



**U.S. Department of Energy  
Advanced Research Projects Agency – Energy  
Announcement of Teaming Partner List  
for an upcoming Funding Opportunity Announcement:  
Integration of Ammonia Technologies Developed under the  
REFUEL Program**

The Advanced Research Projects Agency – Energy (ARPA-E) intends to issue a new Funding Opportunity Announcement (FOA) in July 2020 to solicit applications for financial assistance to integrate and scale up multiple ammonia synthesis technologies that were developed under financial assistance from ARPA-E.

Specifically, ARPA-E anticipates funding a single project where the lead organization (integrator), teaming with partners, develops a skid-mounted ammonia synthesis system capable of producing ammonia from air, water, and intermittent renewable electricity at a rate of a metric ton of ammonia per day. The project team will comprise current and former ARPA-E awardees who developed ammonia synthesis technologies, and these technologies will be incorporated into the ammonia synthesis system.

Respondents to this Teaming Partner List should identify as potential:

- 1) Integrators: Entities that have:
  - a. successfully built, commissioned, and tested multiple skid-mounted chemical engineering systems that produced chemical products at a scale of hundreds of kilograms per day or higher, and have access to test sites with sufficient intermittent renewable electricity and water to produce ammonia at a rate of up to 1 metric ton per day
  - b. testing facilities capable of working with and disposing of or consuming toxic, high pressure, or explosive components including hydrogen and ammonia up to the requested scale, with an excellent safety record
  - c. an in-house facility and staff available to fabricate and assemble components for skid-mounted systems
  - d. experience managing multi-party consortia
  - e. a record of commercializing skid-mounted chemical engineering technology

Integrators are NOT required to have developed ammonia synthesis technology under an ARPA-E award.

- 2) Technology developers: Entities with ARPA-E funded ammonia technologies ready for scaling and system integration. These technologies may require additional, but minimal, optimization and scaling up prior to integration.
- 3) Vendors: Entities with commercially available technology required for ammonia synthesis, such as electrolysis and air separation.
- 4) Demonstrators: Entities with capability to operate test sites with sufficient intermittent renewable electricity and water to produce and utilize ammonia at a rate of up to 1 metric ton per day



More detailed information on the rationale behind the need to scale up and integrate ammonia synthesis technology can be found in the recent [Request for Information \(RFI\) on Next Generation Ammonia System Integration Project DE-FOA-0002307](#). More detailed information on the background of the technology and competitiveness challenges ARPA-E seeks to address can be found in the [REFUEL FOA](#).

As a general matter, ARPA-E strongly encourages outstanding scientists and engineers from different organizations, scientific disciplines, and technology sectors to form new project teams. Interdisciplinary and cross-sector collaboration spanning organizational boundaries enables and accelerates the achievement of scientific and technological outcomes that were previously viewed as extremely difficult, if not impossible.

The Teaming Partner List is being compiled to facilitate the formation of new project teams. ARPA-E intends to make the Teaming Partner List available on ARPA-E eXCHANGE (<http://arpa-e-foa.energy.gov>), ARPA-E's online application portal, starting in June 2020. Once posted, the Teaming Partner List will be updated periodically, until the close of the Full Application period, to reflect new Teaming Partners who have provided their information.

Any organization that would like to be included on the Teaming Partner list should complete all required fields in the following link: <https://arpa-e-foa.energy.gov/Applicantprofile.aspx>. Required information includes: Organization Name, Contact Name, Contact Address, Contact Email, Contact Phone, Organization Type, Area of Technical Expertise, and Brief Description of Capabilities.

By submitting a response to this Notice, you consent to the publication of the above-referenced information. **By facilitating this Teaming Partner List, ARPA-E does not endorse or otherwise evaluate the qualifications of the entities that self-identify themselves for placement on the Teaming Partner List.** ARPA-E will not pay for the provision of any information, nor will it compensate any respondents for the development of such information. Responses submitted to other email addresses or by other means will not be considered.

**This Notice does not constitute a FOA. No FOA exists at this time.** Applicants must refer to the final FOA, expected to be issued in July 2020, for instructions on submitting an application and for the terms and conditions of funding.