date: 5/26/11

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: 6-3-11