

PMC-ND  
(1.08.09.13)

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



**RECIPIENT:** Columbia Power Technologies, Inc.

**STATE:** OR

**PROJECT TITLE :** Build and Test of a Novel, Commercial-Scale Wave Energy Direct-Drive Rotary Power Take-Off Under Realistic Open-Ocean Conditions

|  |  |                            |                             |
|--|--|----------------------------|-----------------------------|
| <b>Funding Opportunity Announcement Number</b><br>DE-FOA-0000848 | <b>Procurement Instrument Number</b><br>DE-EE0006399 | <b>NEPA Control Number</b> | <b>CID Number</b><br>GO6399 |
|--|--|----------------------------|-----------------------------|

**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.)
- B5.15 Small-scale renewable energy research and development and pilot projects** Small-scale renewable energy research and development projects and small-scale pilot projects, provided that the projects are located within a previously disturbed or developed area. Covered actions would be in accordance with applicable requirements (such as local land use and zoning requirements) in the proposed project area and would incorporate appropriate control technologies and best management practices.

**Rationale for determination:**

The U.S. Department of Energy (DOE) is proposing to provide federal funding to Columbia Power Technologies, Inc. (Columbia) to complete the design, fabrication and validation of a commercial-scale Power Take-Off (PTO) Module in Columbia's utility-scale wave energy converter (WEC). Columbia would validate and demonstrate the reliability and feasibility the PTO Module in a land-based test that simulates realistic WEC operating conditions.

To complete the proposed research and development (R&D) project, project management, computer modeling, system design and data analysis type activities would occur at Columbia's R&D facility located in Charlottesville, Virginia. Columbia would also work with various vendors to fabricate, manufacture, test and pre-assemble the PTO module and its various parts, including the PTO generator, corrosion resistant fiber-reinforced-plastic housing structure, electrical components, and other subsystems. These activities would occur at established vendor manufacturing facilities and would follow all established regulations.

The land-based test, validation and verification of PTO Module would occur at the at the DOE's National Renewable Energy Laboratory's (NREL) National Wind Technology Center's (NWTC) Dynamometer Test Facilities in Jefferson County, Colorado. After completion of a pre-assemble set up test at a vendor manufacturing facility, the PTO Module components and equipment would be disassembled and shipped to the NWTC for final assembly and connection to NREL's indoor, commercial scale test dynamometer. The PTO Module would be tested within a sealed water tank with in the test facility to simulate realistic water conditions. All testing, validation and analysis activities at NREL are consistent with activities routinely occurring that this facility and would be performed in coordination between the DOE, NREL and Columbia. Additionally, all work completed at DOE National Laboratories (NREL) may be subject to additional NEPA review by the appropriate DOE NEPA Compliance Officer.

Proposed R&D activities would involve the fabrication, handling, assembly, transportation and testing of large structural and subsystem components. Significant electric power will be used and produced during testing. Columbia completed an Environmental Questionnaire stating all activities performed would be consistent with routine activities in the respective facilities, with each having appropriate health and safety procedures and equipment in place that comply with applicable federal, state and local health and safety regulations.

Based on review of the project information and the above analysis, DOE has determined the proposed activities would not have a significant individual or cumulative impact to human health and/or environment. DOE has determined the proposed project is consistent with actions contained in DOE categorical exclusions A9 "information gathering, analysis, and dissemination," and B5.15 "small-scale renewable energy research and development and pilot projects" and is categorically excluded from further NEPA review.



**NEPA PROVISION**

DOE has made a final NEPA determination for this award

Insert the following language in the award:

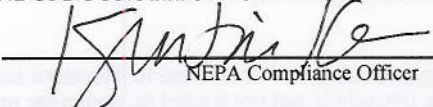
If you intend to make changes to the scope or objective of your project you are required to contact the Project Officer identified in Block 11 of the Notice of Financial Assistance Award before proceeding. You must receive notification of approval from the DOE Contracting Officer prior to commencing with work beyond that currently approved.

Note to Specialist :

This NEPA Determination does not require a tailored NEPA provision.

Obadiah Broughton 12/13/2013

**SIGNATURE OF THIS MEMORANDUM CONSTITUTES A RECORD OF THIS DECISION.**

NEPA Compliance Officer Signature:  Date: 12/16/2013  
NEPA Compliance Officer

**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: \_\_\_\_\_ Date: \_\_\_\_\_  
Field Office Manager