Building America Update – July 9, 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.

Join Us at the Building America Track at EEBA Conference

The Energy & Environmental Building Alliance (EEBA) Excellence in Building Conference will take place on September 24-26, 2013, in Phoenix, Arizona. The EEBA conference offers educational seminars, expert presenters, and hands-on demonstrations to help builders tap into the most up-to-date building science and home performance best practices and profit-building possibilities.

While there, plan to attend the Building America track, *Zero Net-Energy Ready Homes with Building America Innovations*, on September 24-25, which will highlight program activities and top innovations, including:

- Overview of Zero Net-Energy Ready Homes via DOE Challenge Home
- Business Solutions for Zero Net-Energy Ready Homes – Florida Case Studies
- Moisture Levels in a Double-Stud Cellulose Wall in Climate Zone 5: Monitoring Results
- The Cottle Zero Energy Passive House: An Aggressive Approach to Energy Efficiency
- Simplified Space Conditioning in Low Load Homes
- Revisiting Ducts in Attics
- Duct Junction Box Analysis and Recommendations
- Measured Performance and Guidance from a Large-Scale Cold-Climate DER Pilot Program
- Foundation (Basements and Crawlspaces) Insulation for Existing Homes
- Water Heating Solutions for All-Electric Homes and Apartments
- West Village: The First Planned Net Zero Community
- DOE Challenge Home Training for Builders

Deadline Extended for DOE Challenge Home Housing Innovation Awards

There is still time to submit your application for the DOE Challenge Home Housing Innovation Awards, which recognize the best innovations on the path to zero net-energy ready homes; **the deadline is August 1, 2013**. DOE Challenge Home builders are leading a major housing industry transformation to zero net-energy ready homes. The Housing Innovation Awards winners will be selected for each of four categories—Custom Builder; Production Builder; Affordable Home Builder; and Systems Builder—and presented at a ceremony at the Solar Decathlon 2013, on October 4, 2013. Be recognized as a national building leader by certifying your homes and applying for the Housing Innovation Awards!

Register for DOE Challenge Home Orientation Webinar and Trainings

Whether you are new to the DOE Challenge Home program or ready for your annual refresher, join us for an orientation webinar on July 17, 2013. This webinar will provide an overview of the Challenge Home program including the business case and some new tips on how to be recognized as an industry leader. Also, check the Challenge Home Events Calendar for Zero Net-Energy Ready Home trainings in your area, continuing through 2013. For questions about these trainings, contact DOEChallengeHome@newportpartnersllc.com.

Technology Solution: Homeowner's Guide to Window Air Conditioner Installation

Window air conditioners (ACs) are inexpensive, portable, and easy to install, making them a popular solution for off-the-shelf cooling. In fact, 7.5 million window ACs are purchased each year in the United States, more than all other home cooling equipment combined. However, they operate less efficiently than other cooling systems due to outdoor air infiltration through the unit (due to openings and fans), infiltration due to the installation, and cool air recirculation. A new Building America case study shows how proper window AC installation—using simple,

inexpensive hardware store materials—can increase efficiency, improve comfort, and lower utility bills with a payback of less than 1 year. To learn more, read the step-by-step guide and watch the YouTube video.

What is Building America? Watch the New Video

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.

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

Technology Solutions for Existing Homes: A Homeowner's Guide to Window Air Conditioner Installation for Efficiency and Comfort
This step-by-step guide illustrates proper installation of window air conditioning units in order to improve energy efficiency, cost savings, and comfort for homeowners**.**

Strategy Guideline: Compact Air Distribution Systems
This guideline outlines the benefits and challenges of using a compact air distribution system to handle the reduced loads and reduced air volume needed to condition the space within an energy efficient home. The decision criteria for a compact air distribution system must be determined early in the whole-house design process, considering both supply and return air design. However, careful installation of a compact air distribution system can result in lower material costs from smaller equipment, shorter duct runs, and fewer outlets; increased installation efficiencies, including ease of fitting the system into conditioned space; lower loads on a better balanced HVAC system, and overall improved energy efficiency of the home.

Commissioning of the Fresno, California, Retrofit Unoccupied Test House
Commissioning of instrumentation and limited short-term testing have been completed on a retrofit unoccupied test house in Fresno, California, which is used as a laboratory in which to evaluate several different methods of space conditioning distribution. This report provides background on the project, including specifications of the house and models used in its development, along with models to be evaluated through its operation.

Deep in Data: Empirical Data Based Software Accuracy Testing Using the Building America Field Data Repository
This paper describes progress toward developing a usable, standardized, empirical data-based software accuracy test suite using home energy consumption and building description data. Empirical data collected from around the United States have been translated into a uniform Home Performance Extensible Markup Language format that may enable software developers to create translators to their input schemes for efficient access to the data. The impact? This could allow for modeling many homes expediently, and thus implementing software accuracy test cases by applying the translated data.

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

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