

Notice of Intent No. DE-FOA-0002008

Notice of Intent to Issue Funding Opportunity Announcement No. DE-FOA-0001960

The Office of Energy Efficiency and Renewable Energy (EERE) intends to issue, on behalf of the Advanced Manufacturing Office (AMO), a Funding Opportunity Announcement (FOA) entitled **“Clean Energy Manufacturing Innovation Institute: Cybersecurity in Energy Efficient Manufacturing”**.

This FOA establishes a new Clean Energy Manufacturing Innovation Institute (referred to as the “Institute”) to develop technologies that will advance U.S. manufacturing competitiveness, energy efficiency, and innovation. This Institute, the sixth one established by DOE, focuses on Cybersecurity in Manufacturing – understanding the evolving cybersecurity threats to greater energy efficiency in manufacturing industries, developing new cybersecurity technologies and methods, and sharing information and expertise to the broader community of U.S. manufacturers.

A critical path to improving energy efficiency for manufacturing is increased automation (enabled by advanced sensors and controls) and integration across the supply chain. However, cybersecurity risks limit increased adoption and implementation of automation, advanced sensors and controls necessary to improve energy efficiency. By improving cybersecurity protection, those risks can be reduced and also catalyze adoption of more energy efficiency technologies in manufacturing. More cyber-secure, energy-efficient manufacturing processes lead to a more competitive U.S. manufacturing sector.

Similar to the existing Institutes established by DOE, the new Institute will:

- Conduct research leading to more energy-efficient manufacturing processes that are cyber-secure;
- Bring together industry, universities and community colleges, states, localities, and non-profits to accelerate manufacturing innovation in industry-relevant, cross-cutting technologies;
- Provide education and training opportunities to build the skills of the American manufacturing workforce;
- Be expected to continue to function and be fully independent of federal funds approximately 5 years after launch; and
- Achieve specific goals unique to cyber-secure processes that enable greater manufacturing energy efficiency, tied to clear performance metrics.

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The Institute topic of cybersecurity is anticipated to have two distinct sub-topics for technical focus. Anticipated sub-topics include:

1. Securing Automation
 - Addressing cyber vulnerabilities in automated process systems for manufacturing equipment, tools, or components;
 - Improving capabilities for identifying, alerting, and mitigating cybersecurity threats in automated manufacturing systems that enable energy productivity;
 - Increasing the speed and efficiency of encryption capabilities for smart and digital manufacturing which improve process energy efficiency, including machine learning and machine-to-machine communication;
 - Developing new architectures and energy efficient hardware customized for cybersecurity; and
 - Supporting coordinated vulnerability disclosure (CVD) activities to improve the safety and security of manufacturing and energy-intensive industries.

2. Securing the Supply Chain
 - Improving security for agile on-demand, dynamic, energy-aware and cost-effective supply chains;
 - Facilitating standardization of security protocols, architectures and networking infrastructure that promote greater energy efficiency;
 - Enabling autonomy and connected processes for manufacturing systems with secure asset and energy management;
 - Improving supply chain centric real-time prescriptive data analytics for security threats, risk reduction and mitigation; and
 - Improving security related supply chain efficiency.

EERE envisions awarding one financial assistance award in the form of a cooperative agreement. It is anticipated that the award will include approximately \$70 million of federal funding and require a minimum non-federal cost share of 20% of the total project costs. The estimated period of performance for the award will be 5 years with the goal of the Institute to be fully independent of federal funds by the end of the project period.

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 in the second quarter of Fiscal Year 2019 via the EERE Exchange website <https://eere-exchange.energy.gov/>. If applicants wish to receive official notifications

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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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