

PMC-ND
(1.08.09.13)

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



RECIPIENT: Oregon State University

STATE: OR

PROJECT TITLE : Assimilation of Wave Imaging Radar Observations for Real-time Wave-by-Wave Forecasting

Funding Opportunity Announcement Number DE-FOA-0000971 **Procurement Instrument Number** DE-EE0006789 **NEPA Control Number** GFO-0006789-001 **CID Number**

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.)

Rationale for determination:

DOE is proposing to provide funding to Oregon State University to develop and assess the performance of a method for using wave-resolving marine radar to provide all weather, large-area, phase-resolved wave forecasts for wave energy converter control applications.

The project would be separated into two budget periods.

Budget Period 1

- Task 1: Program initialization
- Task 2: Development of radar post-processing algorithm
- Task 3: GPU-based Boussinesq Model Development and Performance Assessment
- Task 4: Forecast Algorithm Development and Performance Assessment

Budget Period 2

- Task 5: Marine Radar and In Situ Data Collection (field work)
- Task 6: Algorithm Verification and Tuning
- Task 7: Completion of Final Report including test report describing complete instrumentation and assimilation system as well as a Production Cost Assessment

During Budget Period 1, OSU would develop and refine data algorithms and perform assessments of the system on existing forecast data. This work would involve desk-top level research, development of computer code and computational analysis of data using computer hardware

In Budget Period 2, OSU would collect field data and apply the system to the data and the resulting wave forecasts to compare and verify results to in situ data sources. Details of the field work are not known at this time and are not advanced to a point where a meaningful NEPA analysis can be completed.

DOE has determined that Budget Period 1 (Tasks 1-4) are consistent with actions covered under DOE CX A9 (information gathering and data analysis); and therefore are categorically excluded from further NEPA review.

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:
Budget Period 2

- Task 5: Marine Radar and In Situ Data Collection (field work)
- Task 6: Algorithm Verification and Tuning
- Task 7: Completion of Final Report including test report describing complete instrumentation and assimilation system as well as a Production Cost Assessment

This restriction does not preclude you from:
Budget Period 1

- Task 1: Program initialization
- Task 2: Development of radar post-processing algorithm
- Task 3: GPU-based Boussinesq Model Development and Performance Assessment
- Task 4: Forecast Algorithm Development and Performance Assessment

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.

Insert the following language in the award:

You are required to:
Submit a new EQ1 with details specific to Budget Period 2 tasks and activities; specifically, provide details on Task 5 field data collection activities, including but not limited to dates, durations, equipment, and frequencies.

Note to Specialist :

NEPA review completed by Laura Margason on September 10, 2014

*This NEPA Determination requires a tailored NEPA provision.

SIGNATURE OF THIS MEMORANDUM CONSTITUTES A RECORD OF THIS DECISION.

NEPA Compliance Officer Signature:  Electronically Signed By: Kristin Kerwin Date: 9/11/2014
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