

# ENERGY.GOV

Office of Energy Efficiency & Renewable Energy

## DOE Zero Energy Ready Home

### May 2015

## **A Note From Sam Rashkin: Good Government...Who Knew?**

I just got a media request asking how the DOE Zero Energy Ready Home program integrates with Passive House. However, when I thought about it, I realized that the more important question was how ALL of the voluntary, high-performance federal government home programs integrate with Passive House. The surprising answer to that question is that we have an incredibly thoughtful set of programs for the housing industry. Yes, in fact good government.

This began with a strong DOE commitment to align Zero Energy Ready Home (ZERH) with ENERGY STAR Certified Homes. Then, Zero Energy Ready Home coordinated with Passive House to form a continuum of high-performance label options for home builders. The staircase diagram below shows the resulting relationships. A good basic home begins with a code home complying with 2009 or more recent version of the International Energy Conservation Code (IECC). Then, the ENERGY STAR Certified Home label at the first step of the staircase assures above code performance with comprehensive building science. The next step is the DOE Zero Energy Ready Home program which makes ENERGY STAR Certified Home and EPA Indoor airPLUS a prerequisite to lock in critical building science and indoor air quality and adds best practices from the DOE Building America program. This label ensures high-performance homes so energy efficient they can offset most or all annual energy consumption with renewable energy. Lastly, Passive House with PHIUS Certification makes DOE Zero Energy Ready Home a prerequisite and then squeezes the last drop of additional efficiency for greater resilience and minimum energy consumption. Thus, the housing industry has a clear path for progressively more efficient homes that also ensures high-performance. Now let's all work together moving builders along this path.

## High-Performance Home Staircase



### 2015 Race to Zero Student Design Competition Changes Lives

The [2015 Race to Zero Student Design Competition](#) had 33 teams from 27 U.S. and Canadian universities competing to design cost-effective, zero energy homes for mainstream builders. It was another amazing event where students learned to integrate building science into a market-ready housing solution; effectively collaborate in multi-disciplinary teams; cogently present complex design concepts to experts and learn from their input; benchmark their efforts with other schools across the U.S. and Canada; be inspired from some of our nation's most engaging thought leaders on high-performance homes; and make important career connections. In other words, this was a weekend that changed lives.

Below are the winners of the annual event, which took place on April 18-20, 2015, at the National Renewable Energy Laboratory in Golden, Colo.

#### **Grand Winner**

- Opti-MN Impact House – Opti-MN University of Minnesota, Minneapolis, MN

### ***Grand Winner Finalists***

- Mountain Laurel Home – Team App (Appalachian State University, Boone, NC)
- The Three Rivers House – Three Rivers Design (Carnegie Mellon University, Pittsburgh, PA)
- The Scott Home – Penn College Williamsport (Pennsylvania College of Technology Williamsport, Williamsport, PA)
- The Suncatcher Cottage – Team Illinois (University of Illinois at Urbana-Champaign, Champaign, IL)

### ***Analysis Excellence***

- HouZe GT – The Zeroes (Georgia Institute of Technology, Atlanta, GA)
- The Corner House – [DAS]Haus (Ryerson University, Toronto, Ontario, Canada)
- The Serrano House – Negawatt Team (University of California, Berkeley, Berkeley, CA)
- The TownHauZ – Invent the Future (Virginia Tech, Blacksburg, VA)

### ***Design Excellence***

- H4: Heritage Homes – Heritage Homes (Penn State University, State College, PA)
- Independence Heights Net Zero Ready Home – Prairie View A&M (Prairie View A&M University, Prairie View, TX)
- Provenance Lane – Provenance Lane (Ryerson University Dept. of Architectural Science, Toronto, Ontario, Canada)
- Ø-Zone Residence - Ø-Zone (Ryerson University Dept. of Architectural Science, Toronto, Ontario, Canada)
- Desert Sunrise Home – Desert Sunrise (University of Las Vegas, Las Vegas, NV)

### ***Systems Integration Excellence***

- Habitat for Humanity Net Zero Energy Home – Redbird Red Team (Illinois State University, Normal, IL)
- H4: Heritage Homes – Heritage Homes (Penn State University, State College, PA)
- Ø-Zone Residence - Ø-Zone (Ryerson University Dept. of Architectural Science, Toronto, Ontario, Canada)
- The TownHauZ – Invent the Future (Virginia Tech, Blacksburg, VA)

## Are Your Homeowners This Happy?

At the [2014 Housing Innovation Awards](#), DOE recognized 28 leaders who represent the very best in innovation on the path to zero energy ready homes. One of the winners, [Promethean Homes](#), recently sent some news from the owners of their award-winning home. Bob Gross and Jean Shepard, whose all electric home has utility bills that average \$70 per month, said:

*"We're appreciating the comfortable, steady temperatures in the house, day and night. No drafts, no sudden changes. The prompt hot water delivery is quite a treat. We rarely hear outside noises. Barking dogs and neighbors' power tools are the only exception. Otherwise it's a joy. Our air exchanger appears to trap any fine dust and we don't get to breathe it - so we've been quite healthy since we moved in at the beginning of last July. Our electric bills have been remarkably low - and that's been a welcome change. Three cheers for Promethean Homes!"*

Are your ZERH homeowners this happy? Let us know by applying to the 2015 Housing Innovation Awards. [Applications](#) are now available!

This year, winners will be selected for each of four categories: custom, production, multifamily, and affordable homes. One DOE ZERH Grand Housing Innovation Award Winner will be announced from among the winners in each of these categories at the 2015 Housing Innovation Awards Ceremony held on October 6, 2015, at the [EEBA Excellence in Building Conference & Expo](#) in Denver, Colorado.

Leading builders who have certified ZERH homes within the last year (April 1, 2014 – May 31, 2015, that have not been formerly recognized) will not want to miss this opportunity for recognition that also includes complimentary registration to the full EEBA conference, a networking poster session following the ceremony and opportunities to present at the conference education sessions.

Each winner receives a customized case study highlighting their winning home featured on the Housing Innovation Awards [webpage](#) and in their profile on the DOE Zero Energy Ready Home [partner locator](#). Winners will also receive a page featuring their award-winning home on the DOE Tour of Zero, a virtual home tour designed for homebuyers that will launch in June 2015. [Applications](#) are due May 31, 2015.

Contact [zero@newportpartnersllc.com](mailto:zero@newportpartnersllc.com) or 301-889-0017, with any questions about the Housing Innovation Awards or your application.

## DOE Zero Energy Ready Specs “Rev05” Set To Go Live

Revision 5 of the DOE Zero Energy Ready Home National Program Requirements will go live on May 11, 2015. The updated specs:

- Explains how the DOE Zero Energy Ready Home program works in states with the 2012 IECC
- Defines an extended phase-in period for the new ENERGY STAR windows specs
- Adds clarifications to the efficient hot water distribution provisions

Perhaps most significant for many of our partners, Rev05 establishes the solar hot water-ready provisions as encouraged, rather than a mandatory specification. The PV-ready provisions will still apply (subject to the exceptions already found in the program specs).

The Rev05 specs go into effect for homes permitted on or after 8/11/2015. Any updates in the Rev05 specs which are advantageous to a builder, such as the change to the solar hot water-ready provisions, can be implemented immediately.

Please join us on Wednesday May 13 at Noon Eastern for a [webinar](#) reviewing the Rev05 changes – give us an hour and we can make sense of it for you!

## The Value of a Zero Energy Ready Home

The DOE Zero Energy Ready Home program has launched a partnership for lenders, hoping to improve the relationship between energy efficiency and appraisal values. If you have a preferred lender, encourage them to become DOE Zero Energy Ready Home [Lender Partners](#) today.

## Upcoming Webinars

**Title:** Updates to the DOE Zero Energy Ready Home Specs - Rev05

**Date and Time:** Wed, May 13, 2015 12:00 PM - 1:00 PM EDT

**Presenters:** *Sam Rashkin, Chief Architect, US DOE*

*Jamie Lyons, Newport Partners LLC*

**Description:** In the year since DOE last updated the DOE Zero Energy Ready Home specs, we've continued to track our partner feedback and other industry issues. This brings us to the release of Revision 05, which changes the solar hot water ready provisions to "recommended", incorporates a phase-in period for the new ENERGY STAR window specs, and spells out how the program works in states where the 2012 IECC is in place. This one-hour webinar will cover the key changes in the DOE Zero Energy Ready Homes specs and explain their significance to our builder, rater, and designer partners.

[Register Now](#)

**Title:** ZERH Lighting Efficiency

**Date and Time:** May 21, 2015 12:00PM to 1:15PM EDT

**Presenters:** *David Brignati, Architect, Newport Ventures*

*Brooke Silber, Lighting Designer, Jan & Brooke Luminae*

**Description:** LED lighting offers efficiency and performance benefits we've never seen in traditional lighting technologies. Commercial buildings have seen rapid growth in LED deployment, and in the residential arena leading builders are now integrating LED lighting packages. And as with any new building system, there are integration challenges along with the process of consumer understanding and acceptance. This webinar will discuss builder integration of LEDs including specification, costs, design approaches, energy-related benefits, and consumer reactions.

[Register Now](#)

## **Virtual Office Hours**

*Get the Answers You Need Quickly & Efficiently!*

Whether you're new to DOE Zero Energy Ready Home or have been involved for a few years, our partners often have a lingering question or two about qualifying a home. If you're not in the mood to search another PDF or website for the answer – let us help! We talk to partners daily and realize that most of our partners could benefit from our answers and those of their peers. To reach more people and to answer questions you might not have thought about, we are rolling out Virtual Office Hours for four weeks beginning in late May. The webinar based Virtual Office Hours will allow raters and builders to ask our program expert's specific questions (no more mute!) about rating and certifying DOE Zero Energy Ready Homes. The attendance for each session will be capped at 15 participants to allow for conversation and the sharing of ideas and solutions. Come join us and get the answers you need...quickly and easily! Register now to reserve your seat at the virtual table!

### [Register Now](#)

- Tuesday, May 26, 2015, 12-1 PM ET
- Tuesday, June 2, 2015, 12-1 PM ET
- Tuesday, June 9, 2015, 12-1 PM ET
- Tuesday, June 16, 2015, 12-1 PM ET

### Use the Tools!

As a Zero Energy Ready Home partner there are a number of different marketing tools available to you. [Login](#) to your partner profile and click on "Marketing Materials" to access both the certification and partner logos, a customized point of sale fact sheet, and a customized brochure. Be sure to check the information in your profile to make sure it is accurate and up to date. The information you input here is what populates the your profile page on the [partner locator](#). Take advantage of all the great tools ZERH provides you!

Update your subscriptions, modify your password or email address, or stop subscriptions at any time on your [subscriber preferences page](#). You will need your email address to log in. If you have questions or problems with the subscription service, contact [support@govdelivery.com](mailto:support@govdelivery.com).

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