

PMC-EF2a

(2010)

**U.S. DEPARTMENT OF ENERGY
EERE PROJECT MANAGEMENT CENTER
NEPA DETERMINATION**



RECIPIENT: Dehlsen Associates, LLC

STATE: CA

PROJECT TITLE : Aquantis 2.5MW ocean Current Generation Device

Funding Opportunity Announcement Number	Procurement Instrument Number	NEPA Control Number	CID Number
DE-FOA-0000069	DE-EE-0002648	GFO-10-173	GO0

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 (including, but not limited to, literature surveys, inventories, audits), data analysis (including computer modeling), document preparation (such as conceptual design or feasibility studies, analytical energy supply and demand studies), and dissemination (including, but not limited to, document mailings, publication, and distribution; and classroom training and informational programs), but not including site characterization or environmental monitoring.
- B3.6** Siting, construction (or modification), operation, and decommissioning of facilities for indoor bench-scale research projects and conventional laboratory operations (for example, preparation of chemical standards and sample analysis); small-scale research and development projects; and small-scale pilot projects (generally less than two years) conducted to verify a concept before demonstration actions. Construction (or modification) will be within or contiguous to an already developed area (where active utilities and currently used roads are readily accessible).

Rational for determination:

Dehlsen Associates, LLC is proposing to use DOE funding to further develop their Aquantis 2.6 MW Ocean Current Generation Device technology which is an ocean current turbine designed to extract the kinetic energy from the ocean's current in hopes of achieving competitively priced base-load, continuous, and reliable power generation.

Tasks include:

Task 1 – Design and analysis

This task involves valuation of the Florida Current resource, analysis of current turbine design (Computational Fluid Dynamics Simulations), and structural analysis of the existing ocean current turbine.

Task 2 – Moorings and Attachments

Existing mooring designs will be researched and evaluated to generate a top level requirements document, test plan development for mooring designs, and design of mooring and anchoring components.

Task 3 – Enabling Technology Direct Drive

A direct drive generator will be engineered and developed in a laboratory setting, resulting in an engineering design package.

Task 4 - Documentation

Paperwork will be put together for all of the previous tasks to form a report/drawing for device development.

Task 5 – Project Management and Reporting

All of the laboratory, fabrication, manufacturing, and testing facilities will take place in the Applied Research Laboratory at The Pennsylvania State University (ARL Penn State), located on the University Park campus in State College, Pennsylvania. Penn State has filled out and submitted an R&D questionnaire regarding their laboratory facilities. This document addresses their established safety protocols and waste handling procedure applicable to work under this project.

No field testing of design prototypes will occur as part of this project.

This project comprises information gathering, conceptual design processes, design testing and conventional bench-scale research; therefore a CX A9 and B3.6 apply.

NEPA PROVISION

DOE has made a final NEPA determination for this award

Insert the following language in the award:

Note to Specialist :

None Given.

SIGNATURE OF THIS MEMORANDUM CONSTITUTES A RECORD OF THIS DECISION.

NEPA Compliance Officer Signature: _____



NEPA Compliance Officer

Date: _____

3/5/10

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: _____