

PMC-EF2a

(2010)

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



RECIPIENT: Concepts NREC

STATE: MA

PROJECT TITLE : Wind and Water - Development and Demonstration of an OWC System

| Funding Opportunity Announcement Number | Procurement Instrument Number | NEPA Control Number | CID Number |
|---|-------------------------------|---------------------|------------|
| DE-PS3608GO98030 | DE-FG36-O8GO18171 | GFO-09-014-001 | 0 |

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).
- A11** Technical advice and planning assistance to international, national, state, and local organizations.

Rational for determination:

Concepts NRC is proposing to use DOE funding to assist in the design of a turbine for an oscillating water column (OWC) wave energy conversion system. The turbine concept for this system is a 350 kW turbine that is radically different than previous turbines. Where articulating blades were required before to optimize the turbine's performance with varying airflow rate, this turbine is designed to have a fixed blades but can use a variable inlet guide vane (also called an air nozzle) that will rotate in response to changing airflow rates. The first design however will be made simpler with fixed vanes. Concepts will provide a detailed design of this new turbine which will be manufactured by Oceanlinx and used in their wave energy conversion system.

The work performed by Concepts NREC will occur in its Woburn, Ma and Wilder, VT engineering offices where the mechanical and aerodynamic engineers are located. No fabrication and thus no testing at these facilities are anticipated during the turbine design process. The recipient has provided an R&D laboratory questionnaire.

The research and design work being proposed by Concepts NRC is a very small portion of a multi-million dollar project that is being funded and carried out by Oceanlinx. Oceanlinx has provided documentation (attached) describing that the DOE funded, Concepts NRC portion of the larger Oceanlinx project is not critical to the enabling the Oceanlinx project to move forward. In effect, the Oceanlinx project would occur regardless of Concepts NRC's participation.

The proposed project is consistent with activities outlined in A9 "information gathering", A11 "technical advice" and B3.6 "small-scale research and development projects"; therefore, it is categorically excluded from further NEPA review.

NEPA PROVISION

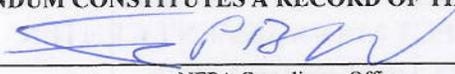
DOE has made a final NEPA determination for this award

Insert the following language in the award:

Note to Specialist :

EF2a completed by Logan Sholar

SIGNATURE OF THIS MEMORANDUM CONSTITUTES A RECORD OF THIS DECISION.

NEPA Compliance Officer Signature: 
NEPA Compliance Officer

Date: 12/22/10

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: _____