Welcome

This webinar is being recorded and will be published on the EERE Program Information Center website

- If you do not wish to have your voice recorded please do not speak during the call
- If you do not wish to have your image recorded, please turn off your camera or participate by phone
- If you speak during the call or use a video connection, you are presumed to consent to recording and use of your voice or image

Please mute your phones and we'll begin momentarily

U.S. DEPARTMENT OF ENERGY | Office of ENERGY EFFICIENCY & RENEWABLE ENERGY

SOLAR ENERGY TECHNOLOGIES OFFICE

Solar Energy Technologies Office Fiscal Year 2021 Systems Integration and Hardware Incubator Funding Program

DE-FOA-0002437

FOA Webinar

January 6, 2021

energy.gov/solar-office

Solar Energy Technologies Office 2021 Systems Integration and Hardware Incubator Funding Program

Welcome!

- This webinar will provide an overview of the Department of Energy's Solar Energy Technologies Office (SETO) and our recently announced 2021 Funding Program
- All applicants are strongly encouraged to carefully read the Funding Opportunity Announcement (FOA) **DE-FOA-0002437** and adhere to the stated submission requirements.
- This presentation summarizes the contents of FOA. No new information on the FOA will be discussed in this webinar. There are no particular advantages or disadvantages to the application evaluation process with respect to participating on the webinar today. Your participation is completely voluntary.
- If there are any inconsistencies between the FOA and this presentation or statements from DOE personnel, the FOA is the controlling document and applicants should rely on the FOA language and seek clarification from EERE at the EERE Program Information Center. To submit a questions, click "Submit Announcement-Specific Question to EERE" in the upper right hand corner of the FOA's Opportunity Details page.
- Please use the chat feature of the WebEx to ask questions or direct questions to seto.foa@ee.doe.gov. SETO will post answers to FOA-related questions on Exchange so everyone has equal access to the answers.

Solar Energy Technologies Office (SETO) Fiscal Year 2021 Systems Integration and Hardware Incubator Funding Program

Anticipated Schedule:

FOA Issue Date:	12/16/2020
Submission Deadline for Letter of Intent:	1/11/2021
Submission Deadline for Concept Papers:	1/25/2021
Submission Deadline for Full Applications:	3/29/2021
Submission Deadline for Replies to Reviewer Comments:	4/28/2021
Expected Date for EERE Selection Notifications:	6/22/2021
Expected Timeframe for Award Negotiations:	July-Sept 2021

All Submission Deadlines are at 5:00 p.m. ET on date listed.

Agenda

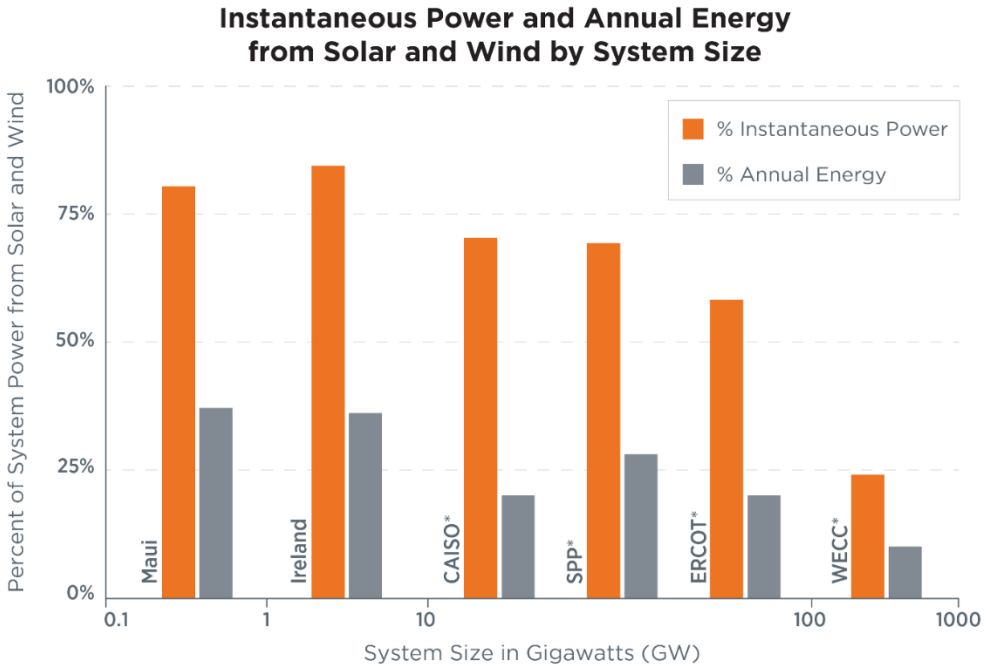
1) FOA Description
2) Topic Areas/Technical Areas of Interest
3) Award Information
4) Statement of Substantial Involvement
5) Cost Sharing
6) FOA Timeline
7) Concept Papers
8) Full Applications
9) Merit Review and Selection Process
10) Registration Requirements

FOA Description

The SETO FY21 Systems Integration and Hardware Incubator funding program seeks to invest in innovative research, development, and demonstration (RD&D) projects that enable solar to contribute to the reliability and resilience of the nation's electricity grid and continue to drive down costs, while developing next-generation solar technologies and boosting American solar manufacturing. These projects will support the scalability of solar as deployment increases across the country so that solar is affordable, supports grid reliability, and benefits the U.S. economy.

Topic 1: Grid-Forming Technologies Research Consortium

SETO and WETO will support the creation of the Grid-Forming Technologies Research Consortium, which will bring together researchers and stakeholders to advance research on grid-forming solar, wind, and storage inverters, and other grid-forming technologies, and ensure that these technologies enhance power systems operation for years to come. This topic identifies the wide-ranging research areas the consortium will address through RD&D efforts, including voltage and frequency control, hardware design, and standards. It also underlines the required systems integration perspective of the RD&D efforts and provides the programmatic requirements for the consortium to ensure geographic diversity of the solutions, strong stakeholder engagement, and enduring scope of work. The goal is to make this consortium a financially sustainable, world-leading innovation group five years after its launch.



*California Independent System Operator (CAISO), Southwest Power Pool (SPP), Electric Reliability Council of Texas (ERCOT), Western Electricity Coordinating Council (WECC)

Topic 1: Grid-Forming Technologies Research Consortium

#	Research Topic	Description
1	Frequency Control	Frequency control refers to actions by grid-forming technologies to maintain the system frequency near the nominal value of 60 hertz (Hz)
2.	Voltage Control	Voltage control refers to actions by grid-forming technologies to increase or decrease real and reactive power to maintain terminal voltages and power system voltages within an acceptable range.
3.	Grid-Forming Technologies Modeling and Simulation	Inverter models for transient stability studies in the bulk grid are highly simplified and lack the details needed for electromagnetic transient programs (EMTP). The consortium should develop a detailed model of grid-forming resources that are agnostic to manufacturer but can be used in large EMTP simulations.
4.	System Modeling and Simulation with Multiple Grid-Forming Resources	The consortium should identify system-wide modeling and simulation challenges that are unique to a grid-forming environment created by IBR, come up with R&D that will inform the power systems operators of these new challenges, and provide tools to address the challenges.
5.	System Protection Using Grid-Forming Technologies	The consortium should focus its research on subtransient behavior of grid-forming resources and how the new grid-forming controls can transform protection coordination, limit transient currents, and provide voltage ride-through.
6.	Black Start Using Grid-Forming Technologies	The consortium should develop R&D to enable grid-forming IBR to black-start the grid, especially in scenarios where fast recovery is needed after an outage caused by severe weather.
7.	Grid-Forming Hardware Design	The consortium should focus its hardware-related efforts on holistic designs of grid-forming inverters optimizing cost, reliability, and functionality.
8.	Standards	The consortium should provide technical and programmatic leadership in grid-forming technologies standards development.

Topic 1: Grid-Forming Technologies Research Consortium

#	System Requirements	Description
1.	Scalability	The consortium should ensure that the newly developed grid-forming controls and hardware are scalable across the transmission, sub-transmission, and distribution networks. The consortium should develop scalability metrics for grid-forming technologies that will help solar and wind contribute to grid reliability at higher percentages of instantaneous penetration for different demands, ranging from 0.1 GW to 10s of GW.
2.	Reliability	The consortium should ensure that grid-forming technologies enhance overall system reliability. The consortium will also define appropriate reliability metrics that will be continuously monitored.
3.	Transient Stability	Transient stability is the ability of the power system to restore its synchronism after a major disturbance. The consortium should focus its research on system-wide transient stability using grid-forming technologies and develop appropriate stability metrics.
4.	Demonstration at Scale	Demonstration will use a physical power system and dynamic test bed simulation. The simulation will include power plants, inverters, energy storage, and the transmission and distribution networks. The consortium will demonstrate on a microgrid with more than 1 megawatt (MW) peak load and on a utility-scale power grid with more than 20 MW peak load.
5.	Human Factors	The consortium should consider human factors in the research and address the need to create the human and operational capacity to use grid-forming technologies and solutions. The consortium should offer programs to train the existing workforce on the different technologies, products, and software tools that result from the consortium's research.

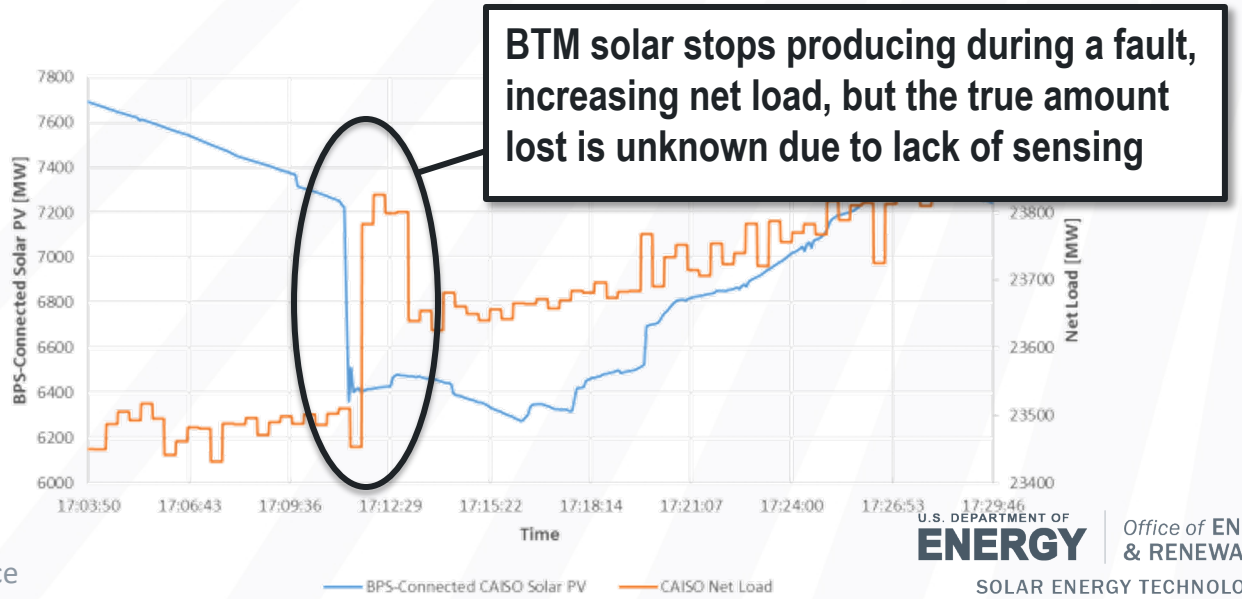
Topic 1: Grid-Forming Technologies Research Consortium

Successful submissions will have the following characteristics:

- Grid-forming technologies applicable to different geographic regions
- Ability to demonstrate technologies and capabilities at various scales
- Robust stakeholder engagement
- Relevant and enduring scope of work: Submissions must describe their proposed strategy to keep the consortium relevant to industry
- Commercialization: Submissions must clearly describe a plan to commercialize the grid-forming technologies developed in the consortium through partnerships with industry.
- Broad communications and dissemination: Submissions must clearly describe a plan to disseminate research results to the broader industry and a general audience.

Topic 2: Integrating Behind-the-Meter Solar Resources into Utility Data Systems

The growing adoption of behind-the-meter (BTM) distributed solar resources installed on utility distribution feeders increases the impacts of these systems on both the local and bulk power grids in aggregate. Despite this trend, distribution utilities do not generally monitor BTM resources in real time. While smart meters or feeder-level measurements may collect or ascertain BTM solar generation data, this data is typically insufficient to be useful in making real-time operation and control decisions that may impact the reliability, quality, or resilience of power delivery. This topic area seeks to fund technologies that would enable real-time measurements on distribution feeders to be incorporated into utility data systems so they can improve feeder situational awareness and realize the potential value of coordinating high-penetration BTM solar energy resources and other DER.



Topic 2: Integrating Behind-the-Meter Solar Resources into Utility Data Systems

Successful submissions will have the following characteristics:

- New innovative sensor hardware or system designs that drastically reduce sensor network installed system costs
- Field demonstrations of prototype data collection systems on medium-voltage utility distribution feeders
- Approaches that are scalable to affordably deploy on a range of feeders, from few BTM PV up to very high PV penetration levels at thousands of customer sites
- Strategies to collect highly distributed sensor data in an interoperable and affordable manner to facilitate data collection across entire distribution systems
- Interfaces that make synchronized, time-stamped data available to both distribution and transmission real-time operations and control software

Topic 2: Integrating Behind-the-Meter Solar Resources into Utility Data Systems

Other applications of interest for this topic:

- Data gathering, filtering, and management software that detects anomalies and errors in data and ensures only useful and relevant data is made available
- Incorporating existing inverter and other BTM sensors into utility control and planning systems
- Monitoring hardware degradation, both utility and customer-owned equipment
- Capturing high-fidelity waveform measurements for modeling fast power electronics behaviors and characterizing low-current, high-impedance, or incipient faults, and malicious attacks

Topic Area 3a: Hardware Incubator - Product Development

- This topic area seeks to accelerate commercialization of innovative product ideas that can substantively increase U.S. domestic manufacturing across the solar industry supply chain and expand private investment in U.S. solar manufacturing. These products and solutions will lower the cost of solar technologies and facilitate the secure integration of solar electricity into the nation's energy grid. The goal of this topic area is to de-risk new technologies and manufacturing processes and bring them to a commercially relevant prototype stage, while developing and validating a realistic pathway to commercial success.
- A minimum 20% recipient cost share is required for projects in this topic area, with the expectation that most, if not all, of the activities proposed can be classified as research and development tasks.

Topic Area 3a: Hardware Incubator - Product Development

Successful applicants for this topic area will be companies domestically incorporated at the time of submission of the full application with an existing technology at the proof of-concept stage. This means that the application should include a feasibility study that proves the technical and business viability of the technology. In addition, the application should demonstrate critical functionality of the proof of concept in a controlled, lab scale environment and why it provides advantages compared to the state of the art. However, there must be significant technical and business risks that need to be retired for which private funding is unlikely, owing to the early-stage nature of the proposed product or solution. Through this award, the awardee will advance their technology to a manufacturing-relevant prototype made in a lab environment.

Topic Area 3a: Hardware Incubator - Product Development

SETO will support solutions that can advance domestic manufacturing of solar energy technologies, including materials and tools to develop a robust domestic supply chain, while facilitating the integration of solar energy into the nation's grid. Applications must fall within one of these areas:

- Advanced solar system integration technologies that enhance the ability of solar energy systems to contribute to grid reliability, resiliency, and security;
- CSP and solar-thermal industrial process heat;
- PV technologies, including manufacturing innovations; or
- Hardware technologies that reduce the balance of system costs of a PV system.

In addition, SETO seeks solutions related to floating solar-powered aeration systems.

Topic Area 3b: Hardware Incubator - Product Development & Demonstration

- The goal of this topic area is to conduct pilot-scale testing and demonstration of products or solutions. This includes high-volume or high-throughput manufacturing processes for solar hardware, the production of a large number of devices sufficient for statistically robust field testing and validation, or the demonstration of a system (for example, a microgrid or an innovative solar system) focused on pilot-testing new hardware.
- A minimum 50% recipient cost share is required for projects in this topic area, with the expectation that all activities can be classified as RD&D tasks. Generally, tasks that consist of empirical or physical validation of technical feasibility and economic potential of a technology at a commercially relevant scale are considered demonstration tasks and require 50% cost share.

Topic Area 3b: Hardware Incubator - Product Development & Demonstration

Successful applicants for this topic area will be established companies or startups incorporated in the United States with an existing prototype whose technical functionalities have already been fully demonstrated and verified on a small scale and in a controlled environment. Through this award, a successful application will pursue one or more of the following objectives:

- Development of high-volume or high-throughput manufacturing processes for solar hardware that can be manufactured competitively in the United States;
- Production of a sufficiently large number of devices for statistically robust field testing and validation; or
- Demonstration of new hardware component(s) or novel system architectures in robust, commercially relevant pilot tests (e.g., an innovative solar system or microgrid system architecture developed in collaboration with relevant partners, like energy service companies and utilities).

Applications must include the identification and pursuit of domestic manufacturing pathways.

Topic Area 3b: Hardware Incubator - Product Development & Demonstration

This topic area is open to any application that falls within one of these areas:

- Advanced solar system integration technologies that enhance the ability of solar energy systems to contribute to grid reliability, resiliency, and security. Applications including storage elements are acceptable if the storage hardware component is part of a larger solution enabling high-penetration solar scenarios;
- CSP and solar-thermal industrial process heat technologies;
- PV technologies, includingmanufacturing innovations; and
- Hardware technologies that reduce the balance of system costs of a PV system.

Non-Responsive Applications

The following types of applications will be deemed nonresponsive and will not be reviewed or considered for an award:

- Applications that fall outside the technical parameters specified in Section I.A or I.B of the FOA
- Applications for proposed technologies that are not based on sound scientific principles (e.g., violates the law of thermodynamics).

Teaming Partner List

- To facilitate the formation of new project teams for this FOA, a Teaming Partner List is available at https://epicweb.ee.doe.gov
- Any organization that would like to be included on this list should submit the following information to SETO.FOA@ee.doe.gov:
  - Organization Name, Contact Name, Contact Address, Contact Email, Contact Phone, Organization Type, Area of Technical Expertise, and Brief Description of Capabilities
- By submitting this information, you consent to the publication of the above-referenced information
- By facilitating this Teaming Partner List, EERE does not endorse or otherwise evaluate the qualifications of the entities that self-identify themselves for placement on the Teaming Partner List

Award Information

Total Amount to be Awarded	Approximately $45 million*
Average Award Amount	EERE anticipates making awards that range from $500,000 to $25 million
Types of Funding Agreements	• Cooperative Agreements** • Grants • Technology Investment Agreements • Work Authorizations • Interagency Agreements
Period of Performance	18 to 60 months
Cost Share Requirement	20-50% of total project costs

* Subject to the availability of appropriated funds

** Although all of the above funding types are available, EERE generally will fund cooperative agreements

Statement of Substantial Involvement

EERE has substantial involvement in work performed under awards made following this FOA. EERE does not limit its involvement to the administrative requirements of the award. Instead, EERE has substantial involvement in the direction and redirection of the technical aspects of the project as a whole. Substantial involvement includes, but is not limited to, the following:

- EERE shares responsibility with the Recipient for the management, control, direction, and performance of the Project.
- EERE may intervene in the conduct or performance of work under this award for programmatic reasons. Intervention includes the interruption or modification of the conduct or performance of project activities.
- EERE may redirect or discontinue funding the Project based on the outcome of EERE's evaluation of the Project at that the Go/No Go decision point.
- EERE participates in major project decision-making processes.

Cost Sharing Requirements

Cost share must be at least 20% of the total allowable costs for research and development projects and education and outreach (or project activities) and 50% of the total allowable costs for demonstration projects (or project activities) and must come from non-federal sources unless otherwise allowed by law.

Topic Area Number	Topic Area Title	Cost Share Requirement
1	Grid-Forming Technologies Research Consortium	20%, 50%
2	Integrating Behind-the-Meter Solar Resources into Utility Data Systems	20%, 50%
3a	Hardware Incubator – Product Development	20%
3b	Hardware Incubator – Product Development & Demonstration	50%

Cost Share Contributions

- Contributions must be:
  - Specified in the project budget
  - Verifiable from the Prime Recipient's records
  - Necessary and reasonable for proper and efficient accomplishment of the project
- If you are selected for award negotiations, every cost share contribution must be reviewed and approved in advance by the Contracting Officer and incorporated into the project budget before the expenditures are incurred
- Please note, vendors/contractors may NOT provide cost share. Any partial donation of goods or services is considered a discount and is not allowable.

Allowable Cost Share

- Cost Share must be allowable and must be verifiable upon submission of the Full Application
- Refer to the following applicable Federal cost principles:

Entity	Cost Principles
For-profit entities	FAR Part 31 *http://farsite.hill.af.mil/reghtml/regs/far2afmcfars/fardfars/far/31.htm*
All other non-federal entities	2 CFR Part 200 Subpart E - Cost Principles *https://www.ecfr.gov/cgi-bin/text-idx?node=2:1.1.2.2.1.5&rgn=div6*

Allowable Cost Share

- Cash Contributions
  - May be provided by the Prime Recipient, Subrecipients, or a Third Party (may not be provided by vendors/contractors)

- In-Kind Contributions
  - Can include, but are not limited to: the donation of volunteer time or the donation of space or use of equipment.

Unallowable Cost Share

The Prime Recipient may **NOT** use the following sources to meet its cost share obligations including, but not limited to:

- Revenues or royalties from the prospective operation of an activity beyond the project period
- Proceeds from the prospective sale of an asset of an activity
- Federal funding or property
- Expenditures reimbursed under a separate Federal Technology Office
- The same cash or in-kind contributions for more than one project or program
- Vendor/contractor contributions

Cost Share Payment

- Recipients must provide documentation of the cost share contribution, incrementally over the life of the award
- The cumulative cost share percentage provided on each invoice must reflect, at a minimum, the cost sharing percentage negotiated
- In limited circumstances, and where it is in the government's interest, the EERE Contracting Officer may approve a request by the Prime Recipient to meet its cost share requirements on a less frequent basis, such as monthly or quarterly. See Section III.B.6 of the FOA.

FOA Timeline

All Submission Deadlines are at 5:00 p.m. ET on date listed.

Expected Timeframe for Award Negotiations: July-September 2021

Required Letters of Intent

- Letters of Intent ("LOIs") are REQUIRED in order to be eligible to submit a Concept Paper and Full Application
- To be considered:
  - The LOI must comply with the content and form requirements of Section IV.C of the FOA, and
  - The applicant must enter all required information and click the "Create Submission" button in the EERE Program Information Center by the deadline stated in the FOA.
- The LOIs should not contain any proprietary or sensitive business information
- EERE will not provide notification of eligibility for Letters of Intent

Concept Papers

- Applicants must submit a Concept Paper
  - Each Concept Paper must be limited to a single concept or technology
- Section IV.D of the FOA states what information a Concept Paper should include and the page limits.
  - Failure to include the required content could result in the Concept Paper receiving a “discouraged” determination or the Concept Paper could be found to be ineligible.
- Concept Papers must be submitted by 1/25/2021, 5 p.m. ET, through the EERE Program Information Center
- EERE provides applicants with: (1) an “encouraged” or “discouraged” notification, and (2) the reviewer comments

Concept Paper Review

Concept Paper Criterion: Overall FOA Responsiveness and Viability of the Project (Weight: 100%)

This criterion involves consideration of the following factors:

- The applicant clearly describes the proposed technology, describes how the technology is unique and innovative, and how the technology will advance the current state of the art;
- The applicant has identified risks and challenges, including possible mitigation strategies, and has shown the impact that EERE funding and the proposed project would have on the relevant field and application;
- The applicant has the qualifications, experience, capabilities and other resources necessary to complete the proposed project; and
- The proposed work, if successfully accomplished, would clearly meet the objectives as stated in the FOA.

Full Applications

The Full Application includes:

- **Technical Volume**: The key technical submission - info relating to the technical content, project team members, etc.
- **SF-424 Application for Federal Assistance:** The formal application signed by the authorized representative of the applicant.
- **SF-424A Budget & Budget Justification Workbook:** a detailed budget and spend plan for the project.
- **Summary for Public Release**
- **Summary Slide**
- **Administrative Documents:** E.g., U.S. Manufacturing Plan, FFRDC Authorization (if applicable), Disclosure of Lobbying Activities, Data Management Plan, Open Source Software Distribution Plan, etc.

Full Applications: Technical Volume Content

Topic Area Number	Topic Area Title	Page Limit
1	Grid-Forming Technologies Research Consortium	30
2, 3a, 3b	All other topics	15

Content of Technical Volume	Suggested % of Technical Volume
Cover Page	
Project Overview	10%
Technical Description, Innovation and Impact	30%
Workplan	40%
Technical Qualifications and Resources	20%

Full Application Eligibility Requirements

- Applicants must submit a Full Application by 3/29/2021
- Full Applications are eligible for review if:
  - The Applicant is an eligible entity Section III.A of FOA;
  - The Applicant submitted an eligible Concept Paper;
  - The Cost Share requirement is satisfied Section III.B of FOA;
  - The Full Application is compliant Section III.C of FOA; and
  - The proposed project is responsive to the FOA Section III.D of FOA
  - The Full Application meets any other eligibility requirements listed in Section III of the FOA.

Who is Eligible to Apply?

Eligible Applicants for this FOA include:

1. U.S. citizens and lawful U.S. permanent residents
2. For-profit entities
3. Educational institutions
4. Nonprofits
5. State, local, and tribal government entities
6. DOE/National Nuclear Security Administration (NNSA)/Federally Funded Research and Development Centers (FFRDCs)

Eligibility Restrictions:

- **Topic Area 3a & 3b**: Prime recipients must be for-profit businesses. The scope of work performed by the prime recipient must represent the majority of the work performed (51% or more), as measured by the total project costs.

Note:

- The scope of work performed by the prime recipient shall not be less than the scope of work performed by the subrecipients who are ineligible to be prime applicants, as measured by the total project costs.
- Nonprofit organizations described in Section 501(c)(4) of the Internal Revenue Code of 1986 that engaged in lobbying activities after December 31, 1995, are not eligible to apply for funding.
- Prime Recipients must be incorporated (or otherwise formed) under the laws of a State or territory of the United States and have a physical location for business operations in the United States.
- For more detail about eligible applicants, please see Section III.A of the FOA

Multiple Applications

- **Topic Areas 1, 2, 3a, and 3b:** An entity may submit more than one Concept Paper and Full Application to this FOA, provided that each application describes a unique, scientifically distinct project and provided that an eligible Concept Paper was submitted for each Full Application.

Merit Review and Selection Process (Full Applications)

- The Merit Review process consists of multiple phases that each include an eligibility review and a thorough technical review
- Rigorous technical reviews are conducted by reviewers that are experts in the subject matter of the FOA
- Ultimately, the Selection Official considers the recommendations of the reviewers, along with other considerations such as program policy factors, to make the selection decisions

Technical Merit Review Criteria

Topic Areas 1, 3a, and 3b:

Criterion 1: Innovation and Impact (40%)

- The project is innovative and impactful, assuming the stated outcomes can be achieved as written. The project is differentiated with respect to existing commercial products, solutions, or technologies. If successful, the project is scalable to have a broader impact and maintained at a sufficiently large scale after project completion. If and as applicable, the project offers wide and open access to its data and software code deliverables.

Technical Merit Review Criteria

Criterion 2: Quality and Likelihood of Completion of Stated Goals (30%)

- The application demonstrates an understanding and appreciation of project risks and challenges the proposed work will face and incorporates reasonable assumptions related to the execution of the project (i.e. market size, customer participation, costs, speed of proposed scale-up or adoption). The information included for the project is validated through customer trials, data from prior work, report references, technical baselines established, etc. The stated goals of the project are SMART (Specific, Measurable, Achievable, Relevant, and Timely) and likely to be accomplished within the scope of this project. The proposed budget is reasonable to achieve the objectives proposed. For Topic Area 1 only: The application includes a clearly defined operational plan that supports a coherent system-oriented approach for proposed RD&D activities as well as management of relevant partnerships, facilities, and information assets. A plan credible is in place to show the path to becoming self-sufficient after the award period.

Technical Merit Review Criteria

Criterion 3: Capability and Resources of the Applicant/Project Team (20%)

- The team is well qualified and has the capability and resources necessary to successfully complete the project. The team (including proposed subrecipients) have the training and experience to achieve the final results on time and to specification. The project team is fully assembled and committed to the project (verified through letters of support) and has a demonstrated record of successful past performance. For Topic Area 1 only: The Consortium director and management team have demonstrated strong leadership and stakeholder engagement capabilities from past experience in similar programs.

Criterion 4: Contribution to U.S. Manufacturing (10%)

- The likelihood that the project will strengthen the competitiveness of domestic manufacturing and translate into increased long-term manufacturing and employment in the United States based on the resulting commercial products and technologies and commitments made in the U.S. Manufacturing Plan.

Technical Merit Review Criteria

Topic Areas 2:

Criterion 1: Innovation and Impact (50%)

- The project is innovative and impactful, assuming the stated outcomes can be achieved as written. The project is differentiated with respect to existing commercial products, solutions, or technologies. If successful, the project is scalable to have a broader impact and maintained at a sufficiently large scale after project completion. If and as applicable, the project offers broad and open access to its major data and software code products.

Technical Merit Review Criteria

Criterion 2: Quality and Likelihood of Completion of Stated Goals (30%)

- The application demonstrates an understanding and appreciation of project risks and challenges the proposed work will face and incorporates reasonable assumptions related to the execution of the project (i.e. market size, customer participation, costs, speed of proposed scale-up or adoption). The information included for the project is validated through customer trials, data from prior work, report references, technical baselines established, etc. The stated goals of the project are SMART (Specific, Measurable, Achievable, Relevant, and Timely) and likely to be accomplished within the scope of this project. The proposed budget is reasonable to achieve the objectives proposed.

Criterion 3: Capability and Resources of the Applicant/Project Team (20%)

- The team is well qualified and has the capability and resources necessary to successfully complete the project. The team (including proposed subrecipients) have the training and experience to achieve the final results on time and to specification. The project team is fully assembled and committed to the project (verified through letters of support) and has a demonstrated record of successful past performance.

Replies to Reviewer Comments

- EERE provides applicants with reviewer comments
- Applicants are not required to submit a Reply - it is optional
- To be considered by EERE, a Reply must be submitted by 4/28/2021, 5 p.m. ET and submitted through the EERE Program Information Center
- Content and form requirements:

Section	Page Limit	Description
Text	2 pages max	Applicants may respond to one or more reviewer comments or supplement their Full Application.
Optional	1 page max	Applicants may use this page however they wish; text, graphs, charts, or other data to respond to reviewer comments or supplement their Full Application are acceptable.

Pre-Selection Interviews

- EERE may invite one or more applicants to participate in Pre-Selection Interviews
- All interviews will be conducted in the same format
- EERE will not reimburse applicants for travel and other expenses relating to the Pre-Selection Interviews, nor will these costs be eligible for reimbursement as pre-award costs
- Participation in Pre-Selection Interviews with EERE does not signify that applicants have been selected for award negotiations

Selection Factors

The Selection Official may consider the merit review recommendation, program policy factors, and the amount of funds available in arriving at selections for this FOA

Program Policy Factors

- The degree to which the proposed project, including proposed cost share, optimizes the use of available EERE funding to achieve programmatic objectives;
- The level of industry involvement and demonstrated ability to accelerate commercialization and overcome key market barriers;
- The degree to which the proposed project will accelerate transformational technological advances in areas that industry by itself is not likely to undertake because of technical and financial uncertainty;
- The degree to which the proposed project, or group of projects, represent a desired geographic distribution (considering past awards and current applications);
- The degree to which the proposed project exhibits technological or programmatic diversity when compared to the existing DOE project portfolio and other projects selected from the subject FOA;
- Based on the commitments made in the U.S. Manufacturing Plan, the degree to which the proposed project is likely to lead to increased employment and manufacturing in the United States or provide other economic benefit to U.S. taxpayers; and
- The degree to which the project improves resilience of critical infrastructure;

Program Policy Factors

- **Diversity (other than technological)**
- The degree to which the proposed project exhibits team member diversity, with participants including but not limited to HBCUs/OMIs or members within Qualified Opportunity Zones.
- **Optimize Funding**
- The degree to which the proposed project avoids duplication/overlap with other publicly or privately funded work.
- **Market Impact**
- The degree to which the proposed project enables new and expanding market segments.
- **EE/Deployment**
- The degree to which the project's solution or strategy will maximize deployment or replication.
- **Tech Transfer**
- The degree to which the project promotes increased coordination with nongovernmental entities for demonstration of technologies and research applications to facilitate technology transfer.

Registration Requirements

- To apply to this FOA, Applicants must register with and submit application materials through the EERE Program Information Center: https://epicweb.ee.doe.gov/EPICWeb/
- Obtain a "control number" at least 24 hours before the first submission deadline at https://epicweb.ee.doe.gov/EPICWeb/
- Although not required to submit an Application, the following registrations must be complete to received an award under this FOA:

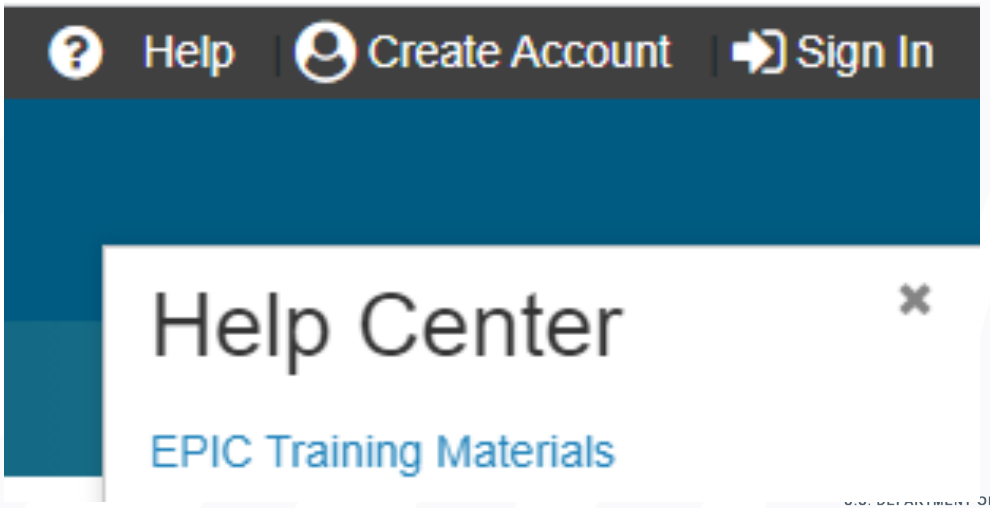
Registration Requirement	Website
DUNS Number	http://fedgov.dnb.com/webform
SAM	https://www.sam.gov
FedConnect	https://www.fedconnect.net
Grants.gov	http://www.grants.gov

Means of Submission

- Letter of Intent, Concept Papers, Full Applications, and Replies to Reviewer Comments must be submitted through the EERE Program Information Center at

  https://epicweb.ee.doe.gov/EPICWeb/

  EERE will not review or consider applications submitted through other means
- For Quick Guides and training on how to use the EERE Program Information Center, click the "EPIC Training Materials" link in the Help Center



Key Submission Points

- Check entries in the EERE Program Information Center
  - Submissions could be deemed ineligible due to an incorrect entry
- EERE strongly encourages Applicants to submit 1-2 days prior to the deadline to allow for full upload of application documents and to avoid any potential technical glitches with the EERE Program Information Center
- Make sure you hit the submit button
  - Any changes made after you hit submit will un-submit your application and you will need to hit the submit button again
- For your records, print out the the EERE Program Information Center Confirmation page at each step, which contains the application's Control Number

Applicant Points-of-Contact

- Applicants must designate a Technical and Business point-of-contact in the EERE Program Information Center with whom EERE will communicate to conduct award negotiations
- It is imperative that the Applicant/Selectee be responsive during award negotiations and meet negotiation deadlines
  - Failure to do so may result in cancellation of further award negotiations and rescission of the Selection

Questions

- Questions about this FOA? Click "Submit Announcement-Specific Question to EERE" in the upper right hand corner of the Opportunity Details page
  - All Q&As related to this FOA will be posted in the EERE Program Information Center
  - To view Q&As, select your FOA from the opportunities page. You will see "Announcement Q&As" in the upper right hand corner of the Opportunity Details page
  - EERE will attempt to respond to a question within 3 business days, unless a similar Q&A is already posted on the website
- Problems logging into or uploading and submitting application documents within the EERE Program Information Center? Email EERE-EPICHelpdesk@ee.doe.gov
  - Include FOA name and number in subject line
- All questions asked during this presentation will be posted in the EERE Program Information Center