



**U.S Department of Energy (DOE)  
Office of Energy Efficiency and Renewable Energy  
"In-Water Wave Energy Conversion (WEC) Device Testing Support"  
Notice of Intent (NOI) Number: DE-FOA-0000704**

**Program Manager/Area:**

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**Subject:**

Notice of Intent to Issue Funding Opportunity Announcement (FOA) No: DE-FOA-0000705

**Description:**

The purpose of this Notice is to provide potential applicants advance notice of a proposed upcoming FOA initially titled "In-Water Wave Energy Conversion (WEC) Device Testing Support." NO APPLICATIONS WILL BE ACCEPTED THROUGH THIS NOTICE. Prospective applicants to the FOA should begin developing partnerships, formulating ideas, and gathering data in anticipation of the issuance of this FOA. It is anticipated that this FOA will be posted to EERE [Exchange](#) in FY12. Please do not respond or submit questions in response to this Notice of Intent.

On behalf of the DOE Office of Energy Efficiency and Renewable Energy (EERE), the Wind and Water Power Program (WWPP) intends to issue a Funding Opportunity Announcement titled "In-Water Wave Energy Conversion (WEC) Device Testing Support."

DOE intends to fund one industry-led project that will deploy a long-term (one year) in-water WEC device. The device will be deployed at the Navy Wave Energy Test Site (WETS) facility in Kaneohe Bay on the Hawaiian Island of Oahu.

**Background:**

The Department of the Navy (DoN), through the Naval Facilities Engineering Command (NAVFAC) Engineering Service Center (ESC), supports the Department of Defense (DOD) energy goal to produce or procure up to 25% of the total quantity of electric energy it consumes at its ashore facilities and activities by fiscal year 2025, and each fiscal year thereafter, from renewable energy sources. NAVFAC ESC is interested in determining if WEC technology is a viable option to assist the DOD in achieving this goal.

In 2003, NAVFAC designed and installed the existing intermediate-scale offshore wave energy test facility at Marine Corps Base Hawaii (MCBH), in Kaneohe Bay, Hawaii. This system

includes a subsea power cable from an onshore data collection facility to a mooring assembly located at a 30m depth test site, 1.2 km offshore. The berth is currently unoccupied, and the Navy is seeking to identify developers to deploy a device at the WETS facility for a long-term test period through a formal Request for Information process (RFI N62742-11-R-1102). Thus, the Navy's continued efforts to make available the 30m water depth WETS to developers will help to advance the technology by supporting infrastructure needs and permitting requirements for ocean testing of mature devices.

DOE's Water Power program is equally interested in demonstrating similar opportunities for WEC technologies for broader utility scale applications. As such, DOE and NAVFAC ESC are pursuing opportunities to jointly support WEC prototype testing at the WETS. The proposed DOE FOA would aim to support a project in which a WEC device will be deployed at the DoN's existing WETS facility. Costs/elements associated with testing at the WETS site under consideration for DOE cost-shared support through a potential FOA may include, but are not limited to:

- Device Transportation to/from WETS site
- Deployment and Recovery
- Test Protocol Definition
- Instrumentation Interface
- Operations and Maintenance (O&M) Protocol Definition
- Device Monitoring and Data Collection
- Data Analysis to include
  - Power Generation
  - Capacity Factor
  - Levelized cost of energy (LCOE) Calculation

These collaborative efforts with DoN support the mission of DOE's Water Power Program to research, test, and develop innovative technologies capable of generating renewable, environmentally responsible, and cost-effective electricity from U.S. water resources. These investments aim to advance the technical readiness of wave energy systems and further support the development of a robust and competitive marine and hydrokinetic (MHK) industry in the U.S. This deployment also presents the opportunity to demonstrate a wave energy technology with a credible potential for lowering the levelized cost of energy (LCOE) below the local "hurdle" price at which MHK energy can compete with other regional generation sources without subsidies.

As devices are tested and performance data is generated, DOE will continue to compile, analyze, and disseminate information to accurately characterize and evaluate the performance of MHK technologies. The DOE will integrate this information into numerical models to establish baseline cost of energy, assess key cost drivers, and identify cost reduction pathways. The ability to obtain in-water performance data of leading device designs is critical in achieving these goals.

## **General Information:**

In order to support the continued testing of devices at the WETS location, NAVFAC ESC has posted a separate Request for Information (RFI) seeking responses to assess specific interest in deploying a WEC device at the DoN's WETS. Through the RFI, NAVFAC ESC also invites interested parties to comment and provide information that NAVFAC ESC will use to evaluate future test area expansion to deeper water depths of approximately 60m-70m. The full RFI can be viewed at <https://www.fbo.gov> by searching Solicitation No. N62742-12-R-1198, titled "Department of the Navy Ocean Energy Technology."

As put forth in the RFI, DoN intends to support development and utilization of wave energy technology as a means to reduce dependence on fossil fuel and associated emissions, while reducing the risk of environmental impacts associated with fossil fuel in the energy production process. This is congruent with DOE's mission to research, test, and develop innovative technologies capable of generating renewable, environmentally responsible, and cost-effective electricity from water resources. By supporting the testing of a WEC device at WETS, DOE will further integrate information into numerical models to establish baseline cost of energy for the purpose of assessing key cost drivers and identifying cost reduction pathways.

## **Registration Information:**

There are several one-time actions before submitting an Application in response to a potential upcoming FOA, as follows:

- Register and create an account on EERE Exchange at <https://eere-exchange.energy.gov/>. This account will then 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.

The EERE Exchange registration does not have a delay; however, the remaining **registration requirements below could take several weeks to process and are necessary in order for a potential applicant to receive an award**. Therefore, although not required in order to submit an Application through the EERE Exchange site, **all potential applicants lacking a DUNS number, or not yet registered with CCR or FedConnect should complete those registrations as soon as possible**.

Questions related to the registration process and use of the EERE Exchange website should be submitted to: [EERE-ExchangeSupport@hq.doe.gov](mailto: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 Central Contractor Registry (CCR) at <https://www.ccr.gov/>. Designating an Electronic Business Point of Contact (EBiz POC) and obtaining a special password called an MPIN are important steps in CCR registration. Please update your CCR registration annually.

- Register in FedConnect at <https://www.fedconnect.net/>. To create an organization account, your organization's CCR MPIN is required. For more information about the CCR MPIN or other registration requirements, review the FedConnect Ready, Set, Go! Guide at [https://www.fedconnect.net/FedConnect/PublicPages/FedConnect\\_Ready\\_Set\\_Go.pdf](https://www.fedconnect.net/FedConnect/PublicPages/FedConnect_Ready_Set_Go.pdf)

DOE will not entertain questions at this time. Once the proposed FOA has been posted, all questions and answers related to the FOA will be publically available on EERE Exchange at: <https://eere-exchange.energy.gov/>.

**Disclaimer:**

DOE is issuing this Notice of Intent so that interested parties are aware of DOE's intention to issue a FOA. DOE reserves the right to change the requirements of any proposed FOA, issue a FOA involving only a portion of the elements listed, or not issue a FOA at all. Any of the information contained in this Notice is subject to change. Any amounts proposed for funding are subject to the availability of Congressional appropriations.