Building America Update – November 4, 2013

This announcement brings you the latest information about news, activities, and publications from the U.S. Department of Energy's (DOE) Building America program. Please forward this message to colleagues who may be interested in subscribing to future *Building America Update* newsletters.

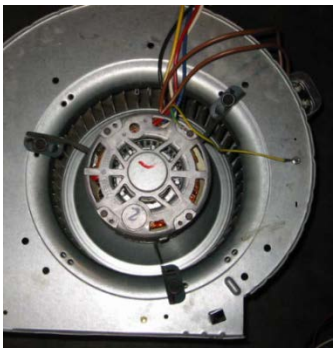
Housing Innovation Awards Recognize Champions of High-Performance Homes

The inaugural DOE Housing Innovation Awards were presented on October 4, 2013, to recognize the very best in innovation on the path to net-zero energy ready homes. The ceremony, held in conjunction with the Solar Decathlon 2013, recognized winners for DOE Challenge Home Builders, Home Performance with ENERGY STAR Participating Contractors, Building America Top Innovations, and Excellence in Building Science Education. Read the DOE Press Release to learn about these leaders who are helping to transform our nation's home building and retrofit industry to high-performance homes.

Calling All Students for the Challenge Home Design Competition!

DOE is launching a new nationwide competition that aims to provide the next generation of architects, engineers, construction managers, and entrepreneurs with skills and experience to start careers in the field of high-performance homes. Applications are currently being accepted for the DOE Challenge Home Student Design Competition, which seeks college student team innovations for homes that the home building industry can use as "models for success." Don't delay—**registration deadline is December 16, 2013**. Submissions will demonstrate the teams' knowledge and skills to design, analyze, and plan the construction of quality homes that meet or exceed the DOE Challenge Home requirements. Learn more about the competition, criteria, and deadlines.

Top Innovation Spotlight: Furnace Blower Efficiency



As homeowners switch on their forced-air furnaces in preparation for cold weather, they may be unaware of how furnace blowers can impact HVAC efficiency. In fact, studies show that the most common blowers have efficiencies of only 10%-15%. Researchers at Lawrence Berkeley National Laboratory (LBNL) garnered a 2013 Top Innovation award for their work on evaluating the performance of home furnace blowers for heating, cooling, and air distribution applications. This research led to the creation of a standard for rating blowers, credits for the use of good blowers in Federal tax credit programs and energy codes, and consideration in current Federal rulemaking procedures. LBNL estimates that homeowners who install high-performance furnace blowers with well-designed and installed ducts can achieve annual savings of 45% of fan energy or about 300 kWh per home. Learn about all of the 2013 Top Innovations.

Request for Information for the Prioritization Tool: Deadline is December 24, 2013

Be part of the solution! DOE's Building Technologies Office (BTO) has issued a Request for Information (RFI) seeking input for its Prioritization Tool, an objective framework that helps set program goals that accelerate the transformation of the U.S. building energy efficiency sector. Currently, the tool contains data on more than 500 energy efficiency measures, which cover a spectrum of market opportunities, including residential and commercial buildings, new and existing buildings, and industrial and outdoor applications.

. It performs extensive analyses using established methodology for calculating energy savings potential and the costs of conserved energy associated with each measure.

DOE seeks comments and information from industry, academia, research laboratories, government agencies, and other stakeholders on input and output data for all measures evaluated in the tool. This is solely a request for information and not a Funding Opportunity Announcement. Responses must be received by **5:00 p.m. EDT on December 24, 2013.** Learn more.

New Enhanced Features for Building America Solution Center

Building America's Solution Center links you to fast, free, and expert building science and energy efficiency information based on Building America research results. Find resources for key construction topics such as air sealing and insulation, HVAC components, windows, indoor air quality, and much more.

Recent updates to the Solution Center interface make navigation easier and faster, and include:

- An interactive home page with links to key search options
- Field kits that can be customized to organize your most important content
- Improved interface to accommodate mobile devices with varying screen resolutions
- Flexibility in saving and printing Measure Guides
- Updated Building Science Publications feature that can easily filter hundreds of building science resources
- A Help page that provides guidance for using the Solution Center.

DOE Challenge Home Trainings Continue through 2013

Since new specifications were introduced in January 2013, the DOE Challenge Home has grown to include more than 320 partners and more than 100 certified net-zero energy ready homes. Nearly half of the partners are third-party verifiers that are available to certify homes; the other half are builders who are committed to constructing DOE Challenge Homes that work better, live better, and last better. Another 30 training partners are helping to deliver Net-Zero Energy Ready trainings across the country—these trainings continue through 2013.

New Publications from Building America

The Building America Publications Library offers an extensive collection of technical reports, measure and strategy guidelines, case studies, and other resources to help you boost energy efficiency in new and existing homes. Also, the Building America Solution Center links you to expert building science and energy efficiency information based on Building America research results. Here is a sampling of some of our most recent publications:

Measure Guideline: Implementing a Plenum Truss for a Compact Air Distribution System
This Measure Guideline presents the steps to implement a compact duct system inside an attic bulkhead (plenum truss) of a one-story, slab-on-grade home. Less energy will be lost through ductwork if the ducts are contained within the thermal enclosure of the house. These measures are intended for the production builder working to meet the 2012 International Energy Conservation Code (IECC) requirements and keep the ductwork within the thermal enclosure of the house. This measure is appropriate for the builder wishing to avoid cathedralizing the insulation in the attic space (i.e., locating it at the underside of the roof deck rather than along the attic floor) or adding dropped soffits.

Evaluation of CNT Energy Savers Retrofit Packages Implemented in Chicago Multifamily Buildings
This project explored the feasibility of designing prescriptive retrofit measure packages for typical Chicago region multifamily buildings to achieve 25%–30% source energy savings. There is an urgent need to scale up energy efficiency retrofitting of Chicago's multifamily buildings to address rising energy costs and a

rapidly depleting rental stock. Aimed at retrofit program administrators and building science professionals, this research investigates the use of prescriptive retrofit packages as a time- and resource-effective approach to the process of retrofitting multifamily buildings.

Systems Evaluation at the Cool Energy House
In this project, Steven Winter Associates, Inc. monitored several advanced mechanical systems within a 2012 deep energy retrofitted home in the small Orlando suburb of Windermere, Florida. This report provides performance results of one of the home's heat pump water heaters and the whole-house dehumidifier over a six-month period. In addition to assessing the energy performance of these systems, this study sought to quantify potential comfort improvements over traditional systems. This information is applicable to researchers, designers, plumbers, and HVAC contractors.

Additional reports published recently are:

- Transformations, Inc.: Partnering to Build Net-Zero Energy Houses in Massachusetts
- Evaluation of Savings in Energy-Efficient Public Housing in the Pacific Northwest
- Moisture Durability with Vapor-Permeable Insulating Sheathing
- Overheating in Hot Water- and Steam-Heated Multifamily Buildings
- Steam System Balancing and Tuning for Multifamily Residential Buildings in Chicagoland -Second Year of Data Collection
- Analysis of Illinois Home Performance with ENERGY STAR® Measure Packages

Visit the Building America Publications Library to access the entire catalog of publications to help improve the efficiency of new and existing homes.

Want to learn more about Building America or help us spread the word about the program? View the new video, "What is Building America?" on DOE's YouTube channel to learn about how Building America aims to bridge the gap between homes with high energy costs and homes that are healthy, durable, and energy efficient.

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