

PMC-ND
(1.08.09.13)

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



RECIPIENT: M3 Wave LLC

STATE: OR

PROJECT TITLE : Survivability and Lower Cost in a Submerged Wave Energy Device

Funding Opportunity Announcement Number	Procurement Instrument Number	NEPA Control Number	CID Number
DE-FOA-0001310	DE-EE-0007345	GFO-0007345-001	

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.)
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 federal funding to M3 Wave, LLC. to develop hydrodynamics and structural models that would provide inputs into a sediment model. The sediment model would identify and refine the optimal device geometry improving robustness and survivability. Levelized cost of energy would be improved by reducing capital expenditure and increasing annual energy production.

Proposed project activities would include computer modeling, fabrication, testing in a small wave tank, and testing in a large, university-operated wave tank. Computer modeling, fabrication of 3D-printed models, and testing of those models would occur in a small wave tank at the M3 Wave facility in Salem, OR. Testing of the larger models would occur in a large wave tank at the University of Oregon's O.H. Hinsdale Wave Research Facility in Corvallis, OR. The dimensions of the small model tested at M3 Wave would be 0.5 meters by 2 meters, and the dimensions of the larger model tested at University of Oregon would be 2.5 meters by 10 meters. Fabrication of the larger models would be completed by the subcontractor, Ershigs, Inc., at their facility in Ridgefield, WA and would be built from fiber-reinforced polymer. Sandia National Lab and National Renewable Energy Laboratory would both provide computer modeling assistance. No laboratory work is planned at the federal sites.

The facilities in which project work would occur are purpose-built for the type of activities being proposed; therefore, no adverse impacts to sensitive resources are expected as a result of the proposed project. No change in the use, mission or operation of existing facilities would arise out of this effort. The proposed laboratories and facilities would comply with standard safety procedures and all processes and procedures would be monitored by the environment, health and safety staff. The proposed laboratories and facilities have all applicable permits in place, and would not need additional permits for the proposed activities. No hazardous waste would be produced as a result of the proposed project and all handling and disposal of waste materials would comply with appropriate local, state and federal regulations.

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.

Based on review of the project information and the above analysis, DOE has determined that the proposed project

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 B3.6 "small-scale research and development, laboratory operations 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 the Recipient intends to make changes to the scope or objective of this project, the Recipient is required to contact the Project Officer, identified in Block 15 of the Assistance Agreement before proceeding. The Recipient must receive notification of approval from the DOE Contracting Officer prior to commencing with work beyond that currently approved. If the Recipient moves forward with activities that are not authorized for Federal funding by the DOE Contracting Officer in advance of a final NEPA decision, the Recipient is doing so at risk of not receiving Federal funding and such costs may not be recognized as allowable cost share.

Insert the following language in the award:

You are required 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.

Note to Specialist :

Wind and Water Power Technologies Office
This NEPA determination requires a tailored NEPA provision.
Review completed by Logan Sholar on 03/21/2016

SIGNATURE OF THIS MEMORANDUM CONSTITUTES A RECORD OF THIS DECISION.

NEPA Compliance Officer Signature: _____

 Electronically Signed By: Lori Gray
NEPA Compliance Officer

Lori Gray

Date: _____

3/21/2016

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: _____