Building America Update – March 11, 2013

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

Plan to Attend the 2013 Technical Update Meeting

If you haven't already registered for Building America's 2013 Technical Update Meeting scheduled for April 29-30, 2013, in Denver, Colorado, there is still time! This meeting will showcase Building America's world-class building science expertise for high performance homes, presented in a dynamic format of expert presentations, panel discussions, and audience participation. This meeting is free and open to the public. Space is limited, so please register soon!

DOE Challenge Home Trainings in Your Area

In 2013, DOE Challenge Home 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 Events Calendar to view and register for upcoming Zero Net Energy-Ready Home trainings. For questions about these trainings, contact DOEChallengeHome@newportpartnersllc.com

Remodeling Magazine Spotlight on Air Sealing

See the February 2013 issue of Remodeling magazine for a feature highlighting Building America's report *Air Sealing: A Guide for Contractors to Share with Homeowners*. This guide will help homeowners identify ways to make their homes more energy efficient, healthy, and comfortable; and provides contractors and remodelers with information to explain the value of air sealing measures to customers. You may also be interested in these other Building America publications that span across all climate zones:

- Energy Renovations: HVAC — A Guide for Contractors to Share with Homeowners offers tips about energy-efficient heating, ventilation, and cooling options to help homeowners cut their energy use, reduce carbon footprint, and increase their homes' comfort, health, and safety.
- Energy Performance Techniques and Technologies: Preserving Historic Homes (Volume 13) focuses on being aware of and adhering to historic designation regulations, and addressing health and safety issues while preserving the features that make historic homes appealing.
- Solar Thermal & Photovoltaic Systems (Volume 6) features current photovoltaic and solar thermal building practices by more than a dozen builders.

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. Here is a sampling of some of our most recent publications:

Evaluating Ventilation Systems for Existing Homes

In an effort to improve housing options near Las Vegas, Nevada, the Clark County Community Resources Division (CCCRD) performs substantial renovations to foreclosed homes. After dramatic energy, aesthetic, and health and safety improvements are made, homes are rented or sold to qualified residents. This report describes the evaluation and selection of ventilation systems for these homes, including key considerations when selecting an ideal system. The report then describes CCCRD's decision process with respect to ventilation.

Reducing Thermal Losses and Gains with Buried and Encapsulated Ducts in Hot-Humid Climates

The CARB team monitored three houses in Jacksonville, FL, to investigate the effectiveness of encapsulated and encapsulated/buried ducts in reducing thermal losses and gains from ductwork in unconditioned attics. Burying ductwork beneath loose-fill insulation has been identified as an effective method of reducing thermal losses and gains from ductwork in dry climates, but it is not applicable in humid climates where condensation may occur on the outside of the duct jacket. By encapsulating the ductwork in closed cell polyurethane foam (ccSPF) before burial beneath loose-fill mineral fiber insulation, the condensation potential may be reduced while increasing the R-value of the ductwork.

Retrofitting the Southeast: The Cool Energy House
The CARB team provided the technical engineering and building science support for a highly visible demonstration home that was unveiled at the National Association of Home Builders' International Builders Show on Feb. 9, 2012, in Orlando, FL. The two previous projects, the Las Vegas net-zero ReVISION House and the 2011 VISION and ReVISION houses in Orlando, met goals for energy efficiency, cost effectiveness, and information dissemination through multiple web-based venues. This report describes the deep energy retrofit of the Cool Energy House (CEH), which began as a mid-1990s two-story traditional specification house of about 4,000 ft^2 in the upscale Orlando suburb of Windermere.

Excavationless Exterior Foundation Insulation Exploratory Study
The key objective of this study was to investigate the feasibility of the development or adoption of technologies that would enable a large percentage of existing homes in cold climates to apply a combination 'excavationless' soil removal process with appropriate insulation and water management on the exterior of existing foundations at a low cost. The NorthernSTAR team's approach was to explore existing excavation and material technologies and systems to discover whether potential successful combinations existed**.**

Greenbelt Homes Pilot Energy Efficiency Program Phase 1 Summary: Existing Conditions and Baseline Energy Use
A multiyear pilot energy efficiency retrofit project has been undertaken by Greenbelt Homes, Inc, (GHI) a 1,566 co-operative of circa 1930 and '40 homes. The three predominate construction methods of the townhomes in the community are materials common to the area and climate zone including 8 in. CMU block, wood frame with brick veneer and wood frame with vinyl siding. GHI has established a pilot project that will serve as a basis for decision making for the roll out of a decade-long community upgrade program that will incorporate energy efficiency to the building envelope and equipment with the modernization of other systems like plumbing, mechanical equipment, and cladding.

Additional reports published recently are:

- Northwest Energy Efficient Manufactured Housing Program Specification Development
- Expert Meeting Report: Energy Savings You Can Bank On
- Measured Cooling Performance and Potential for Buried Duct Condensation in a 1991 Central Florida Retrofit Home

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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