

PMC-ND

(1.08.09.13)

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

**RECIPIENT:** Verdant Power, Inc.**STATE:** NY

PROJECT TITLE : Advancement of the Kinetic Hydropower System (KHPS) to Department of Energy (DOE) Technology Readiness Level (TRL) 7/8

Funding Opportunity Announcement Number	Procurement Instrument Number	NEPA Control Number	CID Number
DE-FOA-0000293	DE-EE0005929	GFO-0005929-002	GO5929

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:

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:

DOE is proposing to provide funding to Verdant Power, Inc. to conduct research, development and environmental monitoring activities to advance the design of a Kinetic Hydropower System (KHPS).

DOE previously reviewed and categorically excluded Tasks 1.1, 1.2, 2.1, and 3.1 (GFO-0005929-001 was signed on 12/13/2012). Tasks 2.2, 2.3, and 2.4 were conditioned upon further NEPA review because Verdant had not determined facilities where they would be testing their components.

This NEPA determination applies to Tasks 2.2, 2.3, and 2.4.

In Tasks 2.2, 2.3, and 2.4 DOE funding would be used to conduct critical component testing and analysis to progressively validate longevity and reliability parameters for the KHPS and US Marine Hydrokinetic (MHK) devices overall. Specific Verdant would test the shaft seal, generator brake and the gearbox components of the KHPS. These tests would take place in four locations:

Blade composite testing at DOE's National Renewable Energy Laboratory Wind Technology Center's dynamometer facility (Boulder, CO)

Shaft seal test at seal manufacturer's existing facility, The Garlock Family of Companies (Palmyra, NY)

Generator brake testing on a specialized test stand at a manufacturing facility, Baldor, Inc. (Wallingford, CT)

Testing of the gearbox on a specialized test stand in a controlled manufacturing facility environment, Peerless WinSmith (Smithville, NY).

Each facility has existing corporate health and safety practices and ISO 9001 compliant procedures in place for handling of hazardous materials.

DOE has determined that this project is consistent with actions covered under DOE CX B3.6 (small-scale research and development, laboratory operations and pilot projects); and therefore 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 :

NEPA review completed by Laura Margason on 11/19/2013

This NEPA determination does not require a tailored NEPA provision. All proposed tasks have been reviewed and categorically excluded from further NEPA review.

SIGNATURE OF THIS MEMORANDUM CONSTITUTES A RECORD OF THIS DECISION.

NEPA Compliance Officer Signature: *Kim Trindle* Date: 11/20/2013
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