DOE Zero Energy Ready Home

How to Upserve Your High-Performance Builders

Sam Bowles
DOE Zero Energy Ready Home

Chrissi Antonopoulos
PNNL
Role of the Rater

Five Key Consumer Experiences

- Sales
- Community
- Quality
- Design
- Performance

You Are Here
# Role of the Rater

## What builders expect from HERS raters

<table>
<thead>
<tr>
<th>Building science experts</th>
<th>Advise, not just critique</th>
<th>Provide evidence</th>
<th>Credibility</th>
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</table>

## How raters can exceed expectations

<table>
<thead>
<tr>
<th>Back your builder</th>
<th>Provide marketing assistance</th>
<th>Turn lower HERS into higher $$$</th>
<th>Effectively communicate value</th>
</tr>
</thead>
</table>

The Informed Buyer
Informed Buyers…

…will know more about

Thermal Defects
Informed Buyers…

…will know more about Advanced Windows
Informed Buyers…

…will know more about Moisture Risks
Informed Buyers…

…will know more about Energy Efficiency
Informed Buyers...

...will know more about

Ensured Comfort
Informed Buyers…

…will know more about Health Risks
Informed Buyers…

…will know more about

Trusted Performance
Informed Buyers…

…will know more about True Cost

Lower True Cost

Monthly Utility Bill

Monthly Mortgage

CODE

Monthly Utility Bill

Monthly Mortgage

ZERO

Energy Ready Home
Informed Buyers…

…will know more about a

Better Home Experience
How do consumers decide?
Effective Communication

Are You Communicating Effectively?
Communication Strategy

• **Simple** Core Message
• **Showcase** Better Experience
• **Trust** with Voice of Authority
• **Clarity** with Contrast
Simple Core Message
Are you ready for a home that lives, works, and lasts better? The home of the future - a better home - is available today. Take a virtual tour of homes that are so energy efficient a renewable energy system can offset all or most of their annual energy consumption. These award-winning homes are independently certified to meet DOE Zero Energy Ready Home guidelines and constructed by a select group of top builders. Zero Energy Ready Home is part of the U.S. Department of Energy's Better Buildings initiative. Better Buildings aims to make commercial, industrial, public, and residential buildings 20 percent more energy efficient over the next decade.

Click on a climate zone to see homes in that region.
Simple: Better Home Experience

Largest Purchase of a Lifetime
Simple: Better Home Experience

Lives Better

ZERO Energy Ready Home
Simple: Better Home Experience

- $10,000's Savings
- Cozy Indoors
- Total Comfort
- Healthy Living
- Peace-of-Mind
- Quality Assurance
- Future Ready
Simple: Better Home Experience

Live Better...
Visit the
Zero Energy
Ready Home
Website

https://energy.gov/eere/buildings/zero-energy-ready-home-homebuyers
Showcase Experiences
Showcase: Housing Innovation Awards

Housing Innovation Awards Feeds ‘Tour of Zero’
Elements Income Qualified Rowhomes at Stapleton

Starting at $215,900

2 - 3 Bedrooms | 2 Car Garage | 1.5 - 2.6 Bathrooms | 1,213 - 1,330 Square Feet

Community Details

PLEASE NOTE: THESE ARE INCOME RESTRICTED ROWHOMES. Elements Rowhomes are subject to the Denver Inclusionary Housing guidelines which include a deed restriction. Purchasers must meet minimum income and cannot exceed the maximum allowable income for their household size. You must also demonstrate that your new housing payment (a combination of the mortgage, interest, taxes, insurance, and HOA dues) will not exceed 30% of your total household monthly gross income. The Elements Collection will offer high-quality affordable townhomes in Stapleton’s Beeler Park and Northfield neighborhoods. Each home will have great proximity to shopping, dining and entertainment as well as access to incredible schools, pools and the other amenities that foster a strong community lifestyle for its residents. These homes will offer two and three-bedroom floorplans ranging between 1,213 and 1,330 square feet and have a starting price point of $215,900. Each home will offer the comfort and energy efficiency that Thrive is known for, including their trademark double walls, solar panels and other zero energy ready features.

Yavapai Hills
Prescott, Arizona

SALES OPEN
Case Studies

BrightLeaf Homes

**2017 HOUSING INNOVATION AWARD WINNER**

**PROJECT DATA**
- **Layout:** 5 bdrm, 4 bath, 2 fl + bsmt, 3,120 ft²
- **Climate:** IECC SA, cold
- **Completed:** February 2016
- **Category:** custom spec

**MODELED PERFORMANCE DATA**
- **HERS Index:** without PV 38, with PV NA
- **Projected Annual Energy Costs:** without PV $1,650, with PV $NA
- **Projected Annual Energy Cost Savings:** (vs typical new homes) without PV $1,150, with PV $NA
- **Annual Energy Savings:** without PV 4,400 kWh, 960 therms; with PV NA

**KEY FEATURE**
- **Walls:** Staggered 2x4s 12” cellulose, ½” coated OSB, openings get flexible Flash
- **Roof:** 24” o.c. engineered 24” overhangs, 30-lb felt
- **Attic:** Vented: all top plates foamed, 9” x 6” blown cellulose, raised-heel trusses.
- **Foundation:** Basement; exterior 3” rigid XPS plus dimpled plastic drain mat, 2” XPS under slab, 10-mil vapor barrier.
- **Windows:** Vinyl-frame triple-pane, argon fill, low-e, U=0.22-0.38, SHGC=0.24.
- **Air Sealing:** 1.1 ACH 50.
- **Ventilation:** Air-cycler-controlled fresh air intake balanced to timer exhaust fans.
- **HVAC:** 96% AFUE gas furnace, 14 SEER AC. Ducts un-insulated, in conditioned space.
- **Hot Water:** Tankless gas, 0.97 EF.
- **Lighting:** 97% LED.
- **Appliances:** ENERGY STAR dishwasher, refrigerator, clothes washer, ceiling fans.
- **Solar:** None.
- **Water Conservation:** 100% WaterSense fixtures; compact plumbing layout.
- **Energy Management System:** None.
- **Other:** No-low-VOC primer, paint, cabinets, flooring. Pre-wired for electric car charger.

Weather-resistant fiber cement siding, structural roof truss connector screws, oversized foundation bolt washers. Graded for positive slope on all sides.

**CONTACT**
Rick Thompson
630-254-9745
rick@mybrightleafhome.com

For more information on the DOE Zero Energy Ready Home program, go to http://energy.gov/energystorage/zero-energy-ready-home or scan the QR code.
Social Media

Recognition in the Field of Sustainable Building and Design

**Dwell Development** received the 2018 Builder's Choice Custom Home Design Award. This year's design awards jury—Deborah Lassen of Washington, D.C.-based Zephyr Interiors, architect Way Graham of Projects in Design, and Peter Vella of Boston-based Peter Vella Architects—launched projects that express a range of uniqueness. These homes, designed from custom designs that respect the heritage of the landscape, are exemplary.

**Emerald Star** Zero Energy from the International Living Institute

Dwell Development's Emerald Star residences certified under the ZEH standard for the 15th year in a row. The Zero Energy program rewards the most energy-efficient buildings, both commercial and residential. The program must meet specific criteria, including the program's most notable category: Residential.

**Dwell Development**

October 30, 2018
A few more photos from the U.S. Department of Energy's Housing Innovation Awards earlier this month. Still feeling so honored to be named the Grand Winner in the Custom Spec category!
Showcase: Tour of Zero

Are you ready for a home that lives, works, and lasts better? The home of the future - a better home - is available today. Take a virtual tour of homes that are so energy efficient a renewable energy system can offset all or most of their annual energy consumption. These award-winning homes are independently certified to meet DOE Zero Energy Ready Home guidelines and constructed by a select group of top builders. Zero Energy Ready Home is part of the U.S. Department of Energy's Better Buildings initiative. Better Buildings aims to make commercial, industrial, public, and residential buildings 20 percent more energy efficient over the next decade.

Experience Showcase

Click on a climate zone map to view homes in that region.

The Home of the Future Today Video (Text Version)
### Tour of Zero

**Search:**

**Showing 1 to 13 of 13 entries (filtered from 123 total entries)**

<table>
<thead>
<tr>
<th>TOUR THESE HOMES</th>
<th>BUILDER</th>
<th>LOCATION</th>
<th>HIA WINNER</th>
<th>CLIMATE ZONE</th>
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<tr>
<td>Air Park Drive</td>
<td>Addison Homes</td>
<td>Greer, SC</td>
<td>2016 HM</td>
<td>MIXED-HUMID</td>
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<td>Cobbler Lane</td>
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<td>Habitat for Humanity of Catawba Valley</td>
<td>Hickory, NC</td>
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<td>The Villas at Rocketts Landing</td>
<td>Health E Community Enterprises of Virginia</td>
<td>Williamsburg, VA</td>
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<td>Atlanta, GA</td>
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<td>High-Performance Bungalow</td>
<td>Imery &amp; Co.</td>
<td>Athens, GA</td>
<td>2016</td>
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<tr>
<td>EXIT-O House</td>
<td>John Hubert Associates</td>
<td>Wyncote, PA</td>
<td>2014</td>
<td>MIXED-HUMID</td>
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<tr>
<td>Charlottesville Infill</td>
<td>Promethean Homes</td>
<td>Steeles Tavern, VA</td>
<td>2014</td>
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<td>First DOE Zero Energy Ready Manufactured Home</td>
<td>Southern Energy Homes</td>
<td>Russelville, AL</td>
<td>2014</td>
<td>MIXED-HUMID</td>
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<tr>
<td>Proud Green Home</td>
<td>The Imery Group</td>
<td>Athens, GA</td>
<td>2014</td>
<td>MIXED-HUMID</td>
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Tour of Zero

DOE Tour of Zero: The Emery by Addison Homes

“THE DOE ZERO ENERGY READY HOME PROGRAM HAS SET A STANDARD THAT IS TRULY ‘BEST IN CLASS’ AND IS PULLING OUR INDUSTRY TOWARD A QUALITY REVOLUTION.”

Consumer Experience
"THE DOE ZERO ENERGY READY HOME PROGRAM HAS SET A STANDARD THAT IS TRULY ‘BEST IN CLASS’ AND IS PULLING OUR INDUSTRY TOWARD A QUALITY REVOLUTION."

DOE Zero Energy Ready Home: Partner Profile
Addison Homes, LLC

Tour of Zero Innovations (Power Words)

Consumer Experience Video

Key Stats

Contact Info

Innovations (Power Words)

Avg. Monthly Energy Bill: $71
Calculated vs. 2009 IECC home

Annual Savings: $2,412
Calculated vs. 2009 IECC home

30-yr Mortgage Savings: $125,500+
Calculated with fuel escalation rate per 2014 EIA Annual Energy Outlook

Annual Savings: $2,412
Calculated vs. 2009 IECC home

30-yr Mortgage Savings: $125,500+
Calculated with fuel escalation rate per 2014 EIA Annual Energy Outlook
DOE Zero Energy Ready Home Marketing Materials

CERTIFICATION LOGO (PDF, JPG, EPS)
PARTNER LOGO (PDF, JPG, EPS)
LOGO USE GUIDELINES
POINT OF SALE FACT SHEET
CUSTOM POINT OF SALE FACT SHEET
BROCHURE
CUSTOM BROCHURE
DROP-IN MESSAGING
 TAKE THE TOUR WEB BUTTON
 TAKE THE TOUR WEB BUTTON (SMALL SIZE)
 PARTNER-BRANDED WEB BUTTON - HORIZONTAL
 PARTNER-BRANDED WEB BUTTON - VERTICAL
 HOMEOWNER MANUAL

Add this ZERH video to your website:

<iframe width="560" height="315"
src="https://www.youtube.com/embed/sp6eJELZACI?rel=0" frameborder="0" allowfullscreen>
</iframe>

Download Video
Right-click > Save Link As
Trusted Voice of Authority
Nearly 1 in 3 consumers indicated they do not trust home building and real estate companies.

Source: The business of Trust – The Most Trusted Builders in America, Lifestory Research, January 2013
Brand yourself as a leader!

Where to use:
- Certified Homes
- Websites
- Social Media
- Signage
- Marketing Materials
Tour of Zero Web Buttons

Link to your homes on the Tour of Zero!
Drop-In Messaging

**Trust Matters!**
*Backed by DOE*

Where to use:
- Website
- Social Media
- Press Releases
- Promotional Materials
- All Communications
Translating Value With Trust:
ZERH Drop-in Messaging

Drop-In Messaging
As a registered DOE Zero Energy Ready Home partner, enjoy access to the following pre-approved messages for insertion into your promotional materials. Simply insert your company name and use the message as it appears below.

- According to the U.S. Department of Energy, <Partner Name> is in a select group of top builders in the nation who have certified one or more homes that meet or exceed Zero Energy Ready Home guidelines for excellence in performance and energy efficiency.

- As a committed DOE partner who provides certified Zero Energy Ready Homes, <Partner Name> is in the top one percent of builders in the country meeting the extraordinary levels of excellence in energy and performance specified in the national program requirements.

- As a Zero Energy Ready Home Partner, <Partner Name> offers high performance homes that are so energy efficient, all or most of their annual energy consumption can be offset with renewable energy.

- <Partner Name> builds homes certified to rigorous DOE Zero Energy Ready Home National Guidelines that are at least 40%-50% more energy efficient than a typical new home.

- Healthful environment:
  According to the U.S. Department of Energy (DOE), every certified Zero Energy Ready Home has a comprehensive package of measures to help minimize dangerous pollutants, provide continuous fresh air, and effectively filter the air you breathe.

- Comfort Plus:
  According to the U.S. Department of Energy (DOE), every certified Zero Energy Ready Home features high-efficiency insulation, windows, air sealing and space conditioning systems that help surround you with even temperatures, low-humidity, and quiet in every room on every floor.

- Advanced Technology:
  According to the U.S. Department of Energy (DOE), every certified Zero Energy Ready Home features advanced technologies and practices recommended by leading housing experts from DOE’s world-class research program, Building America.

- Ultra Efficient:
  According to the U.S. Department of Energy (DOE), every certified Zero Energy Ready Home is so energy efficient a small solar electric system can easily offset most, or all, of its annual energy consumption. This is why it is called as Zero Energy Ready Home.

- Quality Built:
  According to the U.S. Department of Energy (DOE), every certified Zero Energy Ready Home features high-efficiency appliances and equipment that are often associated with better quality construction. In addition, overall quality is enhanced with rigorous inspections, diagnostics, and checklists enforced by independent verifiers.

- Durability:
  According to the U.S. Department of Energy (DOE), every certified Zero Energy Ready Home features advanced levels of energy savings, comfort, health, durability, quality and future performance that can be expected to stand the test of time and help enhance future value.

- "Samuel Rushkin, Chief Architect for DOE Building Technologies Office, said "Zero Energy Ready Homes like those constructed by <Partner Name> are the home of the future because they live, work, and last better with incredibly low or no energy costs. And what’s exciting for American homebuyers, they are available today thanks to leading builders across the country."

- "Housing Innovation Award winners such as <Partner Name who has won HIA> are leading a major housing industry transformation to zero energy ready homes. This level of performance is the home of the future because it improves the way Americans live by substantially reducing or eliminating utility bills, ensuring engineered comfort way beyond traditional homes, protecting health with a comprehensive package of indoor air quality measures, and helping maximize the largest investment of a lifetime," said Sam Rushkin, Chief Architect at the U.S. Department of Energy’s Building Technologies Office."
"Zero Energy Ready homes are the future of US housing, and innovators like Mantell-Hecathorn Builders are leading the way for the entire industry. Zero Energy Ready homes provide a vastly superior homeowner experience at a lower ownership cost - and an experience that all Americans should want in their next home."

- Sam Rashkin, Chief Architect for the US Department of Energy Building Technologies Office
Clarity with Contrast
Clarity with Contrast

Promote the ZERH Advantage!

Where to use:
- Promotional Events
- Home Tours
- Sales Materials

Your logo here
Translating Value With Clarity: ZERH Comparison Bars

KEY
- DOE Zero Energy Ready Home
- ENERGY STAR Home
- Existing Home

This label indicates relative performance of this DOE Zero Energy Ready Home to existing homes (built between 1990 and 2010) and ENERGY STAR qualified homes. Actual performance may vary.
A Symbol of Excellence

Every Zero Energy Ready Home offers a cost-effective, high-performance package of energy savings, comfort, health, and durability unparalleled in today's marketplace.

A comfortable and healthful home.

**HEALTHFUL ENVIRONMENT**

Every DOE Zero Energy Ready Home is a comprehensive package of measures to minimize dangerous pollutants, provide continuous fresh air, and effectively filter the air you breathe.

**COMFORT PLUS**

Superior insulation, windows, air sealing and space conditioning systems included in every DOE Zero Energy Ready Home surround you with even temperatures, low humidity, and quiet in every room on every floor.

**KEY**
- DOE Zero Energy Ready Home
- ENERGY STAR Certified Home
- Built by Home

Ultra high tech and energy efficient.

**ADVANCED TECHNOLOGY**

Every DOE Zero Energy Ready Home offers a wide range of advanced technologies and practices from DOE's world-class research program, Building America.

**ULTRA EFFICIENT**

Compared to a typical home, an ultra efficient Zero Energy Ready Home is inexpensive to own. In fact, every DOE Zero Energy Ready Home is so energy efficient, a small solar electric system can easily offset most, or all, of your annual energy consumption. We call this Zero Net-Energy Ready.

High quality construction—built to last.

**QUALITY BUILT**

Advanced construction practices and technologies are specified for every DOE Zero Energy Ready Home. They are enforced by independent verifiers with detailed checklists and prescribed diagnostics.

**DURABILITY**

The advanced levels of energy savings, comfort, health, durability, quality, and future performance in every DOE Zero Energy Ready Home provide unique value that will sustain the test of time, and will meet and exceed forthcoming code requirements.

**LEARN MORE AT:** buildings.energ.gov/zero

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Front Cover | Inside Spread | Flap | Back
Individual Attribute Fact Sheets

You Deserve a Healthy Home

- Every DOE Zero Energy Ready Home has a comprehensive package of measures to minimize dangerous pollutants, provide continuous fresh air, and effectively filter the air you breathe.
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Compare the Difference

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<thead>
<tr>
<th>KEY</th>
<th>DOE Zero Energy ReadyHome</th>
<th>ENERGY STAR Certified Home</th>
<th>Existing Home</th>
</tr>
</thead>
</table>

- "We have always suffered these allergies...no mold, no breathing problems, no fumes and no itchy eyes. We are definitely happy.
- Zero Energy Ready Home Homemonger"

- "Amor quidem ornem referat. Explet quis qui aert beator. Importa proostrum, quium Nados domonem quide maltumpt."
- Zero Energy Ready Home Homemonger"

- "Il sed et alb excellit mel et erit vel voluptua est ueritab". Nol it ide delsit nullopor por min repudiam."
- Zero Energy Ready Home Homemonger"

- "Dolo et etit dole tiktem et sub quosam, id et, earnuspe volupatatur. Ducidin est uerit ab ehit nip pread pils ant liparre que esque voluptua. Ducidin estu ad uerit nip pread pils ant pils que esque voluptua. Oficijum quiesip deblits mi, natus dolorum quide si mmolestupt quod gented at alias.

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- Ducidin estu ad uerit nip pread pils ant liparre que esque voluptua. Oficijum quiesip deblits mi, natus dolorum quide si mmolestupt quod gented at alias.

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Brought to you by:

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50 | INNOVATION & INTEGRATION: Transforming the Energy Efficiency Market

Buildings.Energy.gov
Social Media

TC Legend Homes added 4 new photos.
August 5, 2015

Check out our Montlake Modern House, featured on the US Department of Energy's "Tour of Zero" http://energy.gov/.../doe-tour-zero-montlake-modern-tc-legend...

Dwell Development @dwellseattle · Oct 18

Read our DOE case study on the Reclaimed Modern! bit.ly/1X9q15U #2015HIA

Bosch Heating and Cooling
November 18 at 11:05am

Your Zero Energy Ready Home Story

Brought to you by
Newport Ventures
(518) 377-9410 - sbowles@newportventures.net