

Notice of Intent No. DE-FOA-0003189

Notice of Intent to Issue Funding Opportunity Announcement No. DE-FOA-0003103

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 “Strategies to Increase Hydropower Flexibility”.

This FOA supports three complementary strategies for increasing the flexibility of hydropower: demonstrating hydropower hybrids, supporting innovative advanced hydropower equipment, and developing new operational strategies. WPTO’s HydroWIREs Initiative seeks to understand, enable, and improve the contribution of hydropower, including pumped storage hydropower (PSH) to reliability, resilience, and integration in the rapidly evolving U.S. electricity system. Hydropower’s flexibility is central to enhancing all these contributions. Through these three topics, this FOA will develop a suite of advancements that improve hydropower flexibility at multiple scales: improved components within the plant, improved hybridized capabilities at the plant interconnection, and improved operations across the fleet.

It is anticipated that the FOA may include the following Topic Areas:

Topic Area 1: Hybridized Hydropower Demonstration

This topic area seeks to demonstrate hydropower hybrid configurations to provide novel energy services or to reduce constraints to providing energy services, such as by mitigating wear-and-tear or the impact of environmental flows. Eligible configurations must be co-located or exclusively co-optimized and include a hydropower element. The awarded work must involve installation and testing of a hydropower hybrid prototype or pilot project, under representative conditions which illustrate the desirable enhanced capabilities of the hybridized hydropower facility. The team should include all relevant stakeholders, including impacted communities, either directly or through partnerships.

Topic Area 2: Technologies to Increase Flexibility

This topic area seeks technology innovations to improve the flexible capabilities of the U.S. hydropower fleet. The development of technical solutions to improve hydropower flexibility – either by improving plant performance across various dimensions of system-level flexibility, or by reducing potential negative impacts of flexible operations – can improve hydropower’s ability to integrate additional variable renewable resources and support power system decarbonization. Solutions could include innovations in turbines and other hardware.

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Topic Area 3: Operational Flexibility

This topic area seeks to quantify the flexible capabilities of hydropower and advance operational strategies to increase such flexibility to better serve an evolving grid. Proposed work should generally address broad systems, such as generation portfolios or river systems, but may focus on single facilities if the increases in flexibility that can be gained are substantial. Solutions could include innovations in models, operational schemes, or other software with direct applicability to real hydropower systems.

EERE envisions awarding multiple financial assistance awards in the form of cooperative agreements. The estimated period of performance for each award will be approximately 24-36 months.

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 on or about November 2023 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 apply to any open EERE FOAs that are currently in EERE eXCHANGE.

To access EERE eXCHANGE, potential applicants will be required to have a [Login.gov](https://login.gov/) account. As part of the eXCHANGE registration process, new users are directed to create an account in [Login.gov](https://login.gov/). Please note that the email address associated with Login.gov must match the email address associated with the eXCHANGE account. For more information, refer to the Exchange Multi-Factor Authentication (MFA) Quick Guide in the [Manuals section](#) of 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

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- 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. Upon registration, SAM will automatically assign a Unique Entity ID (UEI).

NOTE: Due to the high demand of UEI requests and SAM registrations, entity legal business name and address validations are taking longer than expected to process. Entities should start the UEI and SAM registration process as soon as possible. If entities have technical difficulties with the UEI validation or SAM registration process they should utilize the HELP feature on SAM.gov. SAM.gov will work entity service tickets in the order in which they are received and asks that entities not create multiple service tickets for the same request or technical issue. Additional entity validation resources can be found here: [GSAFSD Tier 0 Knowledge Base - Validating your Entity](#).

- 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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