

Notice of Intent No. DE-FOA-0001080**Notice of Intent to Issue
Funding Opportunity Announcement No. DE-FOA-0001081**

The Office of Energy Efficiency and Renewable Energy (EERE) intends to issue, on behalf of the Wind & Water Power Technologies Office (WWPTO), a Funding Opportunity Announcement (FOA) entitled “Competitive Marine and Hydrokinetic (MHK) Demonstrations at the Navy's Wave Energy Test Site (WETS)”.

Testing, evaluation, and comparison of multiple close to full-scale wave energy conversion (WEC) systems will help industry identify and focus on the most promising device archetypes. This is a notice of intent to issue a FOA that will support the deployment of two (2) WEC systems for a period of approximately one (1) year at water depths of approximately 60 and 80 meters at the Navy's WETS in Kaneohe, HI, for comparison of performance, reliability, and levelized cost of energy (LCOE). Testing, evaluation, and comparison results will feed into the program's research and development portfolio planning, provide data as input for validating design models and tools, and identify deployment issues and opportunities.

Testing will be conducted through an interagency partnership with the U.S. Navy Facilities Engineering Command which builds on a history of collaborative wave energy research, development, and testing between the two groups. The Department of Energy (DOE) recipients whose projects are selected under this FOA will be expected to enter into a Cooperative Research and Development Agreement (CRADA) with the Navy in order to gain access to the test site. An overview of the CRADA process, including handbook, templates, and example statements of work, can be found at <http://www.onr.navy.mil/en/Science-Technology/Directorates/Transition/Technology-Transfer-T2/Partnership-Options/CRADA-handbook.aspx>.

Through this initiative, DOE and the Navy will gather important performance and cost data while supporting the Department of Defense's renewable energy goals. A comprehensive set of measurements will be taken over the duration of the deployment to enable quantitative comparisons of WEC system performance and reliability. Metrics of success include annual energy production, availability, reliability, operations and maintenance cost, and overall LCOE. The unique attributes of the Navy's WETS facility make it attractive for prototype testing for the following reasons:

- The deployment site is pre-permitted so funding can be focused on technology development and deployment rather than siting and permitting;
- The deployment site is grid connected, sheltered, and provides year-round access;

This effort seeks WEC technology developers that are in advanced stages of technology development and prepared to build and test technology at close to full-scale in the ocean environment. The funding opportunity will be conducted in two phases with a Go/No-Go stage gate review after Phase I:

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Phase I funding will be used for the following activities for a full scale WEC system:

- a. WEC system optimization for demonstration at WETS,
- b. Analysis of anticipated system performance for a period of 1 year at WETS including considerations for design for manufacturing, reliability, and operations,
- c. Preparation of complete engineering designs and drawings, as well as a schedule for fabrication and deployment of the system,
- d. Preparation of cost estimates (including capital cost and operating expense) and LCOE for deployment at WETS,
- e. Development of an instrumentation and test plan in collaboration with DOE for gathering performance and reliability data (Note that the test plan will include input from recipients and agencies), and
- f. Preparation of a risk management plan and an operations and maintenance plan.

Phase II funding will be used for the following activities:

- a. Within one year of being approved for Phase II, the recipients will:
 - i. Obtain final permitting approvals,
 - ii. Finalize the instrumentation and test plan, and
 - iii. Fabricate the full scale device for deployment at WETS.
- b. Deploy the system at WETS per the agreed upon schedule (Note: The test berths at approximately 60 and 80 meter water depths are anticipated to be available in mid FY16).
- c. The prototype will be deployed for a period of approximately one (1) year. The recipients will be responsible to gather and document the data per the agreed upon instrumentation and test plan. DOE and the Navy will have full access to all data for internal use. However the data will be protected from publication for a period of 5 years from the date it is first produced.
- d. Retrieval and decommissioning of the system upon completion of the test.

EERE envisions awarding multiple financial assistance awards in the form of cooperative agreements. The period of performance for each award will be approximately 3.5 years.

This Notice is issued so that interested parties are aware of the EERE's intention to issue this FOA in the near term. All of the information contained in this Notice is subject to change. EERE will not respond to questions concerning this Notice. Once the FOA has been released, EERE will provide an avenue for potential applicants to submit questions.

EERE plans to issue the FOA in the second quarter of calendar year 2014 via the EERE Exchange website (<https://eere-exchange.energy.gov/>). If applicants wish to receive official notifications and information from EERE regarding this FOA, they should register in EERE Exchange. When the FOA is released, applications will be accepted only through EERE Exchange.

In anticipation of the FOA being released, applicants are advised to complete the following steps, which are **required** for application submission:

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- Register and create an account in EERE Exchange at <https://eere-exchange.energy.gov/>. This account will allow the user to register for any open EERE FOAs that are currently in EERE Exchange. It is recommended that each organization or business unit, whether acting as a team or a single entity, use only one account as the contact point for each submission.

Questions related to the registration process and use of the EERE Exchange website should be submitted to: EERE-ExchangeSupport@hq.doe.gov

- Obtain a Dun and Bradstreet Data Universal Numbering System (DUNS) number (including the plus 4 extension, if applicable) at <http://fedgov.dnb.com/webform>
- Register with the System for Award Management (SAM) at <https://www.sam.gov>. Designating an Electronic Business Point of Contact (EBiz POC) and obtaining a special password called an MPIN are important steps in SAM registration. Please update your SAM registration annually.
- Register in FedConnect at <https://www.fedconnect.net/>. To create an organization account, your organization's SAM MPIN is required. For more information about the SAM MPIN or other registration requirements, review the FedConnect Ready, Set, Go! Guide at https://www.fedconnect.net/FedConnect/PublicPages/FedConnect_Ready_Set_Go.pdf
- Register in Grants.gov to receive automatic updates when Amendments to a FOA are posted. However, please note that applications will not be accepted through Grants.gov. <http://www.grants.gov/>. All applications must be submitted through EERE Exchange.

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