

Notice of Intent No. DE-FOA-0001910

Notice of Intent to Issue Funding Opportunity Announcement No. DE-FOA-0001837

The Office of Energy Efficiency and Renewable Energy (EERE) intends to issue, on behalf of the Water Power Technologies Office (WPTO), a Funding Opportunity Announcement (FOA) entitled “Marine and Hydrokinetic Technology Advancement and Data Dissemination”.

This FOA supports the research, testing, and development of innovative Marine and Hydrokinetic (MHK) technologies that convert the energy of waves, tides, and river and ocean currents into electricity and have the potential to provide millions of Americans with locally sourced, clean, and reliable energy. MHK technologies are at an early stage of development due to the fundamental scientific and engineering challenges of generating power from dynamic, low-velocity and high-density waves and currents, while surviving in corrosive ocean environments. These challenges are intensified by high costs and lengthy permitting processes associated with in-water testing. WPTO’s early research and development (R&D) work in MHK focuses on addressing scientific and engineering challenges to enable breakthroughs that have broad, industry-wide benefits.

WPTO’s strategy to help catalyze MHK development focuses primarily on technology research and design tools to enable industry to reduce cost and improve performance of MHK technology concepts. This research involves testing proof-of-concept systems in laboratory and ocean settings to understand performance characteristics, identify and mitigate reliability risks, and provide data to inform future R&D to improve early-stage designs across the industry. WPTO is committed to investment in early-stage R&D that enables the domestic MHK industry to advance toward achieving cost competitiveness. WPTO also supports efforts to model and predict the environmental effects of marine energy devices through research that simulates device-ecosystem interactions and enables industry to develop new technologies that more accurately monitor devices in the water. Lastly, WPTO research generates new data and synthesizes and disseminates existing data that would not otherwise be available to resource agencies and regulators.

The FOA objectives are to further the development of MHK technologies by reducing costs, accelerating technology, and reducing deployment timelines. It is anticipated that the FOA may include the following Topic Areas to support these objectives:

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Topic Area 1: Early Stage Device Design Research

The objective of Topic Area 1 is to advance technology by providing early-stage development and evaluation of next generation wave and tidal/current systems, targeting prototype-scale systems with high potential that can be proven through numerical simulations and testing validation.

Topic Area 2: Controls and Power Take Off (PTO) Design Integration and Testing

The objective of Topic Area 2 is to support early-stage design of PTO and control systems in parallel. Projects are expected to build and test the PTO with an operational real-time control system at a relevant scale in a laboratory and/or tank setting.

Topic Area 3: Dissemination of Environmental Data and Analyses to Facilitate the Marine Energy Regulatory Process

The objective of Topic Area 3 is to develop tools and methodologies that capture recent advances in the scientific understanding of environmental impacts of marine renewable energy and make this information widely available in a synthesized and easily digestible format to inform and facilitate federal and state MHK regulatory processes.

EERE envisions awarding multiple financial assistance awards in the form of cooperative agreements. The estimated period of performance for each award will be approximately 2-3 years.

This Notice is issued so that interested parties are aware of 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 or around April 2018 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:

- 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.

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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/Marketing/Documents/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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