

PMC-ND  
(1.08.09.13)

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



**RECIPIENT:** CalWave Power Technologies, Inc. (CalWave)

**STATE:** CA

**PROJECT TITLE:** Advancing CalWave's WEC Design for PacWave

<b>Funding Opportunity Announcement Number</b>	<b>Procurement Instrument Number</b>	<b>NEPA Control Number</b>	<b>CID Number</b>
DE-FOA-0002080	DE-EE0008951	GFO-0008951-001	

**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 California Wave Power Technologies, LLC (CalWave) to design, fabricate, and conduct laboratory and tank testing on a submerged pressure differential type Wave Energy Conversion device (WEC).

CalWave would design a full scale variant of the CalWave XWave WEC. All design work would be limited to information gathering and data analysis, including computer simulated design of the proposed WEC. CalWave would also develop plans including an operations plan, a manufacturing plan, a commercialization plan and cost estimates. This work would also be limited to information gathering and data analysis. Design work would be completed by CalWave at their offices in Oakland, CA. Additional design work would be completed by project partners, including Sandia National Laboratories and the National Renewable Energy Laboratory. All design work would be completed in existing office space.

CalWave would also fabricate a small scale (1:25 scale) model of the WEC. The model would be approximately 1 meter by 1 meter by 0.4 meters in dimensions and would be fabricated from approximately 80 kg of metal materials. Fabrication would take place at CalWave's facility in Oakland, CA. The CalWave facility is an existing warehouse and office facility.

Once fabricated the small scale WEC and it's sub-components would be structurally tested by CalWave. Structural testing would occur at the University of California, Berkeley, Department of Civil and Environmental Engineering. This testing would be small scale laboratory testing. Testing would occur in a dedicated laboratory facility designed for this type of testing.

The small scale WEC would also be tank tested at the University of Maine tank testing facility in Orono, Maine. This is a preexisting wave tank test facility that conducts tank testing as its regular course of business. Testing would be conducted over an approximate 2 week period of time. No modifications to any facilities would be required for fabrication or testing of the small scale WEC. All existing federal, state and local regulations would be adhered to.

Any work proposed to be conducted at a DOE laboratory may be subject to additional NEPA review by the cognizant

DOE NEPA Compliance Officer for the specific DOE laboratory prior to initiating such work. Further, any work conducted at a DOE laboratory must meet the laboratory's health and safety requirements.

**NEPA PROVISION**

DOE has made a final NEPA determination.

Notes:

Water Power Technology Office  
This NEPA determination does NOT require a tailored NEPA provision  
Roak Parker February 25, 2020

**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.

The proposed action is categorically excluded from further NEPA review.

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

NEPA Compliance Officer Signature: \_\_\_\_\_

 Electronically Signed By: **Roak Parker**  
NEPA Compliance Officer

Date: 2/25/2020

**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: \_\_\_\_\_