

FMC-ef2a

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

**RECIPIENT:** Ocean Renewable Power Company**STATE:** ME**PROJECT TITLE :** TidGen Power System Commercialization Project

Funding Opportunity Announcement Number	Procurement Instrument Number	NEPA Control Number	CID Number
DE-FOA-0000293	DE-EE0003647	GFO-0003647-001	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.
- C12** Siting, construction, and operation of energy system prototypes including, but not limited to, wind resource, hydropower, geothermal, fossil fuel, biomass, and solar energy pilot projects.

**Rational for determination:**

DOE is proposing to provide federal funding to Ocean Renewable Power Company (ORPC) for the TidGen™ Power System Commercialization Project (TidGen Project). Federal funds would be applied to the entire project. The TidGen™ Project would be completed in two phases over a three-year period and would consist of designing, building, installing and monitoring a commercial-scale array of five grid-connected TidGen™ devices on the sea floor in Cobscook Bay off Lubec (near Eastport), Maine.

The Project's thirteen month first phase would consist of designing, building, installing, and commencing operations of the first TidGen Power System, interconnected with the Bangor Hydro Electric Company distribution grid. This first deployed TidGen Power System would include extensive equipment to collect environmental data and information regarding operating performance. During Phase 1, ORPC would perform detailed testing and monitoring of the local environment as well as all components and subsystems on the device.

Only after completion of all NEPA requirements and the Project passing a Go/No-go Decision point would DOE approve funding for Phase 2 activities.

During Phase 2, ORPC would continue operating, testing, monitoring and maintaining the first deployed system for a period of one year while also building, installing and integrating four additional TidGen devices. Power and control cables from the TidGen devices would be connected to an underwater consolidation box, and a single underwater power and control cable would connect the system to an electrical substation onshore. The four TidGen™ devices deployed during Phase 2 would be coupled together with the Phase 1 TidGen device to form an underwater array of five devices interconnected within a commercial-scale TidGen Power System, which would then continue to be operated, tested, monitored, inspected and maintained for a period of one year after integration.

**Proposed Tasks:****Phase 1:**

- Task 1.0 Engineering & Design
- Task 2.0 Procurement, Manufacture & Assembly
- Task 3.0 Installation & Start-up
- Subtask 3.1 Grid Interconnection
- Task 4.0 Initial Testing

Task 5.0 Retrieval & Maintenance  
 Subtask 5.1 First Retrieval  
 Subtask 5.2 Second Retrieval

Phase 2:

Task 1.0 Operation of initial TidGen Power System  
 Task 2.0 Engineering Enhancements  
 Task 3.0 Procurement, Manufacture & Assembly  
 Task 4.0 Installation & Start-up  
 Task 5.0 Testing & Monitoring  
 Task 6.0 Retrieval & Maintenance  
 Task 7.0 Project Management and Reporting Budget Period 1 (50%); Budget Period 2 (50%)

Phase I, Task 1 would consist of engineering and design for the power electronics, TGU chassis, generator, ADCF turbines, driveline / mechanical, bottom support frame, data acquisition, deployment and retrieval, and installation site development and would take place at ORPC office and lab facilities and therefore a CX A9 applies.

All remaining tasks within Phase I (Tasks 2-5.2) and Phase II (Tasks 1-6) involve full-scale system procurement, assembly, installation/deployment, testing, retrieval, modifications, and redeployment activities. These activities have the potential to result in environmental impacts. Additional NEPA review is required for DOE to evaluate and understand any potential impacts.

Per the DOE NEPA implementing regulations (Appendix C to Subpart D to 10 CFR Part 1021 – C12, as noted above), preparation of a DOE-sponsored Environmental Assessment (EA), or adoption of a required FERC EA, or participation as a cooperating agency with FERC's EA process is required prior to release of federal funds for the subject tasks.

#### 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/NSA providing either a NEPA clearance or a final NEPA decision regarding the project.

**Prohibited actions include:**

DOE funds are not authorized for capital equipment purchase or any in-ocean and related shoreside activities associated with either phase of the project.

ORPC is authorized to initiate the preparation of an EA by a third party contractor consistent with DOE NEPA implementing regulations, or in coordination with DOE in the FERC EA process, whichever is deemed appropriate by DOE and/or FERC.

This restriction does not preclude you from:

Conducting efforts associated with Phase I, Task 1 of the project, including associated project management activities.

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.

Note to Specialist :

This project involves tasks that are conditional pending a final NEPA determination - please place this project on ASAP approval.

**SIGNATURE OF THIS MEMORANDUM CONSTITUTES A RECORD OF THIS DECISION.**

NEPA Compliance Officer Signature:   
NEPA Compliance Officer

Date: 4/5/2011

**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: 4/8/11