

Notice of Intent No. DE-FOA-0001091

Notice of Intent to Issue Funding Opportunity Announcement No. DE-FOA-0000890

The Office of Energy Efficiency and Renewable Energy (EERE) intends to issue, on behalf of the Geothermal Technologies Office (GTO), a Funding Opportunity Announcement (FOA) entitled “**Frontier Observatory for Research in Geothermal Energy (FORGE)**.”

FORGE is at the core of GTO’s efforts to advance enhanced geothermal systems (EGS), with the potential to unlock a vast 100+ GWe resource and transform our understanding of subsurface energy resources.

FORGE is envisioned as a dedicated site where new technologies and techniques can be tested, with a central focus on EGS optimization and validation. Testing of new technologies and methodologies in the deep rock environment accessed at FORGE will allow geothermal as well as other subsurface sectors to gain a fundamental understanding of the key mechanisms controlling coupled thermo-mechanical-chemical-hydrologic processes at depth. For the geothermal industry, critical knowledge on initiating and sustaining fracture networks in low-permeability rock formations will inform the design and testing of a methodology for reproducing large-scale, economically sustainable heat exchange systems. Equally essential to informing the future direction of EGS are the consideration of higher-risk stimulation methods; testing of innovative drilling technologies and well configurations; and the comprehensive capture and dissemination of high-fidelity data to ensure a deep understanding of created systems and reproducibility in a variety of geologic environments. Finally, a dedicated FORGE allows for the highly-integrated comparison of technologies and tools in a controlled and well-characterized environment.

It is anticipated that the FORGE initiative will:

- Promote transformative and high-risk/high-reward science and engineering focused on addressing EGS barriers that the private sector is not financially or operationally equipped to undertake alone (advanced drilling, rock fracturing, and subsurface characterization techniques).
- Include a robust instrumentation, data collection, and data dissemination effort to capture and share in real-time a higher-fidelity picture of EGS creation and evolution processes than any prior geothermal demonstration in the world, critical to the technology development process.
- Provide a collaborative and inclusive platform for advancement via participation of all geothermal and subsurface stakeholders; participation and contributions from industry, national laboratories, and academia will be integral to the success of the initiative.

This is a Notice of Intent (NOI) only. DOE may issue a FOA as described herein, may issue a FOA that is significantly different than the FOA described herein, or DOE may not issue a FOA at all.

This Notice is issued so that interested parties are aware of EERE's intention to issue this FOA in the near term. EERE envisions awarding multiple financial assistance awards in the form of cooperative agreements to conduct planning, site preparation and characterization. Subject to appropriations, a competitive down-select process is envisioned to identify the ultimate FORGE site for technology testing and evaluation.

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 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.

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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