### Building America Update - May 9, 2013



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

### **View Sessions from Building America 2013 Technical Update Meeting**

The Building America program held its 4<sup>th</sup> annual Technical Update meeting on April 29-30, 2013, in Denver, Colorado. The meeting showcased Building America's world-class building science expertise for high performance homes, and focused on eight critical questions facing the building industry today, such as:

- How Do We Retrofit the Tough Buildings?
- What are the Best Off-the-Shelf HVAC Solutions for Low-Load, High-Performance Homes and Apartments?
- When are Heat Pump Water Heaters the Best Solution?
- What are the Best Practices for Ventilation Specific to Multifamily Buildings?

Review the presentations and audio recordings of the meeting on the <u>Building America</u> website. And, <u>sign up</u> to receive notifications of upcoming Building America meetings!

### Interested in Becoming a Peer Reviewer for Building America?

Building America values the contribution of technical experts. On behalf of DOE, the National Renewable Energy Laboratory is seeking peer reviewers for the Building America publications. If you are interested in being a contributor to the program please contact Kristy Usnick.

### Call for Data: Seeking Blower Door Test Results from Multifamily Buildings

The Building America research team, <u>Consortium for Advanced Residential Buildings (CARB)</u>, is conducting research to develop an algorithm for predicting the fraction of total air leakage that is to the outside. Read the summary of <u>preliminary work</u> on this project. The current task is to build a sizeable database of test and unit characteristic data. The following information is needed:

- Blower door test results, both guarded and unguarded, for the same dwelling unit
- Dwelling unit characteristics including location within the building, floor area, window area, HVAC type
- Building characteristics including location, age, and insulation levels.

For more information or to send data, contact Dianne Griffiths.

## **DOE Challenge Home to Present Housing Innovation Awards**

DOE's Challenge Home <u>Housing Innovation Awards</u> recognize the very best in innovation on the path to zero net-energy ready homes. For the first time, the Housing Innovation Awards will be presented as part of the <u>U.S. Department of Energy Solar Decathlon 2013</u>—an award-winning competition that showcases the world's leading colleges and universities designing the most energy-efficient homes ever built. Awards will be given to Challenge Home Builders, Home Performance with Energy Star Contractors, and Building America <u>Top Innovations</u> at a breakfast ceremony on Friday, October 4, 2013, 8:30-10:30 AM. For details and to RSVP, visit the <u>Housing Innovations Award</u> website.

DOE is now accepting <u>applications</u> for its Home Builder Awards, which will be selected for each of four categories: Custom Builder; Production Builder; Affordable Home Builder; and Systems Builder. A single DOE Challenge Home National Grand Award Winner will be announced for each of these four categories at the Housing Innovations Award ceremony. Please submit the <u>application</u> by **July 1, 2013**.

# **Challenge Home Trainings Continue Through 2013**

In 2013, DOE <u>Challenge Home</u> is conducting Zero Net-Energy-Ready Home training with Sponsor Partners throughout the country. This 3.5-hour training provides builders with a comprehensive review of zero net-energy-ready home construction including the business case, detailed specifications, and opportunities to be recognized as an industry leader.

Please visit the Challenge Home <u>Events Calendar</u> to view and register for upcoming trainings. For questions about these trainings, contact <u>DOEChallengeHome@newportpartnersllc.com</u>.

### **New Publications from Building America**

The Building America <u>Publications Library</u> 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. In addition, the Building America <u>Solution Center</u> links you to fast, free, and expert building science and energy efficiency information based on <u>Building America</u> research results. Here is a sampling of some of our most recent publications:

#### Measure Guideline: Steam System Balancing and Tuning for Multifamily Residential Buildings

This measure guideline provides insights for improving the balance and tuning of steam systems to building owners, professionals involved in multifamily audits, and contractors. It provides readers an overview of one-pipe steam heating systems, guidelines for evaluating steam systems, typical costs and savings, and guidelines for ensuring quality installations. It also directs readers to additional resources for optimizing steam systems.

#### Project Overcoat: An Exploration of Exterior Insulation Strategies for 1-1/2 Story Roof Applications in Cold Climates

The development of an alternative method to interior-applied insulation strategies or exterior applied "band-aids" such as heat tapes and ice belts may help reduce energy needs of millions of 1-1/2 story homes while reducing the risk of ice dam formation. This report presents a potential strategy for energy improvement of the roof that is borrowed from new construction best practices: Here an "overcoat" of a continuous air, moisture, and thermal barrier is applied on the outside of the roof structure for improved overall performance. The continuous insulation of this approach facilitates a reduction in thermal bridging which could further reduce energy consumption and bring existing homes closer to meeting the Building America goals for energy reduction.

#### Strategy Guideline: Energy Retrofits for Low-Rise Multifamily Buildings in Cold Climates

This guideline explains the benefits of evaluating and identifying energy efficiency retrofit measures that could be made during renovation and maintenance of multifamily buildings. It focuses on low-rise multifamily structures (three or fewer stories) in a cold climate. Benefits include reduced energy use, lower operating and maintenance costs, improved durability of the structure, and increased occupant comfort. This guideline focuses on retrofit measures for roof repair or replacement, exterior wall repair or gut rehab, and eating system maintenance.

#### Wyandotte Neighborhood Stabilization Program: Retrofit of Two Homes

The Wyandotte NSP2 project aims to build 20 new houses and retrofit 20 existing houses in Wyandotte, MI. Wyandotte is part of a Michigan State Housing Development Authority-led consortium that is funded by HUD under the NSP2 program. The City of Wyandotte has also been awarded DOE EE&CBG funds that are being used to develop a district ground source heat pump (GSHP) system to service the project. This report details the retrofit of two existing houses in the program, and examines the energy efficiency recommendations for the homes.

#### Additional reports published recently are:

- Measure Guideline: Insulating and Air Sealing Attic Sprinklers
- Efficient Multifamily Homes in a Hot Humid Climate by Atlantic Housing Partners
- Retrofitting Las Vegas: Implementing Energy Efficiency in Two Las Vegas Homes
- Assessing Foundation Insulation Strategies for the 2012 International Energy Conservation Code in Cold Climate New Home Construction
- Cold Climate Foundation Retrofit Energy Savings: The Simulated Energy and Experimental Hygrothermal Performance of Foundation Wall Insulation Retrofit Measures -- Phase I, Energy Simulation

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

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