

## QUESTIONS AND ANSWERS

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PLEASE REFER TO THE GENERAL FAQs SECTION OF ARPA-E'S WEBSITE ([HTTP://ARPA-E.ENERGY.GOV/?Q=FAQ/GENERAL-QUESTIONS](http://arpa-e.energy.gov/?Q=FAQ/GENERAL-QUESTIONS)) FOR ANSWERS TO MANY GENERAL QUESTIONS ABOUT ARPA-E AND ARPA-E'S FUNDING OPPORTUNITY ANNOUNCEMENTS. ADDITIONAL QUESTIONS SPECIFIC TO THIS FOA ONLY ARE INCLUDED BELOW. PLEASE REVIEW ALL EXISTING GENERAL FAQs AND FOA-SPECIFIC QUESTIONS BEFORE SUBMITTING NEW QUESTIONS TO ARPA-E.

**I. Questions for week ending: OCTOBER 9, 2015**

**Q1. The Summary indicated that it is addressing heat that flows out through windows in cold weather.**

We have a technology, licensed from [name of national laboratory] that is an electrochromic thin film for retrofitting existing window panes. It will have a solar heat gain coefficient of approximately .05. Because our technology is reflective and not absorptive, it can be placed on a flexible substrate and applied to retrofit existing windows. It can also be applied to new window panes. This application is focused on reducing air conditioner usage by ~35%.

**My question is - will a retrofit and new window solution that can be applied to single pane windows to reduce air conditioner usage in warm weather months be eligible for this FOA?**

**ANSWER:** ARPA-E will review compliant and responsive Concept Paper submissions that propose to meet or exceed the Technical Performance Targets provided in Section I.E of the FOA. Section I.C.4 (Soundproofing and Other Synergistic Opportunities) of the FOA provides that "ARPA-E encourages applicants to propose the measurement and development of additional properties beyond the program objectives described above [in the FOA]." Thus, although the solar heat gain coefficient is not one of the targets listed in the FOA, it may be included as an additional target in submissions that primarily address the listed targets. Concept Paper submissions are compliant if they meet the "Compliant Criteria" listed in Section III.C.1 of the FOA, and are responsive if they meet or exceed the "Technical Performance Targets" provided in Section I.E the FOA and do not fall under the "Applications Specifically Not of Interest" listed in Section III.C.2 of the FOA.

**II. Questions for week ending: OCTOBER 23, 2015**

**Q2. Could ARPA-E provide some clarification regarding the goals of having two distinct programs; a SBIR/STTR program (DE-FOA-0001429) and a regular FOA (DE-FOA-0001425)? For example, the cost match is lower for the SBIR? Does the agency look more favorably at small businesses applying for the SBIR program?**

**ANSWER:** Applicants must choose the appropriate FOA for their submission based on the information provided in both FOAs. ARPA-E FOA No. DE-FOA-0001429 was published to communicate the unique requirements of the government-wide SBIR/STTR programs as set forth in their respective program directives. These may be found at <https://www.sbir.gov/>.

III. Questions for week ending: OCTOBER 30, 2015

**Q3. The SHIELD FOA states "FFRDCs are eligible to apply for funding as the lead organization for a Project Team or as a member of a Project Team, but not as a Standalone Applicant." Are there limitations to who FFRDCs may partner with? Specifically, would a team of two DOE labs (2 FFRDCs) be eligible to apply for funding and receive an award?**

**ANSWER:** Project teams may include more than one FFRDC; however, FFRDCs must partner with teams that include other eligible applicants (i.e. institutions of higher education, companies, research foundations, or trade and industry research collaborations).

**Q4. We have a PI - who is neither a US citizen nor a permanent resident – who is interested in submitting to this solicitation. [A domestic university] would be the submitting organization. Is there a restriction on his ability to function as the PI?**

**ANSWER:** Principal Investigators and other team members representing eligible, qualified institutions need not be U.S. citizens or permanent residents. This is not to be confused with foreign work limitations which are addressed in the General FAQ Section of ARPA-E's web site referenced above and the FOA. Per Section III.A.1 (Individuals) of the FOA, only U.S. citizens or permanent residents may apply to the FOA in their individual capacities.

Note: As set forth in ARPA-E's standard terms and conditions, Awardees are responsible for compliance with applicable Federal, state, and local laws and regulations when performing work under any ARPA-E award, including those regarding immigration and export control (refer to Attachment 1, Clause 4 of ARPA-E's Model Cooperative Agreement on eXCHANGE, found at [http://arpa-e.energy.gov/arpa-e-site-page/award-guidance#Cooperative Agreements](http://arpa-e.energy.gov/arpa-e-site-page/award-guidance#Cooperative%20Agreements)).

**Q5. Does SHIELD program exclude any double-pane or similar concept proposed to the program, although a duo-pane design can meet the criteria of either category I or II?**

**ANSWER:** ARPA-E will review compliant and responsive Concept Paper submissions that propose to meet or exceed the Technical Performance Targets provided in Section I.E of the FOA. Designs must achieve the Cat. I or Cat. II metrics with an added thickness less than 1/8 inch (Cat. I) or a total thickness of 1/4 inch (Cat. II). Double pane designs are not excluded if they meet these and the other criteria of the FOA.

**Q6. We plan to submit a proposal in response to the call DE-FOA-0001425 and would like to get a clarification in the eligibility of foreign entities. In the section III.A.3, it states that “all work by foreign entities must be performed by subsidiaries or affiliates incorporated in the United States (including U.S. territories)”. Our potential industrial partner is a foreign company with a number of subsidiaries in the US. While all the R&D work will be performed in the US, in the effort to maximize our success probability, we may use materials that were made in the foreign subsidiaries of the company in Japan. Furthermore, we may consult experts in those subsidiaries (if so, their time may be counted as part of the cost sharing). Will such practice be out of compliance with the guidance?**

**ANSWER:** Use of materials/supplies manufactured by foreign subsidiaries and consultations with employees of foreign subsidiaries would require approval of a foreign work waiver by ARPA-E. For additional information on foreign work waivers refer to the General FAQs (Applicant Eligibility Section) of ARPA-E’s web site referenced above.

#### **IV. Questions received by first deadline for questions: NOVEMBER 10, 2015**

**Q7. When measuring haze using a spectrophotometer, the total transmittance and the diffuse transmittance are both spectral properties (wavelength dependent). So a proper spectrum is needed to calculate the weighted transmittance value as well as haze in the visible range. According to ASTM D1003-61 (cited in the FOA), either CIE standard Illuminant C or Illuminant A can be used as the reference spectrum. Which of these two spectra is more appropriate in the scope of this project?**

**ANSWER:** Specification of the illuminant is not required for concept paper submissions. If an applicant chooses to specify one of the illuminants, then illuminant C is preferred.

**Q8. We are applying under the SHIELD FOA for small businesses, and have a team consisting of more than one small business. Section III.A.1 of the FOA states that the small business concern that is the lead organization must perform at least 66.7% of the work in Phase I and at least 50% of the work in Phase II and Phase IIS, as measured by the Total Project Cost.**

**Question 8.A: Does this percentage still apply if all members of the project team qualify as small businesses, or can the work be distributed other ways as determined by the team (as an example, 45% small business lead organization, 30% second small business team member, 25% other small business team members)**

**ANSWER:** Generally yes, but deviations from this requirement may be granted through written approval of the ARPA-E Contracting Officer. Specifically, the standard requirement is that a lead organization must perform the percentage of work for each Phase as set forth in Section III.A (Eligibility Information) of the FOA. This requires lead organizations seeking SBIR funding to perform at least 66.7% of the work in Phase I and at least 50% of the work in Phase II and Phase IIS, as measured by



the Total Project Cost. Lead organizations seeking STTR funding must perform at least 40% of the work in Phase I, Phase II, and/or Phase IIS, as measured by the Total Project Cost.

**Question 8.B: Is work done by individual consultants under direct contract to the small business lead organization counted in the percentage work share done by the lead organization?**

**ANSWER:** The answer depends on the specific circumstances and the terms of the awardee's contract with the consultant. Designations of status as a contractor or subrecipient are made by the Contracting Officer during award negotiations and in accordance with 2 C.F.R. § 200.330.

#### V. Questions for week ending: FEBRUARY 5, 2016

**Q9. My question concerns the definition of haze. In the FOA it is stated that: "Haze is defined as the percentage of an incident light beam that is scattered when it passes through a window." (p. 14 footnote 39). However, it is also stated in the technical performance targets that haze should be measured consistent with the procedures of ASTM D 1003. The ASTM D 1003 standard states that: "[Haze is] the percent of transmitted light that is scattered so that its direction deviates more than a specified angle from the direction of the incident beam". Thus, the former definition normalizes the scattered light by the incident intensity whereas the latter normalizes the scattered light by the total transmitted intensity. Which definition should be used in discussing haze? Different values are obtained when the window pane surfaces reflect incident light.**

**ANSWER:** ARPA-E will consider compliant and responsive Full Applications which propose to meet or exceed the Technical Performance Targets set forth in Section I.E of the FOA. Thus, haze should be estimated using the ASTM D 1003 procedure (illuminant C) as specified in Section I.E of the FOA.

#### VI. Questions for week ending: FEBRUARY 19, 2016

**Q10. To clarify, TT&O (Technology Transfer & Outreach) is no more and no less than 5% of total budget?**

**ANSWER:** Every Project Team must spend at least 5% of the Federal funding (i.e., the portion of the award that does not include the recipient's cost share) provided by ARPA-E on TT&O activities. Project Teams may not expend more than 5% of the Total Project Cost on TT&O activities without the prior approval of ARPA-E. Please see Section IV.G.8 (Technology Transfer and Outreach) of the FOA for additional information on ARPA-E's TT&O requirement.



CHANGING WHAT'S POSSIBLE

## DE-FOA-0001425 – SHIELD

Questions can be sent to [ARPA-E-CO@hq.doe.gov](mailto:ARPA-E-CO@hq.doe.gov)

FIRST DEADLINE FOR QUESTIONS TO ARPA-E-CO@HQ.DOE.GOV: 5 PM ET, NOVEMBER 10, 2015

SECOND DEADLINE FOR QUESTIONS TO ARPA-E-CO@HQ.DOE.GOV: 5 PM ET, FEBRUARY 26, 2016

**Q11. If we had state or county funded equipment as our cost share, do we include G&A as a component of its cost? For example if our equipment was worth \$500,000 and our G&A was 10%, would we say our cost share is \$500,000 or \$550,000? If it is \$500,000, can the G&A costs to support it be part of the federal government funded portion of the program?**

**ANSWER:** Provided the state or county funded the equipment for purchase and use on the ARPA-E sponsored project, G&A expenses may be allocated to shared direct costs and claimed as cost share with the ARPA-E Contracting Officer's prior approval per 2 C.F.R. § 200.306(c). ARPA-E personnel will discuss the specific facts surrounding cost share matters with prospective awardees during award negotiations.

### VII. Questions for week ending: FEBRUARY 26, 2016

**Q12. Regarding the FOA: DE-FOA-0001425: Based on the submitted concept paper, are investigators allowed to slightly change the title and select the different category (e.g. from cat. I to cat. II) for the full application?**

**ANSWER:** Yes, it is within the discretion of the applicant to select the appropriate title and category for their proposed project.