

Notice of Intent No. DE-FOA-0002249

Notice of Intent to Issue Funding Opportunity Announcement No. DE-FOA-0002206

The Office of Energy Efficiency and Renewable Energy (EERE) intends to issue, on behalf of the Building Technologies Office (BTO), a Funding Opportunity Announcement (FOA) entitled “Connected Communities.” Prior to release of the FOA it is anticipated that an RFI (DE-FOA-0002291) will be released to request feedback on the topic.

The goal of this planned FOA would be to demonstrate the ability of efficient buildings to interact with the grid to provide demand flexibility. This includes the ability to shift and modulate load in both existing and new communities across diverse climates, geography, building types and grid/regulatory structures, while maintaining (if not enhancing) occupant satisfaction and productivity. This builds on BTO’s current Grid-Interactive Efficient Buildings (GEB) work: <https://www.energy.gov/eere/buildings/grid-interactive-efficient-buildings>. Improving the energy efficiency and demand flexibility of buildings alleviates pressure on the electric grid and extends our energy resources.

A key objective of the planned Connected Communities FOA is to have a coordinated set of validation projects that demonstrate the ability of buildings to serve as reliable grid assets, meeting specific grid needs. An important element of this is a centralized research approach, which will allow for the projects to serve as a cohort, share challenges and best practices, and allow for BTO to synthesize information across diverse projects on building technologies, community aggregation, business models and occupant impact. This FOA would enable regional grid-interactive efficient building communities to share research results and lessons learned on projects that increase grid reliability, resilience, security and energy integration well into the future. This planned FOA will be coordinated with the DOE Office of Electricity (OE).

It is anticipated that the FOA, if released, may request proposals for the following topic:

Connected Communities Regional Pilots

BTO plans to request proposals for regional pilots for connected communities. BTO plans to require projects to include energy efficiency and demand flexibility improvements that enable buildings to be responsive to grid needs. Draft requirements would be as follows:

- Applicant teams should include:
 - an electric utility,
 - a research institution, such as a national lab or other, and

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- at least one of the following: a homebuilder, commercial building developer, building owner(s), or other collection of multiple buildings,
 - Applicants may include other important collaborators such as manufacturers and local governments
- Projects must involve multiple buildings, and when aggregated demonstrate impact at scale. Buildings may be adjacent structures or non-adjacent structures; commercial, residential, or mixed-use building types; and new construction or existing. Preference will be given to projects that integrate technologies, infrastructure, and contractual arrangements across multiple buildings/homes.
- Project applicants must agree to share data and participate in verification and validation efforts led by a central coordinator managed by BTO.
- Proposals should include demonstration of new and innovative technology or approaches.
- Selections will be made, in part, to achieve a diversity of projects across a number of factors including, climate, geography, vintage, building type, grid/regulatory structures, and inclusion of other distributed energy resources (DERs) such as renewables, energy storage, or electric vehicles (EVs).

Priority outcomes include:

- Data from projects in at least four regions showing if/how buildings can reliably and cost-effectively serve as significant grid assets by strategically deploying efficiency and demand flexibility across multiple buildings.
- Proven pathways to make buildings grid-interactive with decreased time and disruption for the hardware, software and communication set up.
- Increased insights on occupant impact and comfort levels resulting from equipment with advanced controls and changing operation of equipment to meet grid needs.
- Perspective into the amount and duration that occupants are willing to change the timing of their energy use, and any necessary level of compensation.
- New business models for demand flexibility and DER coordination, aggregation and optimization across buildings that can be scaled throughout region, and beyond, recognizing technological, business and contractual approaches that will be potentially attractive to customers, utilities, builders and other key stakeholders.
- Online solutions portal with case studies of each pilot project, synthesized best practices pilots, analysis and associated analytical tools.

EERE envisions awarding 4-6 financial assistance awards of up to \$7M each in the form of cooperative agreements. The estimated 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

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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 July 2020 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/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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