

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.

### Test Your Skills: “What’s Wrong With These Roof Details?”

View the latest entry of Building America's ongoing series, “[What’s Wrong With This Picture?](#)” in the new issue of [Green Building Advisor](#) online newsletter. In this installment, readers are invited to spot as many errors as they can in the photo of the roof of a multifamily building in Minneapolis. Members of the [NorthernSTAR Building America Partnership](#) team developed this entry, and will provide answers based on their research on energy efficiency and building durability in Climate Zone 6.

Also, review past installments of this fun and informative series based on Building America research:

- [What’s Wrong With This Crawl Space?](#)
- [What’s Wrong With This Insulation Job?](#)
- [What’s Wrong With This Window Installation?](#)

### DOE Challenge Home News, Events, and Trainings

- Mark your calendars for DOE's Challenge Home [Housing Innovation Awards](#), which recognize the very best in innovation on the path to zero net-energy ready homes. These awards will be presented as part of the [U.S. Department of Energy Solar Decathlon 2013](#)—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 [Top Innovations](#) at a breakfast ceremony on Friday, October 4, 2013, 8:30-10:30 AM. For details and to RSVP, visit the [Housing Innovations Award](#) website.
- There is still time to [apply](#) for the 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 [application](#) by **July 1, 2013**.
- Check the Challenge Home [Events Calendar](#) for Zero Net-Energy-Ready Home trainings in your area, continuing through 2013. 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. For questions about these trainings, contact [DOEChallengeHome@newportpartnersllc.com](mailto:DOEChallengeHome@newportpartnersllc.com).
- Read the May issue of *Builder/Developer* magazine for an [article](#) about the construction of the first Challenge Home, which produces more energy than it uses, with building costs one-third less than originally planned. This 4,305 ft<sup>2</sup> custom home scores a HERS 57 without solar; with its photovoltaic system, the home performs better than zero net energy with a score of HERS -7.

### Building America Solution Center: Easy Access to World-Class Research

Check out the Building America [Solution Center](#), an online resource that links you to fast, free, and expert building science and energy efficiency information based on [Building America](#) research results. The user-friendly interface delivers a variety of resources for key construction topics. Find helpful tools including: contracting documents and specs; installation guides; codes information; CAD drawings; how-to videos; case studies; technical reports, and a new Field Kit, which you can populate with your favorite guides, images and CAD files. Also, plan to attend a **free webinar** at 1:00 PM ET on June 12, 2013, [Upgrading Your Tool Box: An Introduction to the Building America Solution Center](#), presented by DOE's Chief Architect, Sam Rashkin, and hosted by the GreenExpo35, a virtual community. **Note:** You will need to first register at the GreenExpo365 website in order to attend the webinar.

### Boost Energy Savings With an Efficient, Variable Speed Pool Pump

Now that summer is here, it may be time to evaluate the efficiency of your swimming pool pump. Pool pumps can use more electricity than any other appliance in the home—as much as three times the electricity used by your refrigerator. An

[article](#) in *Green Building Advisor* magazine discusses the energy savings that can be achieved by replacing traditional single speed pumps with variable speed pumps, based on a Building America [Measure Guideline report](#) on this topic.

## **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](#).

## **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:

### [Measure Guideline: Condensing Boilers – Control Strategies for Optimizing Performance and Comfort in Residential Applications](#)

This guide is intended for designers and installers of hydronic heating systems interested in maximizing the overall system efficiency of condensing boilers when coupled with baseboard convectors. It is applicable to new and retrofit projects.

### [Moisture Research - Optimizing Wall Assemblies](#)

In this project, the Consortium for Advanced Residential Buildings (CARB) team evaluated several different configurations of wall assemblies to determine the accuracy of moisture modeling and make recommendations to ensure durable, efficient assemblies. WUFI and THERM were used to model the hygrothermal and heat transfer characteristics of these walls. Wall assemblies evaluated included code minimum walls using spray foam insulation and fiberglass batts, high R-value walls at least 12 in. thick (R-40 and R-60 assemblies), and brick walls with interior insulation.

### [Expert Meeting Report: Foundations Research Results](#)

The NorthernSTAR Building America Partnership team held an expert meeting to present its research on foundations on November 15, 2011, in Minneapolis, MN. Key results were: greater understanding of the role of moisture transport through foundation and insulation materials and its potential impact on building durability; greater understanding of the role of foundation type in the process of selecting an insulation system for energy performance and building durability; need for research to quantify the risks associated with insulation processes to better enable users to weigh costs and benefits against the existing conditions of a home; need for improved performance modeling capabilities that address variations in foundation types and soil conditions.

Additional reports published recently are:

- [Laboratory Evaluation of Energy Recovery Ventilators](#)
- [Expert Meeting Report: Exploring the Disconnect Between Rated and Field Performance of Water Heating Systems](#)
- [Expert Meeting Report: Windows Options for New and Existing Homes](#)
- [Building America Systems Integration Research Annual Report: FY 2012](#).

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

***Please forward this announcement to colleagues who may be interested in subscribing to future Building America Updates.***