

# Long Duration Energy Storage for Everyone, Everywhere (LD ESEE) Initiative

## PCFO Request for Information Snapshot

May 23, 2022

<b>Department:</b> US Department of Energy	<b>Agency:</b> Office of Energy Efficiency and Renewable Energy
<b>Application Deadline:</b> June 16, 2022	<b>FOA Number:</b> DE-FOA-0002777

### Summary

DOE issued a Request for Information (RFI) to gather feedback on the implementation of energy storage demonstration programs. These energy storage programs will provide the opportunity to accelerate commercialization for energy technologies by: (1) demonstrating the technologies at scale; and (2) partnering with community and industry stakeholders so they can best adopt and benefit from these technologies.

### Background

The Bipartisan Infrastructure Law (BIL) appropriated \$505 million for the development of grid-scale long-duration energy storage demonstrations to validate new technologies and enhance the capabilities of customers and communities to integrate grid storage more effectively. DOE is supporting many storage technologies that can potentially scale to the power and duration requirements required of the future grid. These technologies exhibit significant cost reduction potential, high materials availability, sufficient performance, societal and community benefits (such as reduced energy burden and equitable energy access), and in many cases flexible siting independent of geography. However, none of them are yet being deployed at sufficient scale, due to a range of technological, economic, institutional, and market barriers.

To address these challenges and opportunities, Section 41001 of the BIL authorizes four energy storage programs:

1. Energy Storage Demonstration Projects (“Demo Projects”) (41001(a)): Program to fund at least 3 long-duration energy storage demonstrations, with one project of weekly to monthly or seasonal duration, and one a grid demonstration of end-of-life electric vehicle (EV) batteries.
2. Energy Storage Pilot Grant Program (“Pilot Grants”) (41001(a)): Program that aims to bring a range of benefits provided by storage to targeted recipients including States, Tribes, and utilities.
3. Long-Duration Demonstration Initiative (“Demo Initiatives”) (41001(b)): Flexible program that may target demonstrations for a range of long-duration technology types.
4. Joint Program (41001(b)): Collaboration between DOE and the DOD for long-duration demonstrations on government facilities.

**Who Should Respond** The purpose of this RFI is to solicit feedback from industry, government agencies, Tribes, state and local coalitions, academia, research laboratories, labor unions, community-based organizations (CBOs), and other stakeholders on DOE's strategy to implement the Demo Initiative, Demo Projects, and Pilot Grants

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**Response Guidelines** Respondents may answer as many or as few questions as they wish. Respondents may answer as few or as many of the questions below as they would like. Please copy and paste the bolded Category numbers and sub-numbers as headings in the response to the greatest extent possible and include the questions (1.a, 2.b etc.) in the body of the responses. DOE will not respond to individual submissions or publish publicly a compendium of responses.

Respondents are requested to provide the following information at the start of their response to this RFI:

- Company / institution name
  - Company / institution contact
  - Contact's address, phone number, and e-mail address
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**Key Questions** The RFI is divided into several sections, with many questions and opportunities for input. A summary of the sections is included below. For a full list of the questions, please view the full [Request for Information](#).

### **Category 1: 41001 Energy Storage Program-Specific Requirements and Implementation Strategy**

#### Category 1A. Long-Duration Demonstration Initiative ("Demo Initiative")

DOE's Demo Initiative will be composed of demonstration projects focused on the development of long-duration energy storage technologies capable of delivering 10 or more hours. This long duration storage functionality is a key enabler for grid decarbonization and for powering remote communities.

#### Category 1B. Energy Storage Demonstration Projects ("Demo Projects")

DOE is required to fund three energy storage system demonstration projects by September 30, 2023. The strategy of Demo Projects is to enable first-of-a-kind technologies at utility scale by mitigating technology risk to potential buyers, or offtakers.

#### Category 1C. Energy Storage Pilot Grant Program ("Pilot Grants")

The Pilot Grants will provide support to eligible entities to carry out demonstration projects for pilot energy storage systems. The strategy of Pilot Grants is to build enduring capabilities (institutional, analytical, financial) for targeted communities to invest in storage resources that provide local benefits (including resilience, decarbonization, and economics).

#### Category 1D. Rapid Operational Validation Initiative (ROVI)

DOE is contemplating a requirement that all demonstrations be required to participate in (i.e., share data with) ROVI. ROVI will accelerate the validation process by using state-of-the-art data-science to create artificial intelligence (AI)/ machine learning (ML) tools for rapid life prediction in complex situations and by continuously refining use-case scenarios. ROVI is envisioned as a cross-cutting analytical framework that can support faster validation of technologies currently being developed within relevant DOE and BIL programs.

## Category 2: BIL 41001 Energy Storage Programs Crosscutting Topics

### Category 2A. Storage Technology Opportunity Readiness Evaluation (STORE)

DOE is seeking input on the clarity of the STORE scale as it relates to the energy storage programs described above and additional metrics to further define the technology and community acceptance landscape for long-duration storage.

### Category 2B. BIL Provision, Requirements and Proposed Implementation

DOE is seeking input on the program design and implementation of its Energy Storage Programs.

## Category 3: Employment: Expanding Union Jobs and Effective Workforce Development

DOE is seeking input on how its Energy Storage Programs can best support the Biden Administration's goals related to job creation, workforce development, and local economic growth.

## Category 4: Equity, Environmental and Energy Justice (EEEJ) Priorities

DOE is seeking input on how its Energy Storage Programs can embed EEEJ and Justice40 benefits into the program design. DOE has identified the following nonexhaustive list of policy priorities as examples to guide DOE's implementation of Justice40 in disadvantaged communities (DACs): (1) decrease energy burden; (2) decrease environmental exposure and burdens; (3) increase access to low-cost capital; (4) increase clean energy jobs, clean energy job pipeline, and job training for individuals; (5) increase clean energy enterprise creation and contracting (e.g., minority-owned or diverse business enterprises); (6) increase energy democracy, including community ownership; (7) increase parity in clean energy technology access and adoption; and (8) increase energy resilience.

## Category 5: Additional Input

Participants may also provide any additional information or input not specifically requested in the questions above that they believe would be valuable to help DOE develop 41001 funding announcements and opportunities, including any specific criteria that DOE may take into consideration in implementing 41001 energy storage programs.

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## How to Submit

Responses to this RFI must be submitted electronically to EnergyStorage41001RFI@ee.doe.gov no later than 5:00pm (ET) on June 16, 2022, with subject line "BIL 41001 RFI response." Responses must be provided as attachments to an email. It is recommended that attachments with file sizes exceeding 25MB be compressed (i.e., zipped) to ensure message delivery. Responses must be provided as a Microsoft Word (.docx) or Adobe PDF (.pdf) attachment to the email, and no more than 20 pages in length, 12-point font, 1-inch margins. Only electronic responses will be accepted.

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## Resources

- [Request for Information](#)
- [RFI Announcement](#)