

## **DE-FOA-0001675: Request for Information:**

### **Teaming Partner List for Upcoming Funding Opportunity Announcement: Buildings Energy Efficiency Frontiers & Innovation Technologies (BENEFIT) - 2017**

DATE: October 3, 2016  
SUBJECT: Request for Information (RFI)

#### **Description**

The United States (U.S.) Department of Energy (DOE) Building Technologies Office (BTO) 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.

#### **Background**

Energy Efficiency and Renewable Energy (EERE) is compiling a Teaming Partner List to facilitate the formation of new project teams for the anticipated Buildings Energy Efficiency Frontiers & Innovation Technologies (BENEFIT) – 2017 Funding Opportunity Announcement (FOA). The Teaming Partner List will be available as an attachment to this RFI on EERE Exchange at <https://eere-Exchange.energy.gov>, and moved to FOA DE-FOA-0001632 when available. The Teaming Partner List will be updated periodically until the close of the Full Application period for the FOA, to reflect new Teaming Partners who have provided their information. Any organization that would like to be included on this list should submit the following information to [BENEFIT17Teaming@ee.doe.gov](mailto:BENEFIT17Teaming@ee.doe.gov):

1. Organization Name
2. Organizational Email Address
3. Organization Type, e.g.:
  - a. For-Profit Corporation
  - b. Non-Profit Corporation
  - c. Educational Institution
  - d. State/Local Government
  - e. National Lab
  - f. Utility
4. Organization Country
5. Area of Technical Expertise
6. Brief Description of Capabilities

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7. A statement of consent acknowledging permission for DOE to share the above-provided information with other entities as part of this teaming list for the purpose of facilitating teaming arrangements for the anticipated BENEFIT FOA.

By submitting a response to this Notice, consent to the publication of the above-referenced information is implicit. EERE requests that each organization create a general e-mail address to receive queries related to this Teaming RFI. **Direct personal e-mail addresses will not be posted.** By facilitating this Teaming Partner List, EERE does not endorse or otherwise evaluate the qualifications of the entities that identify themselves for placement on the Teaming Partner List. EERE 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.

## Purpose

The purpose of this RFI is to identify interested parties from industry, academia, research laboratories, government agencies, and other stakeholders on applied research and development (R&D) for technologies and systems that contribute to reductions in building energy consumption. EERE is particularly interested in R&D performers who have sufficient expertise and demonstrated experience in the industries and relevant sciences necessary for development within the following particular areas of interest:

### Area of Interest 1, Early-stage “Innovations” Open Topic

The Building Technologies Office (BTO) seeks proof of concept validation of leading-edge technologies, techniques, and tools for making buildings more energy efficient. Any innovative energy-efficiency technologies, approaches, or tools that show a clear application to residential and/or commercial buildings with significant primary energy savings potential are encouraged.

### Area of Interest 2, Advanced HVAC&R Topic

BTO seeks to accelerate the development of next generation heating, ventilation, air-conditioning, and refrigeration (HVAC&R) technologies, including both electric- and natural-gas-driven solutions. Experience in the development of low or near-zero global warming potential (GWP) solutions is of interest.

### *International Collaboration*

BTO encourages applicants that collaborate with both international partners and non-DOE domestic partners. This includes leveraging international partners by acknowledging that their contributions can accelerate the development of new HVAC&R technologies. International partners wishing to engage in a collaborative R&D effort between US researchers and researchers in other countries in order to increase the market viability of the proposed technologies to non-US markets as well as develop capacity for advanced HVAC&R research

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abroad are encouraged to submit a response to this RFI. DOE funds will only be used to fund researchers in the US. The international collaborators will be funded on their own or by their countries' government.

### **Area of Interest 3, Miscellaneous Electric Loads (MELs) Topic**

BTO seeks to reduce the energy consumption of electric loads outside of a building's core functions of HVAC&R, lighting, and water heating. Miscellaneous Electric Loads (MELs), including plug loads and hard-wired loads, currently consume approximately 30% (~6.1 quads) of total building energy in the residential sector and 36% (~6.5 quads) of total building energy in the commercial sector. These fractions are projected to grow to 34% (~6.9 quads) in the residential sector and 43% (~8.3 quads) in the commercial sector due to a combination of market growth from these loads and reduced consumption, due to improved efficiencies, from major energy end use technologies (HVAC&R, water heating, lighting, the building envelope, etc.). The focus of this topic is on electric-powered MELs which comprise 92% of all MELs for residential buildings, and 82% for commercial buildings.<sup>1</sup> Overarching technology approaches are solicited in order to target the diversity of the loads collectively since individually they represent a small portion (<1000 TBtu).

### **Area of Interest 4, Pre-Commercialization "Transitions" Open Topic**

BTO seeks to develop fully functional, pre-commercial products ready for demonstration in operational, occupied buildings and the associated data necessary to support these demonstrations in collaboration with a strategic industry partner. This topic will focus on advancing prototypes that can be reliably reproduced at a lab scale and that require further iteration to enable scale up and market deployment.

### **Disclaimer and Important Notes**

This RFI is not a Funding Opportunity Announcement (FOA); therefore, EERE is not accepting applications at this time. EERE may issue a FOA in the future based on or related to the content and responses to this RFI; however, EERE may also elect not to issue a FOA. There is no guarantee that a FOA will be issued as a result of this RFI. Responding to this RFI does not provide any advantage or disadvantage to potential applicants if EERE chooses to issue a FOA regarding the subject matter. Final details, including the anticipated award size, quantity, and timing of EERE funded awards, will be subject to Congressional appropriations and direction.

Any information obtained as a result of this RFI is intended to be used by the Government on a non-attribution basis for planning and strategy development; this RFI does not constitute a formal solicitation for proposals or abstracts. Your response to this notice will be treated as

<sup>1</sup> DOE Quadrennial Technology Review 2015, "Building Technologies Office Potential Energy Savings Analysis, Chapter 5 Supplemental Information," <http://energy.gov/downloads/chapter-5-increasing-efficiency-buildings-systems-and-technologies>

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information only. EERE will review and consider all responses in its formulation of program strategies for the identified materials of interest that are the subject of this request. EERE will not provide reimbursement for costs incurred in responding to this RFI. Respondents are advised that EERE is under no obligation to acknowledge receipt of the information received or provide feedback to respondents with respect to any information submitted under this RFI. Responses to this RFI do not bind EERE to any further actions related to this topic.

### **Proprietary Information**

Because information received in response to this RFI may be used to structure future programs and FOAs and/or otherwise be made available to the public, **respondents are strongly advised to NOT include any information in their responses that might be considered business sensitive, proprietary, or otherwise confidential.** If, however, a respondent chooses to submit business sensitive, proprietary, or otherwise confidential information, it must be clearly and conspicuously marked as such in the response.

Responses containing confidential, proprietary, or privileged information must be conspicuously marked as described below. Failure to comply with these marking requirements may result in the disclosure of the unmarked information under the Freedom of Information Act or otherwise. The U.S. Federal Government is not liable for the disclosure or use of unmarked information, and may use or disclose such information for any purpose.

If your response contains confidential, proprietary, or privileged information, you must include a cover sheet marked as follows identifying the specific pages containing confidential, proprietary, or privileged information:

#### **Notice of Restriction on Disclosure and Use of Data:**

Pages [List applicable pages] of this response may contain confidential, proprietary, or privileged information that is exempt from public disclosure. Such information shall be used or disclosed only for the purposes described in this RFI DE-FOA-0001675. The Government may use or disclose any information that is not appropriately marked or otherwise restricted, regardless of source.

In addition, (1) the header and footer of every page that contains confidential, proprietary, or privileged information must be marked as follows: “Contains Confidential, Proprietary, or Privileged Information Exempt from Public Disclosure” and (2) every line and paragraph containing proprietary, privileged, or trade secret information must be clearly marked with double brackets or highlighting.

### **Evaluation and Administration by Federal and Non-Federal Personnel**

Federal employees are subject to the non-disclosure requirements of a criminal statute, the Trade Secrets Act, 18 USC 1905. The Government may seek the advice of qualified non-Federal

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personnel. The Government may also use non-Federal personnel to conduct routine, nondiscretionary administrative activities. The respondents, by submitting their response, consent to EERE providing their response to non-Federal parties. Non-Federal parties given access to responses must be subject to an appropriate obligation of confidentiality prior to being given the access. Submissions may be reviewed by support contractors and private consultants.

### **Request for Information Response Guidelines**

Responses to this RFI must be submitted electronically to [BENEFIT17Teaming@ee.doe.gov](mailto:BENEFIT17Teaming@ee.doe.gov). It is recommended that responses be submitted no later than 5:00pm (ET) on November 14, 2016. However, responses will be accepted past this deadline and up to the Full Application deadline for FOA DE-FOA-0001632 which has not been determined at this time. Responses must be provided as attachments to an email. It is recommended that attachments with file sizes exceeding 25MB be compressed (i.e., zipped) to ensure message delivery. Responses must be provided as a Microsoft Word (.docx) attachment to the email, and be no more than 2 pages in length, 12 point font, 1 inch margins. Only electronic responses will be accepted.

In Summary: The Teaming Partner List will be available on EERE Exchange at <https://eere-Exchange.energy.gov> under this RFI initially, and moved to FOA DE-FOA-0001632 when available. Any organization that would like to be included on this list should submit the following information to [BENEFIT17Teaming@ee.doe.gov](mailto:BENEFIT17Teaming@ee.doe.gov):

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