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 NEPA Control Number CID Number

DE-EE0006789

GFO-0006789-002

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.)

B3.1 Site characterization environmental monitoring

Site characterization and environmental monitoring (including, but not limited to, siting, construction, modification, operation, and dismantlement and removal or otherwise proper closure (such as of a well) of characterization and monitoring devices, and siting, construction, and associated operation of a smallscale laboratory building or renovation of a room in an existing building for sample analysis). Such activities would be designed in conformance with applicable requirements and use best management practices to limit the potential effects of any resultant ground disturbance. Covered activities include, but are not limited to, site characterization and environmental monitoring under CERCLA and RCRA. (This class of actions excludes activities in aquatic environments. See B3.16 of this appendix for such activities.) Specific activities include, but are not limited to: (a) Geological, geophysical (such as gravity, magnetic, electrical, seismic, radar, and temperature gradient), geochemical, and engineering surveys and mapping, and the establishment of survey marks. Seismic techniques would not include large-scale reflection or refraction testing; (b) Installation and operation of field instruments (such as stream-gauging stations or flow-measuring devices, telemetry systems, geochemical monitoring tools, and geophysical exploration tools); (c) Drilling of wells for sampling or monitoring of groundwater or the vadose (unsaturated) zone, well logging, and installation of water-level recording devices in wells; (d) Aquifer and underground reservoir response testing; (e) Installation and operation of ambient air monitoring equipment; (f) Sampling and characterization of water, soil, rock, or contaminants (such as drilling using truck- or mobile-scale equipment, and modification, use, and plugging of boreholes); (g) Sampling and characterization of water effluents, air emissions, or solid waste streams; (h) Installation and operation of meteorological towers and associated activities (such as assessment of potential wind energy resources); (i) Sampling of flora or fauna; and (j) Archeological, historic, and cultural resource identification in compliance with 36 CFR part 800 and 43 CFR part 7.

Rationale for determination:

The U.S. Department of Energy (DOE) is proposing to provide federal funding to Oregon State University (OSU) to develop and assess the performance of a method for using wave-resolving marine radar to provide all weather, largearea, phase-resolved wave forecasts for wave energy converter control applications.

DOE completed a previous NEPA review (GFO-0006789-001 CX A9 9/10/2014) that authorized Budget Period 1 (Tasks 1-4) activities including program initialization, development of radar post-processing algorithms, GPU-based boussinesg model development and performance assessment, and forecast algorithm development and performance assessment. This NEPA determination applies to activities associated with Budget Period 2 including marine radar and in-situ data collection (Task 5), algorithm verification and tuning (Task 6), and completion of final reports (Task 7).

Tasks 6 and 7 are purely intellectual, academic, or analytical activities. They would be completed on campus at OSU and University of Southern California (USC) and in the offices of SRI International in Ann Arbor, MI and would use no physical materials beyond basic office supplies and software. However, Task 5 would require collection of data from the field.

This field component would involve collecting data from a standard commercial marine radar system with a

customized data acquisition computer aboard a mid-sized vessel off the coast of Newport, Oregon at the established Pacific Marine Energy Center's (PMEC) South Energy Test Site (SETS) operated through the Northwest National Marine Renewable Energy Center (NNMREC). The fishing vessel to be used in this study is representative of vessels that occupy these waters regularly and would be present and operating at this location regardless of this specific project. The marine radar is an off-the-shelf commercial device. The vessel used would already have one or two such devices installed for navigation purposes. OSU's marine radar would be installed on the bridge of the vessel with the assistance of the crew and would remain aboard for up to two days of testing in November 2015. OSU's radar would be removed from the vessel upon completion of the data collection. The project activities would take place in the marine navigable waters but would not involve in-water deployment. All fishing vessels are required to have the appropriate FCC license for marine radar operation, which OSU would have in place before beginning any field work. No new or special permits would be required.

The proposed project would necessitate work at sea. This work would not be conducted under rough conditions. Existing standardized practices for research operations at sea would be followed, including safety briefings specific to the vessel and continuous wearing of personal floatation devices. No hazardous materials would be utilized for this project and no wastes would be generated. The only emissions produced would be normal emissions associated with operating a vessel of this size and type.

Based on review of the project information and the above analysis, DOE has determined the activities associated with 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 B3.16 "Research activities in aquatic environments" 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:

Water Power Program
This NEPA Determination does NOT require a tailored NEPA provision.
NEPA review completed by Rebecca McCord, 11/2/2015

SIGNATURE OF THIS MEMORANDUM CONSTITUTES A RECORD OF THIS DECISION.

NEI	PA Compliance Officer Signature:	Signed By: Lori Gray Activities NEPA Compliance Officer	Date: _	11/9/2015
FIE	LD OFFICE MANAGER DETERMINATION	NEPA Compliance Officer		
	Field Office Manager review required			
NCO REQUESTS THE FIELD OFFICE MANAGER REVIEW FOR THE FOLLOWING REASON:				
	Manager's attention.			
BASED ON MY REVIEW I CONCUR WITH THE DETERMINATION OF THE NCO:				
Field Office Manager's Signature: Date: Date:				