

Notice of Intent Key Facts	
Issuing Agency	U.S. Department of Energy (DOE), Office of Critical Minerals and Energy Innovation (CMEI), Alternative Fuels and Feedstocks Office (AFFO)
Notice of Intent Title	Accelerating Scale-up and Pre-piloting of Emerging Chemical Technologies (ASPECT)
Notice of Intent Number	DE-FOA-0003646
Topic Areas	• Topic Area 1 (Bench ASPECT): Supports the development and adoption of new production pathways for chemicals from alternative feedstocks, moving beyond proof-of-concept to bench and engineering/pre-pilot scale. - o 1a: Bench-scale technologies - o 1b: Bench-scale and unit-operation pre-piloting • Topic Area 2 (Pre-Pilot ASPECT): Accelerates the development and market entry of chemicals by supporting pre-pilot scale systems that convert alternative feedstocks into chemicals. - o 2a: Unit operation pre-piloting & pre-pilot system integration - o 2b: Pre-pilot system integration only
Eligible/Required Applicants	• Eligible prime applicants and subrecipients include the following domestic entities: institutions of higher education*; for-profit entities; non-profit entities; state and local government entities and Indian Tribes * Institutions of higher education are eligible as prime applicants and subrecipients for Topic Area 1 and as subrecipients only for Topic Area 2. • The following are eligible only as subrecipients: DOE federally funded research and development centers (FFRDCs), non-DOE FFRDCs, and federal research agencies • Required: At least one for-profit industry entity is required as part of the proposed project team
eXCHANGE URL and Helpdesk	eere-exchange.energy.gov eere-exchangesupport@hq.doe.gov (include Notice of Funding Opportunity [NOFO] name and number in the subject line)
Anticipated Notice of Funding Opportunity Information	
Anticipated Release Date	August 24, 2026
Funding Instrument	Cooperative Agreements
Total Available Funding	\$58M
Award Duration	Topic Area 1: 2 to 4 years Topic Area 2: 2 to 5 years

This Notice of Intent (NOI) is for informational purposes only; DOE is 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 U.S. Department of Energy (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. DOE 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, “Accelerating Scale-up and Pre-piloting of Emerging Chemical Technologies (ASPECT).” This NOFO will seek applications for financial assistance from entities that wish to conduct work in support of AFFO's focus on emerging chemical technologies. AFFO supports expanding the supply and use of domestic alternative feedstocks to improve supply chain resiliency of U.S. chemical production and to expand domestic manufacturing through technology innovation to lower costs and improve environmental safety of chemical production.¹

Through this NOFO, AFFO seeks to support research, development, and scale-up of novel technologies for producing chemicals from alternative and waste feedstocks. Chemicals of interest include foundational molecules that can be further transformed into high-value end-products, chemical compounds or derivatives generated either from these foundational molecules or directly from alternative feedstocks through process intensification, as well as final end-products. This NOFO will aim to support work involving chemicals that offer advantages in terms of performance or cost, or that offer benefits to America's foreign trade or national security. The proposed chemicals can be either conventional or bio-advantaged chemicals. Conventional chemicals must possess added benefits like improved domestic supply chain resiliency, reduced U.S. imports, reduced cost, or large market growth potential. Bio-advantaged chemicals must possess favorable properties—such as enhanced durability, production efficiency, or decreased toxicity—that create new value propositions.

If the NOFO is issued, its goals will be to:

- Foster industry partnerships in the production of chemicals from alternative feedstocks
- Prototype and pilot technologies and processes proven at the bench scale
- Validate novel chemical manufacturing technologies that address gaps in the U.S. supply chain
- Enable informed decisions, optimize processes, and build confidence in technology scale up
- Accelerate adoption of innovative solutions for chemical production in high impact areas
- Improve domestic supply chain resiliency and expand market growth for chemicals
- Enable domestic production of chemicals with improved properties, such as reduced cost, enhanced durability, higher production efficiency, or lower toxicity.

¹Energy Policy Act (EPA) 2005, Pub. L. 109-58, § 931 as codified at 42 U.S.C. § 16231; EPA 2005 § 932, as codified at 42 U.S.C § 16232.

To address progress from laboratory research to pre-pilot scale and eliminate delays between scale-up phases, ASPECT will implement a staged scale-up approach across two topic areas: Bench ASPECT and Pre-pilot ASPECT.

Topic Area 1: Bench ASPECT

Topic Area 1 will support the development and adoption of new technologies for producing chemicals from alternative feedstocks, moving beyond proof-of-concept to bench and pre-pilot scale. Applicants can choose between two sub-topic areas:

Topic Area 1a (Bench Only): This sub-topic area is intended for technologies currently beyond proof-of-concept and ready for additional bench scale research and development (R&D) work. Funding in this sub-topic area will support process development and optimization at the bench scale for promising early-stage chemical technology development.

Topic Area 1b (Bench Scale and Unit Operation Pre-Piloting): This sub-topic area will allow for both the R&D work in sub-topic area 1a and will lower scale-up risk by pre-piloting one or more unit operations at the successful completion of the initial R&D work.

Topic Area 2: Pre-pilot ASPECT

Topic Area 2 will aim to accelerate the development and market entry of strategically valuable, domestically produced chemicals. This topic area will seek proposals to design, construct, and operate pre-pilot scale facilities that convert alternative feedstocks into chemicals. Applicants can choose between two sub-topic areas:

Topic Area 2a (Unit Operation Pre-Piloting and Pre-Pilot System Integration): This sub-topic area will support the development of technologies that require testing of one- or two-unit operations at scale before an integrated pre-pilot facility can be designed. Upon successful completion of these tasks, projects funded in this sub-topic area will then design, construct, and operate an integrated pre-pilot system.

Topic Area 2b (Pre-Pilot System Integration Only): This sub-topic area will support the development of technologies that have prior-scale data and are ready for pre-pilot system integration. Projects funded in this area will design, construct, and operate an integrated pre-pilot system.

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 TPL-0000074 on DOE eXCHANGE. The Teaming Partner List

will be made available on DOE eXCHANGE at <https://eere-exchange.energy.gov> under NOI DE-FOA-0003646 and will be updated periodically until the close of the Full Application period of the potential NOFOs to reflect new Teaming Partners who have provided their information.

- Updates: The Teaming Partner List will be updated regularly and kept on the DOE eXCHANGE website. This means that the list will be refreshed as new organizations add their information.
- Important note: By asking to be on this list, you agree that the information you provide can be shared publicly. DOE is helping connect potential partners; they 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

This NOFO will require submission of a concept paper. This concept paper may be submitted using the template that will be provided with the NOFO, or by providing equivalent information in a similar format. Concept papers will consist only of fundamental information about the project, such as the chemical product, feedstock, conversion pathway, entities involved, and justification describing the advantages of the proposed technology compared with the current standard.

Additional Information

This NOFO will utilize a new, streamlined application and review process aimed at alleviating undue burdens on applicants and accelerating the time to award for selectees. A NOFO application webinar will be held shortly after the publication of the NOFO that will provide more details on this new, streamlined process.

Submission and Registration Requirements

If the NOFO is released, it will be available in [DOE eXCHANGE](#). If you are interested in applying, please register with DOE eXCHANGE 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.

SAM.gov Registration

Applicants must have an active account with [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. (START Early)

Unique Entity Identifier (UEI)

- **What is it?** UEI is a non-proprietary identifier that has replaced the Federal Government use of Data Universal Numbering System (DUNS) number effective April 4, 2022.
- **Getting a Unique ID:** Applicants must obtain an 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 in order to receive automatic updates when modifications to a NOFO are posted. Doing so requires a Login.gov registration as well.

- **What is it?** Website used to enable federal grant-making agencies to notify potential applicants of funding opportunities and, in some cases, 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 is how a recipient of an award will 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
- **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, new users 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.
- **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/>