

**U.S. Department of Energy
Advanced Research Projects Agency – Energy
and
Office of Science – Fusion Energy Sciences**

**Announcement of Teaming Partner List
for an upcoming
Joint Funding Opportunity Announcement**

**GALVANIZING ADVANCES IN MARKET-ALIGNED FUSION FOR AN
OVERABUNDANCE OF WATTS (GAMOW)**

The Advanced Research Projects Agency – Energy (ARPA-E) and the Office of Science – Fusion Energy Sciences (SC-FES) of the Department of Energy intend to issue a new joint Funding Opportunity Announcement (FOA) in February 2020 named GAMOW. This FOA will solicit applications for financial assistance to support innovative research and development (R&D) in a range of enabling technologies (beyond confinement plasma physics) that will be needed in commercially attractive fusion energy systems. Related to this planned FOA, a “Teaming Partner List” – described below - is being compiled to facilitate the formation of project teams that will submit applications in response to the FOA.

Key attributes for any commercially attractive energy system include economics, safety, RAMI (reliability, availability, maintainability, inspectability), and environmental sustainability. The GAMOW Program will prioritize R&D that will help establish both the technical and commercial viability of technologies in the following anticipated technical research categories:

- A. Fusion Energy Subsystems
 - i. Integrated first-wall and tritium-breeding blanket
 - ii. Plasma-facing components (PFC) and divertor
 - iii. Tritium fuel cycle
 - iv. High-temperature superconducting (HTS) magnets
 - v. High-efficiency, high-duty-cycle electrical drivers
- B. Cross-Cutting Research
 - i. Novel fusion materials, including methods to enable accelerated testing/qualification
 - ii. Advanced and additive manufacturing to revolutionize fusion R&D and system attractiveness

The high-level program objectives are:

- Substantial progress toward demonstrating technical feasibility and/or increases in performance in the technical categories listed above compared to present state-of-the-art
- Enabling significant device simplification or elimination of entire subsystems, in one or more commercially motivated fusion energy concepts
- Reduction in fusion energy system cost (capital and/or operations/maintenance) and/or development time/cost, including those of critical materials and component testing/qualification facilities
- Improvements in safety, RAMI, and/or environmental attractiveness of fusion energy systems.

As a general matter, ARPA-E and SC-FES strongly encourage 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 GAMOW 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 February 2020. The Teaming Partner List will be updated periodically, until the close of the Full Application period, to reflect the addition of 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 / SC-FES do not endorse or otherwise evaluate the qualifications of the entities that self-identify themselves for placement on the Teaming Partner List.** ARPA-E / SC-FES will not pay for the provision of any information, nor will it compensate any respondents for the development of such information. Responses submitted via email or 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 February 2020, for instructions on submitting an application and for the terms and conditions of funding.