

## Department of Energy (DOE) Hydrogen and Fuel Cell Technologies Office

### Bipartisan Infrastructure Law (BIL), Notice of Intent No. DE-FOA-0002921

#### Notice of Intent to Issue Bipartisan Infrastructure Law (BIL) Funding Opportunity Announcement No. DE-FOA-0002922

DISCLAIMER: This “Notice of Intent” is for informational purposes only; the Department of Energy is not seeking comments on the information in this notice and applications are not being accepted at this time. Any information contained in this notice is subject to change.

The Office of Energy Efficiency and Renewable Energy (EERE) intends to issue a Funding Opportunity Announcement (FOA) entitled “Bipartisan Infrastructure Law: Clean Hydrogen Electrolysis, Manufacturing, and Recycling.”

The activities to be funded under this FOA support Sec. 40314 of the Infrastructure Investment and Jobs Act (also known as the Bipartisan Infrastructure Law, or BIL<sup>1</sup>), which amended Title VIII of the Energy Policy Act (EPAct) of 2005 to include a new section 815, “Clean Hydrogen Manufacturing and Recycling” and a new section 816, “Clean Hydrogen Electrolysis Program.” Through these provisions, the BIL will invest \$500 million for the development of manufacturing and recycling of clean hydrogen technologies, and \$1 billion for electrolyzer development for the five (5) year period encompassing Fiscal Years (FYs) 2022 through 2026. This FOA will be an integral part of the programs developed under these provisions. In addition to this FOA (which includes up to \$750M of the total \$1.5B), other program activities will include funding for national laboratories, Small Business Innovative Research projects, Prizes, and additional FOAs or other funding mechanisms. These activities will support the broader government-wide approach to accelerate progress in clean hydrogen technologies and maximize the benefits of the clean energy transition as the nation works to curb the climate crisis, empower workers, and advance environmental justice.

#### Background

On November 15, 2021, President Joseph R. Biden, Jr. signed the BIL, a once-in-a-generation investment in infrastructure, designed to modernize and upgrade American infrastructure to enhance United States competitiveness, drive the creation of good-paying union jobs, tackle the climate crisis, and ensure stronger access to economic, environmental, and other benefits

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<sup>1</sup> Infrastructure Investment and Jobs Act, Public Law 117-58 (November 15, 2021), Section 40314 (42 U.S.C. 16161c), <https://www.congress.gov/bill/117th-congress/house-bill/3684>. This FOA uses the more common name “Bipartisan Infrastructure Law.”

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for disadvantaged communities.<sup>2</sup> The BIL appropriates more than \$62 billion to the Department of Energy (DOE) to invest in American manufacturing and workers; expand access to energy efficiency and clean energy; deliver reliable, clean and affordable power to more Americans; and demonstrate and deploy the technologies of tomorrow through clean energy demonstrations.

To support the goal of building a clean and equitable energy economy, the BIL-funded projects are expected to (1) support meaningful community and labor engagement; (2) invest in America's workforce; (3) advance diversity, equity, inclusion, and accessibility; and (4) contribute to the President's goal that 40% of the overall benefits of certain federal investments flow to disadvantaged communities (the Justice40 Initiative<sup>3</sup>).

### Technical Objectives

Clean hydrogen technologies (clean hydrogen production, processing, delivery, storage, and use equipment) are important elements of the clean energy transition, particularly for hard-to-decarbonize sectors of the economy such as heavy-duty transportation and industrial applications and to enable long duration energy storage for a clean electric grid.<sup>4</sup> These elements directly support administration goals to put the United States on a path to achieve net-zero emissions economy-wide by no later than 2050 to benefit all Americans. The anticipated FOA will support research, development, demonstration (RD&D), and manufacturing of affordable hydrogen technologies, aligned with the vision outlined in DOE's draft national clean hydrogen strategy and roadmap,<sup>5</sup> which is required by the BIL and outlines the vision for clean hydrogen in the United States – *affordable clean hydrogen for a net-zero carbon future for a sustainable, resilient, and equitable economy*. The draft roadmap outlines strategic opportunities for 10 million metric tonnes (MMT) of clean hydrogen per year by 2030, 20 MMT per year by 2040, and 50 MMT per year by 2050.<sup>6</sup>

To unlock the market potential for clean hydrogen, DOE launched the Hydrogen Energy Earthshot (Hydrogen Shot)<sup>7</sup> in June 2021, to reduce the cost of clean hydrogen by 80 percent to

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<sup>2</sup> Pursuant to E.O. 14008 and the Office of Management and Budget's Interim Justice40 Implementation Guidance M-21-28, DOE has developed a definition and tools to locate and identify disadvantaged communities. These resources can be located at <https://energyjustice.egs.anl.gov/>. DOE will also recognize disadvantaged communities as defined and identified by the White House Council on Environmental Quality's Climate and Economic Justice Screening Tool (CEJST), which can be located at <https://screeningtool.geoplatform.gov/>.

<sup>3</sup> The Justice40 initiative, created by E.O. 14008, establishes a goal that 40% of the overall benefits of certain federal investments flow to disadvantaged communities. <https://www.energy.gov/diversity/justice40-initiative>

<sup>4</sup> In accordance with Sec. 40314 of BIL, which established Sec. 822 of EPA Act 2005, DOE issued draft guidance for stakeholder feedback and will finalize the clean hydrogen production standard (see <https://www.energy.gov/eere/fuelcells/articles/clean-hydrogen-production-standard>).

<sup>5</sup> U.S. Department of Energy, "DOE National Clean Hydrogen Strategy and Roadmap (Draft)", <https://www.hydrogen.energy.gov/clean-hydrogen-strategy-roadmap.html>.

<sup>6</sup> Id.

<sup>7</sup> U.S. Department of Energy, "Hydrogen Shot," <https://www.energy.gov/eere/fuelcells/hydrogen-shot>.

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\$1 per 1 kilogram in 1 decade (“1 1 1”). This FOA will support Hydrogen Shot and catalyze both innovation and manufacturing at scale, stimulating private sector investments, spurring development across the hydrogen supply chain, and dramatically reducing the cost of clean hydrogen. Efforts will also support robust supply chains including for any needed critical materials and design for environmental and climate stewardship, efficiency, durability, and recyclability to ensure a strategic and sustainable build out of the clean hydrogen industry.

Specifically, the BIL Clean Hydrogen Electrolysis, Manufacturing, and Recycling FOA will support the following objectives:

- Reduce the cost of clean hydrogen produced using electrolyzers to less than \$2 per kilogram by 2026<sup>8</sup>
- Advance new manufacturing technologies and techniques for clean hydrogen production and use equipment, specifically for electrolyzer and fuel cell technologies
- Research, develop, and demonstrate innovative and practical approaches to increase the reuse and recycling of clean hydrogen technologies

For all topic areas, EERE envisions awarding financial assistance awards in the form of cooperative agreements. It is anticipated that the FOA may include the following topics:

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<sup>8</sup> Note that \$2/kg is the levelized cost of hydrogen production and includes the cost of electricity (i.e., power input to electrolyzer), capital cost, and operating cost.

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Topic	TRL <sup>9</sup>	Anticipated Award Duration (years)	Anticipated Federal Funding per Award	Anticipated Non-federal Cost Share	Anticipated Total Federal Funding
<b>Area of Interest 1: Clean Hydrogen Electrolysis Program</b>					
Topic 1: Low Cost, High-Throughput Electrolyzer Manufacturing	5-7	~3-5	Up to \$50M	20-50%	Up to \$300M
Topic 2: Electrolyzer Component and Supply Chain Development	4-6	~3-4	Up to \$10M	20%	Up to \$100M
Topic 3: Advanced Electrolyzer Technology and Component Development	3-5	~2-3	Up to \$5M	20%	Up to \$70M
<b>Area of Interest 2: Clean Hydrogen Manufacturing and Recycling</b>					
Topic 4: Fuel Cell MEA and Stack Manufacturing and Automation	5-7	~3-5	Up to \$30M	20-50%	Up to \$150M
Topic 5: Fuel Cell Supply Chain Development	3-6	~2-4	Up to \$10M	20%	Up to \$80M
Topic 6: Recycling and Recovery Consortium	2-6	5	Up to \$50M	20%	Up to \$50M
<b>Total</b>					<b>Up to \$750M</b>

<sup>9</sup> Technology Readiness Level (TRL) range from start to end of project. TRLs are used to gauge the technical maturity of a project and range from 1 (basic principles observed and reported) to 9 (actual operation of the technology in its final form, under the full range of operating conditions). U.S. Government Accountability Office, *Technology Readiness Assessment Guide*, January 2020, Table 11: DOE Technology Readiness Levels, <https://www.gao.gov/assets/gao-20-48g.pdf>.

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## Area of Interest 1: Clean Hydrogen Electrolysis Program

### Topic Area 1: Low-Cost, High-Throughput Electrolyzer Manufacturing

HFTO is seeking applications for RD&D of electrolyzer manufacturing processes and techniques for high-volume manufacturing and pre-commercial pilot line proof-of-concept validation activities to meet a DOE stack cost target of \$100/kW by 2026.<sup>10</sup> This topic focuses on innovations in proven technologies ready for manufacturing scale-up, including proton exchange membrane (PEM), oxide-conducting solid oxide electrolyzer cell (O-SOEC), and advanced liquid alkaline (LA) technologies that offer benefits over the widely-commercialized, incumbent LA technology. This funding will support domestic electrolyzer stack manufacturers in reaching low-cost, high-throughput manufacturing to enable GW/yr stack production rates and \$2/kg electrolytic hydrogen production by 2026, consistent with the BIL's Clean Hydrogen Electrolysis Program goals. Other performance goals, such as high efficiency, dynamic operation, and minimal or zero dependence on critical materials or foreign supply chains, will also be considered.

Applicants will be expected to describe the greatest barrier(s) to domestic high-volume manufacturing, the areas with the greatest potential for cost reduction, and the resulting innovations this funding would support to address these barriers. Applicants will also be expected to estimate the stack cost they will achieve through these innovations, targeting  $\leq$  \$100/kW. Examples of specific domestic manufacturing barriers may include cell and stack assembly automation, roll-to-roll manufacturing, quality control and in-line defect detection, leak checking and conditioning, and continuous thermal processing. At the end of the project, stacks and/or components should be manufactured in a pilot line process relevant for subsequent high-volume manufacturing at a commercial scale, and the manufactured component(s) should be demonstrated and validated in a stack. Applicants to this topic may be required to develop workforce development, education, and/or training plans in partnership with subrecipients.<sup>11</sup>

### Topic Area 2: Electrolyzer Component and Supply Chain Development

This topic will support RD&D of advanced, high-performing electrolyzer components and manufacturing processes/equipment that enable near-term pathways to commercialization. Activities will support a domestic electrolyzer supply chain, including material and component suppliers that are developing advanced, high-performing components with the potential for low-cost, high-throughput manufacturing, and thus enable meeting cost, efficiency, durability, and other metrics for the stack and system. Components of particular interest include membranes, porous transport layers, bipolar plates/interconnects, and catalysts (including for

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<sup>10</sup> "H2 Technologies Overview." DOE Hydrogen and Fuel Cell Technologies Office Annual Merit Review. June 2022. [https://www.hydrogen.energy.gov/pdfs/review22/plenary6\\_stetson\\_2022\\_o.pdf](https://www.hydrogen.energy.gov/pdfs/review22/plenary6_stetson_2022_o.pdf).

<sup>11</sup> For examples of subrecipients, please refer to Teaming Arrangements.

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instance, iridium thrifting or replacement and reduction of other critical materials). Applicants will be expected to include a description of the component's current performance or supply chain limitations, the approach to address the limitation, and the manufacturability of the component at volumes sufficient to support GW-scale deployment of electrolyzers. Applicants will be expected to test their component in an electrolyzer stack, potentially through a collaboration with DOE's H2NEW consortium and/or an electrolyzer manufacturer. Applicants requesting higher funding levels will also be expected to manufacture the advanced component at a pilot scale.

### Topic Area 3: Advanced Electrolyzer Technology and Component Development

This topic will support R&D of advanced or completely innovative electrolyzer materials, components, and cells to enable meeting electrolyzer performance, durability, and capital cost targets in the future. Activities are expected to be higher risk and at a lower technology readiness level (TRL) with potentially greater long-term impact in comparison to the manufacturing related topics. Specifically, this topic will support lab-scale R&D that focuses on improving the performance, increasing durability, and/or reducing the cost of materials and components such as catalysts, electrodes, membranes, and separators. Applicants will be expected to address the materials or components, and their integration into cells which pose the greatest barrier for PEM, LA, O-SOEC, proton-conducting solid oxide (P-SOEC), or alkaline exchange membrane (AEM) technologies. Under this award, novel concepts for advanced materials, components, interfaces, or cell designs will be further developed and must be validated in at least a single cell electrolyzer by the end of the performance period. Applicants will be expected to include a description of the material or component under development, and how the proposed innovations are an improvement over the current state-of-the-art and will help achieve the Hydrogen Shot goal. Applicants will be required to collaborate with H2NEW,<sup>12</sup> HydroGEN,<sup>13</sup> or ElectroCat<sup>14</sup> consortia as appropriate.

## **Area of Interest 2: Clean Hydrogen Manufacturing and Recycling**

### Topic Area 4: Fuel Cell MEA and Stack Manufacturing and Automation

This topic seeks to address challenges to significantly increasing manufacturing capacity for proton exchange membrane (PEM) fuel cells designed for heavy-duty vehicle (HDV) applications. Applicants will be expected to focus on technology development and design, build, and validation of pilot-scale manufacturing techniques, processes, and equipment for PEM fuel cell components. This includes high-volume membrane electrode assembly (MEA) component fabrication, automated cell and/or stack (including balance of stack components) assembly, quality control methods, standardization, assembly and/or post-assembly testing or

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<sup>12</sup> Hydrogen from Next-generation Electrolyzers of Water (H2NEW), <https://h2new.energy.gov/>.

<sup>13</sup> HydroGEN: Advanced Water Splitting Materials, <https://h2awsm.org/about>.

<sup>14</sup> ElectroCatalysis Consortium (ElectroCat), <https://www.electrocat.org/>.

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conditioning for heavy-duty fuel cell systems and other bottlenecks for high-volume, low-cost manufacturing. Such development and proof-of-concept demonstration and validation will enable industry to ramp up large-scale commercial manufacturing plants at the GW scale in the outyears, based on the successful outcomes of this anticipated FOA.

Manufacturing processes and technology development with consideration of end-of-life, including aspects that facilitate recovery of critical materials, is encouraged. As cell and/or stack redesign to facilitate high-volume or automated processing is anticipated, incorporation of design for disassembly, recycling, and/or refurbishment is encouraged. Applicants are highly encouraged to develop diverse teams, for example including a stack/system integrator, stack and component suppliers, and automation or high-volume equipment suppliers, that can optimally address the most critical cell and stack scaling bottlenecks of the primary applicant. The proposed manufacturing methods and equipment must meet or justifiably contribute to meeting specific metrics, including an interim manufacturing capacity target of 5 stacks/hour and/or 2-3 seconds per MEA (based for example on 20,000 stacks per year at 2 shifts per day and an HDV stack sized for at least 100-120 kW<sub>net</sub> output, with nominally 250-300 cells), as applicable. The proposed equipment must be operationally validated by multiple runs, and the produced materials must be demonstrated to have requisite quality and to perform in accordance with DOE's HDV fuel cell system targets.<sup>15</sup> Applicants to this topic may be required to develop workforce development, education, and/or training plans in partnership with subrecipients.<sup>16</sup>

#### Topic Area 5: Fuel Cell Supply Chain Development

This topic will support RD&D to establish or expand a stable, accessible, and high-volume U.S. supply chain of critical PEM fuel cell materials and components. This topic aims to develop manufacturing technologies, processes, and equipment, that produce cost-competitive, scalable, high performance, and durable heavy-duty PEM fuel cell materials and components in four critical areas: A) gas diffusion layers, B) catalysts, C) bipolar plates, and D) non-PFSA<sup>17</sup> membranes. Technologies and manufacturing processes must enable meeting cost and performance metrics for each of these components, with emphasis on metrics required to meet the 2030 heavy-duty fuel cell system targets of \$80/kW, 25,000 hour durability, and 68% peak efficiency for fuel cell systems.<sup>18</sup>

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<sup>15</sup> J. Marcinkoski, et al., "DOE Advanced Truck Technologies, Technical Targets for Hydrogen-fueled Long-haul Tractor-trailer Trucks," HFTO Program Record #19006, October 31, 2019.

[https://www.hydrogen.energy.gov/pdfs/19006\\_hydrogen\\_class8\\_long\\_haul\\_truck\\_targets.pdf](https://www.hydrogen.energy.gov/pdfs/19006_hydrogen_class8_long_haul_truck_targets.pdf)

<sup>16</sup> For examples of subrecipients, please refer to Teaming Arrangements.

<sup>17</sup> Perfluorosulfonic acid.

<sup>18</sup> Ibid (footnote 15).

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Priority will be given to projects that support the establishment or expansion of domestic production capacity, de-risk future investments, and demonstrate potential for economies of scale to meet projected demand. Applicants will need to operationally validate the proposed process or equipment and justify a pathway to cost-competitive component or material production at rates that are commensurate with HFTO's interim target production level of 20,000 stacks per year (i.e., HDV stack for at least 100-120 kW<sub>net</sub> output, with nominally 250-300 cells). Applicants will also be expected to validate material and component performance and should collaborate with DOE's Million Mile Fuel Cell Truck Consortium (M2FCT)<sup>19</sup> as appropriate.

#### Topic Area 6: Recycling and Recovery Consortium

This Topic seeks to establish a consortium of industry, academia, non-profits, and national laboratories to address end-of-life and critical supply chain challenges for low temperature PEM fuel cell and electrolyzer systems. As the market for low temperature fuel cells and electrolyzers ramps up to the GW scale, the number of end-of-life systems will grow substantially, and supply chain vulnerabilities, particularly for critical materials such as precious-group metals will be an increasing challenge. For instance, the required PEM electrolyzer build out would require orders of magnitude more iridium than today's global supply, which is sourced primarily from South Africa and Russia.

The proposed consortium will identify key challenges, apply lessons learned and best practices from other industries (e.g., batteries, electronic equipment), and will develop and validate recovery and recycling methods to ensure end-of-life challenges are addressed to avoid environmental and energy justice related issues. Objectives include solving the issue of how best to recycle fuel cell and electrolyzer stacks, with a strong emphasis on platinum group metals, membrane electrode assemblies, ionomers, and automated disassembly. Anticipated innovations through this consortium include developing systems that are designed for recycling and components capable of being recycled and recovered efficiently, at low cost, and low carbon footprint. The consortium will cover analysis, novel recovery and recycling methods, design for recyclability, methods to recycle, recover, refurbish, and reuse of components, and other "re-x" pilot-scale demonstration and validation. The consortium will achieve DOE program goals by addressing the scope established by the BIL to "create innovative and practical approaches to increase the reuse and recycling of clean hydrogen technologies."<sup>20</sup> Consistent with BIL language, the consortium should include activities to increase efficiency and cost-effectiveness of the recovery of raw materials, identify nonhazardous alternative materials and processes, minimize environmental impacts from recovery and recycling processes, and develop alternative disassembly and resource recovery processes that enable efficient, cost-

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<sup>19</sup> For examples of subrecipients, please refer to Teaming Arrangements.

<sup>20</sup> Infrastructure Investment and Jobs Act, Public Law 117-58 (November 15, 2021), Section 40314 (42 U.S.C. 16161c (b)).

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effective, and environmentally responsible disassembly of, and resource recovery from, clean hydrogen technologies.

It is anticipated that a university or nonprofit will lead the consortium and partners would include industry, national laboratories, and additional universities and/or institutes.

### **Teaming Arrangements**

In general, teaming arrangements with multiple stakeholders potentially including academia, industry, national laboratories, communities, Tribal organizations,<sup>21</sup> or other stakeholder organizations as appropriate, and across technical disciplines, are encouraged. Teams that include representation from diverse entities such as, but not limited to: Minority Serving Institutions (MSIs), including Historically Black Colleges and Universities (HBCUs)/Other Minority Institutions (OMIs), or through linkages with Opportunity Zones, are encouraged.<sup>22</sup> Applicants are also encouraged to include individuals or student organizations from groups historically underrepresented in Science, Technology, Engineering and Math (STEM) education on their project teams.

EERE is compiling a Teaming Partner List to facilitate the widest possible national participation in the formation of applicant teams for this potential FOA. The list allows organizations who may wish to participate in an application to express their interest to other potential applicants and to explore potential partners.

Any organization that would like to be included on this list should access EERE eXCHANGE at <https://eere-Exchange.energy.gov> and choose the menu item labelled Teaming Partners. From the pulldown menu, select this FOA, DE-FOA-0002922. Enter your organization, contact information, the Topic in which you are interested, and any background information on your particular interests and capabilities and press Register. See the document titled “Topic and Background Information” posted on EERE eXCHANGE for instructions on what to include in these fields. Each entry should only include one topic area. Submit multiple entries if you are interested in partnering on more than one topic area. For further information regarding teaming partner lists, see <https://eere-exchange.energy.gov/Manuals.aspx>.

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<sup>21</sup> Topics 4 and 5 are covered by the Clean Hydrogen Manufacturing provision (EPA Act Section 815(a)(2)), which prioritizes manufacturing projects that “operate in partnership with tribal energy development organizations, Indian Tribes, Tribal organizations, Native Hawaiian community-based organizations, or territories or freely associated States” or “are located in economically distressed areas of the major natural gas-producing regions of the United States.”

<sup>22</sup> Minority Serving Institutions (MSIs), including HBCUs/OMIs as educational entities recognized by the Office of Civil Rights (OCR), U.S. Department of Education, and identified on the OCR’s Department of Education U.S. accredited postsecondary minorities’ institution list. See <https://www2.ed.gov/about/offices/list/ocr/edlite-minorityinst.html>. Opportunity Zones were added to the Internal Revenue Code by section 13823 of the Tax Cuts and Jobs Act of 2017, codified at 26 U.S.C. 1400Z-1. The list of designated Qualified Opportunity Zones can be found in IRS Notices [2018-48 \(PDF\)](#) and [2019-42 \(PDF\)](#). Further, census tracts designated as Qualified Opportunity Zones may also be found at [Opportunity Zones Resources](#). Also see, [frequently asked questions](#) about Qualified Opportunity Zones.

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By submitting a response 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. EERE will not pay for the provision of any information, nor will it compensate any applicants or requesting organizations for the development of such information.

### **Additional Information**

This Notice of Intent 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 on or about February 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 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 apply to any open EERE FOAs that are currently in EERE eXCHANGE.

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](mailto: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).

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**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](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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