

DOE Notice of Intent (NOI)

Notice of Intent Key Facts	
Issuing Agency	Department of Energy (DOE), Office of Critical Minerals and Energy Innovation (CMEI), Alternative Fuels and Feedstocks Office (AFFO)
Notice of Intent Title	AFFO Multi-Topic Notice of Funding Opportunity (NOFO): Leveraging Domestic Infrastructure and Resources to Unleash Alternative Chemicals, Fuels, and Feedstocks
Notice of Intent Number	DE-FOA-0003648
Topic Areas	• Topic Area 1: Biointermediate Depots: Establish pilot sites to produce more-traditional intermediate products, such as sugars or biocrudes, from biomass and wastes. Projects under this topic area would derisk technologies for solids-to-liquids conversion, while also validating the economics of distributed depots that would operate on a hub-and-spoke model, sending intermediate products to a central hub (a refinery or biorefinery) for further upgrading to finished products. • Topic Area 2: Refinery Integration: Support research and development (R&D) to advance technologies for processing intermediates in existing refinery or petrochemical infrastructure. For example, projects under this topic could conduct research into co-processing biocrudes or waste plastic oils with crude oil to determine impact on: catalyst life, the mix and proportions of different end-products, and compatibility with the plant's physical equipment. • Topic Area 3: Pilot Site for Hydrogen/Natural Gas Blending: Establish pilot sites for the blending of hydrogen and natural gas, at a facility that closely simulates actual gas distribution networks. Projects under this topic area would evaluate the reliability and scalability potential associated with blending, including the suitability, performance, and durability of pipeline components. Projects would apply lessons learned from the analyses and models in DOE's HyBlend initiative to a near-commercial, controlled, instrumented site. This site would represent an intermediate step prior to broader large-scale blending.
Eligible/Required Applicants	• Topic Area 1: Any prime recipient <u>must</u> be a <i>for-profit organization</i>, as defined in 2 CFR 200.1. All other entities are eligible as subrecipients.

DOE Notice of Intent (NOI)

	• Topic Area 2: All entities, including DOE federally funded research and development centers (FFRDCs), are eligible as prime recipients. • Topic Area 3: All entities are eligible as prime recipients, except for DOE FFRDCs which are only eligible as subrecipients.
CMEI Exchange URL and Helpdesk	https://eere-exchange.energy.gov/ EERE-ExchangeSupport@hq.doe.gov <i>Include NOI number (DE-FOA-00003648) in the subject line</i>
Anticipated Notice of Funding Opportunity Information	
Anticipated Release Date	November 13, 2026
Funding Instrument	Cooperative agreements
Total Available Funding	\$60,000,000
Award Duration	3–5 years

This NOI is for informational purposes only; we are not requesting comments or applications at this time. All information provided here is subject to change. This notice serves to inform interested parties that the DOE may issue a notice of funding opportunity (NOFO). Please be aware that any future NOFO could differ significantly from what is described here, or one may not be issued at all. We will provide a designated channel for questions once a NOFO is officially released.

Summary

CMEI intends to issue, on behalf of AFFO, a NOFO titled, “Leveraging Domestic Infrastructure and Resources to Unleash Alternative Chemicals, Fuels, and Feedstocks.” This NOFO will seek applications for financial assistance awards that would support AFFO’s vision to push the frontiers of science and engineering, advance energy addition, and unleash American energy innovation.

AFFO integrates efforts from the former Bioenergy Technologies Office and Hydrogen and Fuel Cell Technologies Office under one office. [AFFO’s mission](#) is to enable research, development, and demonstration (RD&D) to accelerate technology commercialization for the production, storage, delivery and use of alternative fuels, fertilizers, chemicals, and feedstocks. These efforts strengthen the security and reliability of domestic energy networks and lowers energy costs for Americans. Through collaboration with industry, our national laboratories, and academia, AFFO advances national energy independence by establishing a secure domestic supply chain, lowering production costs, invigorating a strong U.S. workforce, and fostering energy growth through diverse, domestic production pathways.

The purpose of this potential NOFO would be to solicit proposals for RD&D of innovative technologies that harness existing domestic biomass, hydrogen, and pipeline resources to expand U.S. domestic energy production and distribution. To maximize the benefits of these existing resources, this NOFO would aim to advance multiple alternative fuel and feedstock technologies through support of projects that would:

- Enhance the production of liquid intermediate-products that are made from biomass and are: chemically, thermally, and physically stable; and can be sold as commodities for various end applications, including for further upgrading to renewable fuels and chemicals
- Enhance the production of commodity chemicals and fuels from alternative feedstocks—using existing refinery assets—achieving production-costs that enable competitive market pricing
- Establish pilot sites for the blending of hydrogen and natural gas—as well as the distribution of those blends—that closely simulate actual gas distribution networks, to improve reliability, scalability, suitability, performance, and durability.

Topic Area 1: Biointermediate Depots

The intent of this topic is to establish sites at pilot-scale (processing 5–10 dry tons per day) that produce more-traditional intermediate products, such as sugars, biocrudes, or bio-oils, from biomass and wastes. Projects under this topic area would derisk technologies for solids-to-liquids

conversion, while also validating the economics of distributed depots that would operate on a hub-and-spoke model, sending the intermediates to a central hub (a refinery or biorefinery) for further upgrading to finished products.

Feedstocks of interest include: lignocellulosic biomass such as corn stover, woody residues, and other agriculture by-products; algae; organic wet wastes; municipal solid waste; and other waste streams such as used tires, non-recyclable plastics, and construction and demolition debris.

Topic Area 2: Refinery Integration

The intent of this topic is to advance technologies for processing intermediates (such as biocrudes or waste-plastic oils) in existing refinery or petrochemical infrastructure. This will include a test run of a pilot-scale facility, at a minimum rate of 0.2 barrels (0.02 tons) per day (at the reactor throat) for a minimum of 1000 total hours. It is anticipated that work scope would include: project definition; process optimization; testing; and updating models with resulting data. Work may also be needed in the pretreatment of the intermediate to reach critical material attributes acceptable for a refinery or petrochemical unit operation. Projects under this topic may generate insights into the impact that processing intermediates can have on: catalyst life, the mix and proportions of different end-products, and compatibility with the plant's physical equipment.

Feedstocks of interest include: intermediates from biomass or waste (such as waste plastics). Applications must identify a credible path for conversion of feedstocks to chemicals and/or strategic fuel that is cost-effective at commercial scale, without incentives.

Topic Area 3: Pilot Site for Hydrogen/Natural Gas Blending

The intent of this topic is to establish a pilot facility for blending hydrogen and natural gas that will enable evaluation of components and practices related to blending hydrogen into natural gas distribution systems. Projects under this topic area would address stakeholder needs by evaluating the reliability and scalability potential associated with blending, including the suitability, performance, and durability of pipeline components. They may also provide valuable information that will help address the unique workforce needs related to hydrogen-natural gas blending. The project would apply lessons learned from the analyses and models in DOE's HyBlend initiative to a near-commercial, controlled, instrumented site. This site would represent an intermediate step prior to broader large-scale blending. Applicants should plan to leverage existing relevant assets and include a business and management plan for continued facility operation after the end of the DOE award.

Target blending levels include: up to 30% hydrogen by volume, with a stretch goal of up to 80%.

Teaming Partners

DOE is creating a list of "Teaming Partners" to help organizations find each other and form new project teams for this NOFO. If your organization wants to be part of a team, you can add your contact information to this list. This allows different groups to show their interest and find potential collaborators.

Here is how it works:

- To join the list: If your organization wants to be included on this list, you need to submit your information to the [Teaming Partner List](#) on eXCHANGE.
- Updates: The Teaming Partner List will be updated regularly and kept on the eXCHANGE website. This means that as new organizations add their information, the list will be refreshed.
- Important note: By asking to be on this list, you agree that the information you provide will be shared publicly. DOE is helping connect potential partners; we are not endorsing, sponsoring, or checking the qualifications of anyone on this list. Also, DOE will not pay for any information you provide or for your time in developing this information.

Concept Papers

If issued, the NOFO will use a streamlined process that aims to lower barriers, reduce the burden on potential applicants, and accelerate the time to award for selectees.

Applicants will be required to submit a *concept paper* using a template, or by providing equivalent information in a similar format, that succinctly describes the proposed approach, feedstock (as applicable), conversion process (as applicable), product (as applicable), estimated budget, timeline, and potential team. AFFO will review these concept papers against the NOFO requirements and promptly return a recommendation: applicants will be *encouraged*, *discouraged*, or *ineligible* to submit a Stage-1 application, which will be due approximately six weeks after they receive their recommendation. This recommendation provides an assessment of the concept's likelihood of being selected for funding, based on the objectives and requirements of the NOFO. In other words, it is not a thorough assessment of the feasibility or merit of the concept.

If a proposal is deemed *ineligible* (e.g., because the entity does not meet eligibility requirements) or it is *discouraged* (e.g., it does not meet the intent of the NOFO objectives), a Stage-1 application **cannot** be submitted. Only applicants who receive an *encourage* recommendation may submit a Stage-1 application.

Additional Information

As noted above, it is intended to use this new process should a NOFO be issued, and more details on this process will be provided in a recorded webinar, which will be held shortly after the publication of the NOFO. The new process will also be described in detail within the NOFO.

Submission and Registration Requirements

If the NOFO is released, it will be available in [DOE eXCHANGE](#) and [Grants.gov](#). If you are interested in applying, please register with DOE eXCHANGE and Grants.gov to receive official notifications and information about this NOFO.

There are several required one-time actions applicants must take before applying to a NOFO. Some of these actions may take several weeks, **so it is vital applicants build in enough time to complete them**. Failure to complete these actions could interfere with application or negotiation

deadlines or the ability to receive an award if selected. If you are already registered, please make sure your registration is active and up to date. All registrations are free.

You can find the details and how to complete these steps page here under Pre-Award, Guidance, CMEI eXCHANGE: <https://www.energy.gov/cmei/cmei-funding-application-and-management-forms>

SAM.gov Registration

Applicants must have a current All Awards of Financial Assistance Awards registration with [SAM.gov](https://sam.gov), the System for Award Management (SAM). This includes having a Unique Entity Identifier (UEI).

- **What is it?** SAM is a federal procurement database. All entities that want to do business with the federal government **MUST** be registered in SAM.
- **Updates:** Existing SAM registrations must be updated annually.
- **Duration to complete:** Can take several weeks.
- **Registration Link:** <https://sam.gov/content/home>
 - **NOTE:** Subrecipients are not required to obtain an active SAM registration but must obtain a Unique Entity Identifier.
- **HELP:** <https://sam.gov/content/help> Applicants must allow several weeks for the SAM process to complete. All registrations rely on completion of the SAM registration. (It is highly recommended that you **start early**)

Unique Entity Identifier (UEI)

- **What is it?** A UEI is a non-proprietary identifier that has replaced the Data Universal Numbering System (DUNS) number, effective April 4, 2022.
- **Getting a Unique ID:** Applicants must obtain a UEI from the SAM to uniquely identify the entity. The UEI is available in the SAM entity registration record.
 - **Note:** Subawardees/subrecipients at all tiers must also obtain an UEI from the SAM and provide the UEI to the recipient before the subaward can be issued.
- **Duration to complete:** Can take several weeks.
- **Registration Link:** <https://sam.gov/content/entity-registration>
- **HELP:** https://www.fsd.gov/gsafsd_sp

Grants.gov Registration

Applicants must have an active [Grants.gov](https://www.grants.gov) registration to receive automatic updates when modifications to a NOFO are posted. Doing so requires a Login.gov registration as well.

- **What is it?** Grants.gov is a website used to enable federal grant-making agencies to notify potential applicants of funding opportunities and, in some cases, to enable applicants to submit an application in response to a funding opportunity.
- **Duration to complete:** Can take several days.

- **Registration Link:** <https://grants.gov/applicants/grant-applications/how-to-apply-for-grants>
- **HELP:** <https://grants.gov/support>

FedConnect Registration

Registering with FedConnect® is fast, easy, and free. Only individuals who are designated as Points of Contact in SAM.gov can create a new company account.

- **What is it?** FedConnect enables the recipient of an award to receive the fully executed award package.
- **How to Register?** The SAM Unique Entity Identifier Number (UEI) must be obtained before this registration can be initiated. Review the FedConnect Ready, Set, Go! Guide at https://www.fedconnect.net/FedConnect/Marketing/Documents/FedConnect_Ready_Set_Go.pdf
- **Duration to complete:** Can take two to three days.
- **Registration Link:** FedConnect website: <https://www.fedconnect.net/FedConnect/Default.htm>
- **HELP:** E-mail fcsupport@unisonglobal.com or call 1-800-899-6665

eXCHANGE Registration

Register with eXCHANGE, with Login.gov or ID.me.

- **What is it?** eXCHANGE is the official database used for searching and applying to funding opportunities.
- **How to Register?** When you sign up for eXCHANGE, if you are a new user, you will also need to create an account on Login.gov. It's important that the email address you use for Login.gov is the exact same one you use for your eXCHANGE account. DOE strongly encourages applicants to register a second individual as a backup.
- **Electronic Signature:** Submission of application documents in the DOE eXCHANGE system constitutes the authorized representative's approval and electronic signature.
- **Duration to complete:** Can take two to three days.
- **Registration Link:** <https://eere-exchange.energy.gov/Registration.aspx?rid=new>