

**Request for Information (RFI)**

**DE-FOA-0000720**

**“HVACR to Home Performance”**

**Heating, Ventilation, Air Conditioning and Refrigeration (HVACR) Contractor Expansion into Whole House Residential Energy Efficiency Services**

**Please note, the RFI submission deadline has been extended to June 1, 2012.**

**Date:** 4/10/2012

**Program Manager**/**Area**

Roland Risser, Program Manager

Building Technologies Program

Office of Energy Efficiency and Renewable Energy

U.S. Department of Energy (DOE)

**Information Requested**

DOE solicits input from all parties regarding how DOE can best support the expansion of HVACR contractors into residential whole-house energy efficiency services through new initiatives or by building upon existing “HVACR to Home Performance” efforts underway within the industry.

**Background and Rationale**

The Building Technologies Program (BTP) is part of the DOE Office of Energy Efficiency and Renewable Energy. BTP’s mission is to develop technologies, techniques, and tools for making buildings more energy efficient, productive, and affordable. This involves research, development, demonstration, and deployment activities in partnership with industry, government agencies, universities, and national laboratories. The BTP portfolio of activities includes improving the energy efficiency of building components and equipment and integrating them effectively using whole-building system design techniques.

The Better Buildings Neighborhood Program (BBNP) and the Home Performance with Energy Star Program (HPwES) are BTP deployment programs focused on helping consumers and the private sector capitalize on energy savings opportunities in existing residential buildings. These two programs recently initiated coordinated efforts supporting the expansion of traditional HVACR contractors into the home performance arena. Many BBNP grantees are utilizing HVACR contractors in their residential energy upgrade programs, and a forthcoming BBNP Business Models Guide will feature a detailed analysis of the challenges and opportunities for HVACR contractors expanding into home performance.[[1]](#footnote-2) Concurrently, DOE has initiated a process for enhancing the HPwES program and is exploring a much more prominent role for HVACR contractors.

The opportunity is significant. In 2010, heating and cooling accounted for 55% of residential site energy consumption.[[2]](#footnote-3) Moreover, estimates for the number of residential central air-conditioner, air-source heat pump, and furnace replacements or add-ons range from approximately 3-5 million units *per year*.[[3]](#footnote-4) Every time an HVAC unit is replaced or repaired—and each occasion an HVACR technician visits a home for a service appointment—represents an opportunity for a whole-house assessment and major energy efficiency and performance improvements in the HVAC unit itself, in the distribution system, and throughout the building envelope. HVACR contractors also have well-established relationships with homeowners that can be leveraged to introduce and sell the home performance concept.

The HVACR industry has already initiated several significant efforts to support contractor expansion into to home performance, including developing new technical standards; launching partnerships with established home performance organizations; forming HVACR industry councils and committees focused on home performance; and exploring new or expanded workforce certifications. Responses to this RFI will help DOE identify how it can best support these existing efforts or partner with the industry to develop new initiatives to encourage HVACR contractors to expand into whole-house energy efficiency services.

**Procurement Concept**

DOE may release a competitive Funding Opportunity Announcement (FOA) in Fiscal Year 2012 to support effort(s) that facilitate HVACR contactor expansion into home performance. DOE proposes to divide the FOA into the following three Topic Areas:

Topic 1 – HVACR Efficiency and System Performance

Topic 2 – HVACR to Home Performance Business Models

Topic 3 – HVACR Professional Certifications

Under a FOA, resulting awards are *anticipated* to include the following characteristics:

* Awards will be cooperative agreements
* Up to three awards will be issued, covering one or multiple topics
* Award period of 1 year, with the opportunity for additional funding for a subsequent 1 or 2 years
* Annual funding level is estimated at a total of $500,000 per year for all Topic Areas combined
* A minimum of 20% cost share will be required from Applicants

Potential Topic Areas and Proposed Activities

1. HVACR Efficiency and System Performance
   1. Increase contractor utilization of existing HVACR assessment, sizing, installation, and maintenance/servicing standards, manuals, and mechanical codes to improve overall HVACR (the unit and the distribution system) efficiency and performance.

Proposed activities:

* + 1. Develop user-friendly technical, training, or educational materials for contractors focused on improving the efficiency and performance of HVACR systems.
    2. Develop educational materials to drive consumer demand for high-quality HVACR services that prioritize efficiency and performance.
    3. Develop new or complementary verification methodologies and/or checklists for consumers or residential energy efficiency program administrators to verify contractor compliance with efficiency and performance-related HVACR standards, manuals, and mechanical codes.

1. HVACR to Home Performance Business Models
   1. Develop and disseminate business-oriented resources that support HVACR expansion into home performance.

Proposed activities:

* + 1. Prepare case studies, training materials and/or other resources for business owners on how to diversify their business model to offer whole-house energy performance services in addition to installing and servicing HVACR equipment. Highlight the challenges and benefits of a diversified contractor business model.
    2. Partner with a defined pool of contractors and one or more local programs to develop and pilot business and program models that encourage whole house energy performance services delivered by HVACR contractors.
  1. Facilitate HVACR contractor participation in whole-house residential energy efficiency programs (e.g. HPwES version 2.0).

Proposed activities:

* + 1. Develop educational, training and/or technical resources to promote HVACR contractor participation in whole-house residential energy efficiency programs.
    2. Establish an accreditation and verification process and a directory for HVACR contractors offering whole-house energy efficiency services.
    3. Facilitate access (through direct hiring or subcontracting) for the Weatherization Assistance Program workforce to private sector opportunities with HVACR contractors expanding into whole-house energy upgrade services.
    4. Develop educational, training and/or technical resources for HVACR contractors based on the assessment, installation, repair, and/or servicing requirements of HPwES version 2.0.

1. HVACR Professional Certifications
   1. Revise or expand scope of HVAC professional certifications to assess technician knowledge of how to diagnose and improve whole-house energy performance.

Proposed activities:

* + 1. Strengthen existing HVACR certifications by adding additional emphasis on distribution system performance, the integrity of the building envelope, and whole-house building science.
    2. Develop new HVACR whole house energy auditor certification.
    3. Expand existing or develop new HVACR certifications to assess knowledge of home performance business models.

**Information Requested**

DOE invites comments on any or all of the Potential Topic Areas and Proposed Activities outlined above. Of particular interest is information that would assist DOE in focusing its resources on activities with the highest potential for sustained market transformation in the HVACR industry beyond the scope of the potential grant period.

When addressing a specific Potential Topic Area and Proposed Activity, please include the proper reference to the outline, for example: 1)a.i.; 2)b.ii.; etc.

Questions

1. Are these the right topic areas and types of activities? If so, what are the most and least transformative?
2. If these are not the right topic areas and types of activities, what do you recommend DOE focus on instead?
3. DOE envisions that the awardee(s) would develop a partnership with other industry groups and the DOE to accomplish the activities identified in the potential FOA. Is this the right approach?
4. Is the timeframe (1 year) and funding amount (up to $500K) sufficient to accomplish the activities proposed?
5. DOE envisions that this potential FOA would fund an initial 1-year effort focused on one or more of the topic areas and proposed activities outlined above, but is considering including options for up to 2 additional years with additional funds. What should the focus of years two and three be?
6. Should a cost share be included as part of any future funding agreement? Is 20% cost share a reasonable requirement?

**Additional comments and information relevant to this RFI are also encouraged, including issues that are not specifically mentioned above. DOE welcomes broad input from the public as it develops a strategy for supporting HVACR contractors transitioning to home performance.**

**Request for Information Guidelines**

The sole purpose of this RFI is to gain input from the public regarding DOE support for HVACR industry engagement in residential energy efficiency activities. **This does not constitute a request for specific project proposals. DOE will not pay for information provided under this RFI, and there is no guarantee that future funding opportunities or other activities will be undertaken as a result of this RFI. A response to this RFI will not be viewed as a binding commitment to develop or pursue the project or ideas discussed. DOE may decide at a later date to issue a FOA based on consideration of the input received from this RFI or to not issue an announcement at all. Any information obtained as a result of this RFI is intended to be used by the Government on a non-attribution basis for program planning and procurement strategy development.** Responding to this RFI does not provide any advantage or disadvantage to potential applicants if DOE chooses to issue a FOA regarding this or any other area.

Please send your response (one attachment only) via email, with the title, "RFI Response" to HVACRHomePerformance@go.doe.gov. Your response should be limited to 5 pages, submitted in Microsoft Word as an email attachment to the address above, and received **no later than 8:00 PM Eastern Daylight Time on 6/1/2012.**

Respondents are requested to provide the following information at the start of their response to this RFI:

* Company/Institutional Name.
* Company/Institutional Contact.
* Address, phone number, and e-mail address.
* Sectors (Industry - HVACR; Industry - Other; Education; Government; Non-profit; Other). If either "Industry - Other" or "Other", please specify.
* Brief description of the operations and mission of business or institution (several sentences will suffice).

RESPONSES WILL NOT BE CONSIDERED CONFIDENTIAL. DO NOT INCLUDE ANY CONFIDENTIAL OR PROPRIETARY INFORMATION IN YOUR RESPONSE.

**Disclaimer**

This is an RFI issued solely for information and program planning purposes; this RFI does not constitute a formal solicitation for proposals or abstracts. Your response to this notice will be treated as information only. DOE will not provide reimbursement for costs incurred in responding to this RFI. Respondents are advised that DOE 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 DOE to any further actions related to this topic. DOE will not publish any report or compendium of responses received from this RFI.

Thank you for your participation and contribution to the efforts of the DOE Building Technologies Program.

1. The final draft of the Business Models Guide is forthcoming, but a review draft is available now: <http://www1.eere.energy.gov/buildings/betterbuildings/neighborhoods/pdfs/bbnp_business_model_guide_10-28-11.pdf> [↑](#footnote-ref-2)
2. <http://buildingsdatabook.eren.doe.gov/TableView.aspx?table=2.1.5> [↑](#footnote-ref-3)
3. <http://www.ahrinet.org/historical+data.aspx>; <http://www.jchs.harvard.edu/sites/jchs.harvard.edu/files/r11-1_6_appendix_tables.pdf> [↑](#footnote-ref-4)