

Notice of Intent No. DE-FOA-0003022**Notice of Intent to Issue
Funding Opportunity Announcement No. DE-FOA-0003023:
Domestic Near Net Shape Manufacturing to Enable a Clean and
Competitive Economy**

The Office of Energy Efficiency and Renewable Energy (EERE) intends to issue, on behalf of the Advanced Materials and Manufacturing Technologies Office (AMMTO), a Funding Opportunity Announcement (FOA) entitled “Domestic Near Net Shape Manufacturing to Enable a Clean and Competitive Economy.”

EERE’s AMMTO collaborates with industry, small businesses, universities, national laboratories, state and local governments, and other stakeholders on advancing emerging energy-related materials and manufacturing technologies to increase domestic competitiveness and build a clean, decarbonized economy.

There are multiple processing routes for fabricating near net shape (NNS) metallic components, including casting, forging, powder metallurgy (PM), and additive manufacturing (AM). The physical scale of the components being fabricated often pose unique technical, logistical, and economic challenges. The manufacturing of large metallic NNS components with weights over 10 tons (20,000 lbs.) will be the focus of this FOA.

The domestic manufacturing base is currently unable to competitively produce these components, which has resulted in elevated costs, long lead times, reliance on foreign supply chains, and limited ability to produce large, complex systems. This problem impacts multiple manufacturing sectors that are critical to U.S. economy, including transportation, industrial machinery, heavy equipment, domestic infrastructure, and carbon-free power generation.

The DOE report on clean energy supply chains [1] and associated deep dive assessment reports [2] highlighted the inability to competitively manufacture large NNS components domestically as one of the common risks/vulnerabilities to secure supply chains for a clean energy transition. The potential for developing and commercializing novel manufacturing processes and technologies

¹ America’s Strategy to Secure the Supply Chain for a Robust Clean Energy Transition, February 2022: [https://www.energy.gov/sites/default/files/2022-02/America’s%20Strategy%20to%20Secure%20the%20Supply%20Chain%20for%20a%20Robust%20Clean%20Energy%20Transition%20FINAL.docx_0.pdf](https://www.energy.gov/sites/default/files/2022-02/America%20s%20Strategy%20to%20Secure%20the%20Supply%20Chain%20for%20a%20Robust%20Clean%20Energy%20Transition%20FINAL.docx_0.pdf)

² Securing America’s Clean Energy Supply Chain, February 2022: <https://www.energy.gov/policy/securing-americas-clean-energy-supply-chain>

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

capable of producing large metallic NNS components was further discussed in DOE-sponsored workshop in November, 2022 [3,4].

The primary goal of the FOA is to address the above challenges. Given the importance of large metallic NNS components to deploying a significant portion of national clean power generation goals [5, 6], it is anticipated that the FOA may include the following **Area of Interest**:

Domestic Near Net Shape Manufacturing to Enable a Clean and Competitive Economy: This involves accelerated development of innovative manufacturing technologies to increase the competitiveness of the domestic near net shape (NNS) manufacturing base and strengthen the clean energy manufacturing supply chain. The technical and economic viability of the proposed manufacturing technologies will be established by producing a full-scale component. The component must be relevant to carbon-free power generation or clean energy manufacturing, and be fabricated utilizing innovative advanced manufacturing technologies [7].

Project teams are to be comprised of multiple segments across the value/supply chain. The teams must possess the expertise needed to develop the proposed technologies, integrate the technologies (e.g., with applicable process flows, legacy equipment, design methodologies, and other systems), produce a full-scale component, conduct techno-economic analysis (TEA) and supply chain analysis (SCA), develop a robust transition/commercialization plan, and develop an executable qualification/certification plan [8].

EERE envisions awarding multiple financial assistance awards in the form of cooperative agreements. It is anticipated that each selected project will be awarded up to approximately \$10M 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 approximately 2 to 3 years.

³ Technical and Business Challenges for Infrastructure Scale Near Net Shaped Components Workshop: <https://isnsc.ornl.gov/>

⁴ Technical and Business Challenges for Infrastructure Scale Near Net Shaped Components – Workshop Report: Publication Number DOE/EE-2691, April 2023.

⁵ Executive Order 14008, “Tackling the Climate Crisis at Home and Abroad,” January 27, 2021.

⁶ National Strategy for Advanced Manufacturing, October 2022: <https://www.whitehouse.gov/wp-content/uploads/2022/10/National-Strategy-for-Advanced-Manufacturing-10072022.pdf>

⁷ Clarification on “Clean Energy Manufacturing” and “Advanced Manufacturing” provided on page 5 of “Advanced Manufacturing Office Multi-Year Program Plan for Fiscal Years 2017 through 2021 – DRAFT: https://www.energy.gov/sites/default/files/2017/01/f34/Draft%20Advanced%20Manufacturing%20Office%20MYPP_1.pdf

⁸ Completion of the full qualification/certification plan is not anticipated within the project.

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

A Teaming Partner List is a list compiled by DOE that allows organizations to express their interest to other potential applicants, and explore potential partnerships to submit an application as a Team. Potential partners could include representation from state and local governing bodies, non-profit and for-profit associations/organizations, educational institutions, and federally funded research and development centers (FFRDCs).

- The Teaming Partner List will be available on EERE eXCHANGE at <https://eere-exchange.energy.gov> under FOA DE-FOA-3022 at the time of the Notice of Intent release through its closing. The Teaming Partner List will be regularly updated, to reflect new Teaming Partners who have provided their information.
- SUBMISSION INSTRUCTIONS: Any organization that would like to be included on this list should submit the following information through EERE eXCHANGE: Organization Name, Contact Name, Contact Address, Contact Email, Contact Phone, Organization Type, Area of Technical Expertise, Brief Description of Capabilities, and Area of Interest.
- DISCLAIMER: By submitting a request to be included on the Teaming Partner List, the requesting organization consents 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. DOE will not pay for the provision of any information, nor will it compensate any applicants or requesting organizations for the development of such information.

This Notice is issued so that interested parties are aware of the EERE's intention to issue this FOA in the near term. All 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 or around April 2023 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 release, 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 apply to any open EERE FOAs that are currently in EERE eXCHANGE.

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

To access EERE eXCHANGE, potential applicants will be required to have a [Login.gov](https://login.gov) account. As part of the eXCHANGE registration process, new users are directed to create an account in [Login.gov](https://login.gov). Please note that the email address associated with Login.gov must match the email address associated with the eXCHANGE account. For more information, refer to the Exchange Multi-Factor Authentication (MFA) Quick Guide in the [Manuals section](#) of 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

- 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. Upon registration, SAM will automatically assign a Unique Entity ID (UEI).

NOTE: Due to the high demand of UEI requests and SAM registrations, entity legal business name and address validations are taking longer than expected to process. Entities should start the UEI and SAM registration process as soon as possible. If entities have technical difficulties with the UEI validation or SAM registration process they should utilize the HELP feature on SAM.gov. SAM.gov will work entity service tickets in the order in which they are received and asks that entities not create multiple service tickets for the same request or technical issue. Additional entity validation resources can be found here: [GSAFSD Tier 0 Knowledge Base - Validating your Entity](#).

- 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.

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