



## **FY2012 Building Technologies Program Notice of Intent**

### **Energy Savings through Improved Mechanical Systems and Building Envelope Technologies**

In January 2012, the U.S. Department of Energy's (DOE) Building Technologies Program (BTP) intends to issue a Funding Opportunity Announcement (FOA) to develop innovative technologies for buildings that can have a tremendous impact on energy savings overall and lead to a market-ready solution within five years of project launch. This Notice of Intent is designed to provide an opportunity for potential applicants to begin developing partnerships and begin the process of gathering data to prepare their application.

As part of DOE's goal to catalyze the timely, material, and efficient transformation of the nation's energy system and secure U.S. leadership in clean energy technologies, BTP seeks to develop technologies, techniques, and tools for making buildings more energy efficient, productive, and affordable. BTP's goal is to create marketable technologies and design approaches that address energy consumption in existing and new buildings. For new construction, the ultimate residential goal is to produce homes on a community scale that use on average 40% to 100% less source energy. For commercial buildings, the goal is to achieve 50% to 70% whole building energy improvements, relative to American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) Standard 90.1-2004. These are both long-term goals for BTP with a focus on achieving these energy savings in a cost-effective manner.

In support of BTP's goals, DOE will seek applications with a focus on innovative mechanical systems or building envelope technologies that can be market-ready within 5 years from the time of award. Topic areas may include:

- Energy saving heating, ventilation and air Conditioning (HVAC) systems and components, which may include areas such as heat pumps, non-vapor compression technologies, compressors and heat exchangers.  
Energy saving building envelope and window systems and components, which may include areas such as thermal insulation, advanced roofing, highly insulating windows and advanced materials for retrofit solutions.

### **For all Topic Areas:**

- Applicants must demonstrate in their application how energy savings and materials and manufacturing costs are estimated to justify how the technology holds promise to approach, meet or exceed the FOA targets
- Applicants must demonstrate that the proposed technology has commercial viability which can be accomplished by:
  - including information about the market potential of the technology, cost considerations and an assessment of the competitive market;
  - involvement of or commitment from a company with a track record in this industry;
  - involvement of or commitment from a potential investor with a track record in this industry;
  - addressing how various market barriers might be overcome;
  - describing the manufacturing approach(es) that will most likely be used to scale up the proposed technologies;
  - demonstrating reasonable lifetimes comparable to existing technologies through some level of accelerated lifetime testing ;
  - demonstrating a feasible retrofitting scheme (if applicable)
- Applicants must demonstrate the potential for the technology to be market-ready in less than five years from project launch.
- Preference will be given to multidisciplinary teams where different team members complement each other and have expertise in different aspects of the technology. At least one identified team member must have business-related experience and will be largely responsible for various business-related tasks outlined in the work plan.
- This FOA is expected to support early stage prototyping and optimization of proposed technologies for which a proof-of-concept scientific demonstration already exists.
- DOE anticipates that \$9-12 million would be available for 5-8 new awards under this announcement. Awards are expected to run for up to 36 months. DOE funding per award is anticipated not to exceed \$1.2-1.5 million for the total project period.

Building Technologies Program webpage: <http://www1.eere.energy.gov/buildings/>

The pending FOA will be available electronically on the EERE eXCHANGE. Applications will be submitted via the EERE eXCHANGE at <http://eere.energy.gov/financing/exchange>. To gain access to the EERE eXCHANGE system, an applicant must first register and create an account on the main EERE eXCHANGE site. This account will then allow the user to register for any open EERE FOAs that are currently in eXCHANGE. It is recommended that each prospective applicant, whether acting as a team or a single entity, utilize one account as the appropriate contact information for each submission.

This Notice of Intent is intended to provide potential applicants advance notice of the upcoming BTP FOA. Prospective applicants should begin developing partnerships, formulating ideas, and gathering data in anticipation of the issuance of the FOA scheduled for late January or early February 2012.

Please do not respond or submit questions in response to this Notice of Intent. **NO APPLICATIONS WILL BE ACCEPTED THROUGH THIS NOTICE.** DOE reserves the right to change the requirements of any proposed FOA, issue a FOA involving only a portion of the elements listed, or not issue a FOA at all. Any of the information contained in this Notice of Intent is subject to change.