



**U.S. Department of Energy
Advanced Research Projects Agency – Energy
Announcement of Teaming Partner List
for an upcoming Funding Opportunity Announcement:
Single pane Highly Insulating Efficient Lucid Designs (SHIELD)**

The Advanced Research Projects Agency – Energy (ARPA–E) intends to issue a new Funding Opportunity Announcement (FOA) in October, 2015 for technologies to transform the insulation and other qualities of existing single pane windows. In aggregate, these inefficient windows are substantial consumers of the nation’s heating energy. The overarching goal of the SHIELD program is to improve these windows without resorting to complete replacement. To achieve widespread adoption, the installed price must be minimized, and excellent qualities beyond insulation such as appearance, condensation resistance, and soundproofing will be needed. The demands upon the materials and structures will be challenging. ARPA–E held a workshop on this topic in November 2014; information on this workshop can be found at the webpage <http://ARPA-E.energy.gov/?q=workshop/single-pane-window-efficiency-workshop> .

Currently, ARPA–E anticipates that the SHIELD program will have two areas of interest.

1. Structures that are applied to or built up onto existing windowpanes.
2. Manufactured windowpanes or structures that replace the panes in existing single pane window sashes.

In order to realize the goals of the SHIELD program, expertise in the following areas may be useful: (i) transparent materials, coatings, and layers with very low thermal conductivity, (ii) materials, coatings, and layers with low thermal emissivity, (iii) glass pane design and manufacturing, (iv) window film design and manufacturing, (v) acoustical properties of materials, (vi) thermal and optical modeling of windows, (vii) window performance and lifetime testing, (viii) window soundproofing, and (ix) window marketing.

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, in July 2015. 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 October 2015, for instructions on submitting an application and for the terms and conditions of funding.