

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:** VA

**PROJECT TITLE:** Design, build and test of novel, remote, low-power wave energy converter for non-grid applications

<b>Funding Opportunity Announcement Number</b>	<b>Procurement Instrument Number</b>	<b>NEPA Control Number</b>	<b>CID Number</b>
DE-FOA-0001837	DE-EE0008627	GFO-0008627-001	

**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:

**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.)

**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 Columbia Power Technologies, Inc. (C-Power) to design, develop, and test a novel low-power wave-energy-converter (WEC). The project would gather system requirements, determine potential energy storage technologies for integration into the WEC, and build on previous research to develop systems and sub-systems. A prototype WEC, the dataRAY, would be fabricated and tested in open-water to validate its performance. The project would be completed over two Budget Periods (BPs), with a Go/No-Go Decision Point in between each BP.

This NEPA Determination applies to BP1 only. BP2 activities would focus on WEC testing at the DOE-funded PacWave North site currently being developed by Oregon State University (OSU). Relevant permits and authorizations would need to be secured before testing can proceed. Securing these permits would be included in BP1 activities. Additionally, a Biological Evaluation will need to be completed before initiating open water testing. Accordingly, all BP2 activities are restricted until further NEPA review is completed. Additional NEPA review will be completed once all relevant information has been developed and provided to DOE by the Recipient.

Proposed project activities under BP1 consist largely of desktop studies to determine WEC system requirements, market literature reviews, preliminary design work, and laboratory-scale component/subsystem testing. Specific tasks would include the following:

Task 1 would consist of planning activities for BP1 work. This would include the development of a Project Management Plan, a Risk Management Plan, and a Risk Register.

Task 2 would focus on concept development, including WEC requirements development, based on surveys of potential markets, and WEC concept design development.

Task 3 activities would focus on development of a preliminary WEC design. Various design and operational

concepts would be developed, with a single concept ultimately being down-selected and further conceptualized. Operational requirements would be finalized and initial techno-economic metrics would be developed.

Task 4 activities would further the design work of the previous task. Design standards would be reviewed and approved. Plans would also be developed for WEC subsystem interface requirements, integration, and controller requirements, as well as a plan for system fabrication and assembly.

Task 5 activities would focus on component/subsystem testing. Activities would include the development of a testing plan for components, systems, and subsystems, component acquisition, and component testing. All testing would be bench-scale and would be performed at established, purpose-built laboratory facilities at the campuses of OSU, in Corvallis, OR, and University of Washington (UW), in Seattle, WA. Components and subsystems would be assembled at C-Power's facilities in Corvallis, OR, prior to testing.

C-Power and its project partners, OSU and WU, would adhere to established health and safety policies and procedures when performing laboratory testing. All applicable Federal, state, and local health, safety, and environmental regulations would be observed. No change in the use, mission or operation of existing facilities would be required as part of this project. Likewise, no additional permits or authorizations would be required.

Task 6 activities would focus on preparing for and initiating the permitting processes necessary for WEC testing in BP2. Activities would include a review of the open water test site, development of a regulatory compliance plan, initiating permitting processes with relevant Federal, state, and local agencies, and development of a preliminary BP2 testing plan, logistics plan, Installation, Operations & Maintenance (IO&M) plan, and decommissioning plan.

Task 7 activities would focus on compiling all final reporting requirements for BP1 and preparing/submitting a Continuing Application to DOE for the Go/No-Go Decision Point from BP1 to BP2.

## NEPA PROVISION

DOE has made a conditional NEPA determination.

The NEPA Determination applies to the following Topic Areas, Budget Periods, and/or tasks:

All Budget Period 1 Tasks and Sub-tasks

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

All Budget Period 2 Tasks and Sub-tasks

Notes:

Water Power Technologies Office

This NEPA determination requires a tailored NEPA provision.

Review completed by Jonathan Hartman, 04/26/2019

## FOR CATEGORICAL EXCLUSION DETERMINATIONS

The proposed action (or the part of the proposal defined in the Rationale above) fits within a class of actions that is listed in Appendix A or B to 10 CFR Part 1021, Subpart D. To fit within the classes of actions listed in 10 CFR Part 1021, Subpart D, Appendix B, a proposal must be one that would not: (1) threaten a violation of applicable statutory, regulatory, or permit requirements for environment, safety, and health, or similar requirements of DOE or Executive Orders; (2) require siting and construction or major expansion of waste storage, disposal, recovery, or treatment facilities (including incinerators), but the proposal may include categorically excluded waste storage, disposal, recovery, or treatment actions or facilities; (3) disturb hazardous substances, pollutants, contaminants, or CERCLA-excluded petroleum and natural gas products that preexist in the environment such that there would be uncontrolled or unpermitted releases; (4) have the potential to cause significant impacts on environmentally sensitive resources, including, but not limited to, those listed in paragraph B(4) of 10 CFR Part 1021, Subpart D, Appendix B; (5) involve genetically engineered organisms, synthetic biology, governmentally designated noxious weeds, or invasive species, unless the proposed activity would be contained or confined in a manner designed and operated to prevent unauthorized release into the environment and conducted in accordance with applicable requirements, such as those listed in paragraph B(5) of 10 CFR Part 1021, Subpart D, Appendix B.

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. This proposal is not connected to other actions with potentially significant impacts (40 CFR 1508.25(a)(1)), is not related to other actions with individually insignificant but cumulatively significant impacts (40 CFR 1508.27(b)(7)), and is not precluded by 40 CFR 1506.1 or 10 CFR 1021.211 concerning limitations on actions during preparation of an environmental impact statement.

A portion of the proposed action is categorically excluded from further NEPA review. The NEPA Provision identifies Topic Areas, Budget Periods, tasks, and/or subtasks that are subject to additional NEPA review.

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

NEPA Compliance Officer Signature:  \_\_\_\_\_ Date: 4/29/2019  
NEPA Compliance Officer

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