Indoor airPLUS Builders Joining Forces with Zero Energy Ready Homes

Jamie Lyons, P.E.
Newport Partners
Technical Director, DOE ZERH
Specifications:
The Easy Lift from Indoor airPLUS
Eligible Building Types
- Same as ENERGY STAR Homes

- SFD and SFA dwellings
- MF buildings up to 5 stories;
- Central HVAC and DHW is allowed
- Focus is New Construction; Substantial Rehabs can be qualified;
Stepping up to ZERH…

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>HERS 70-80</td>
<td>HERS 65-75</td>
<td>HERS 55-65</td>
<td>HERS 55-75</td>
<td>HERS 48-55</td>
</tr>
<tr>
<td>IECC 2012</td>
<td>ENERGY STAR v3</td>
<td>ENERGY STAR v3.1</td>
<td>Indoor airPLUS</td>
<td>ZERH</td>
</tr>
</tbody>
</table>

**Solar Ready**
**Eff. Comps. & H$_2$O Distrib.**
**Optimized Duct Location**
**EPA Indoor Air Package**
**EPA Indoor Air Package**

- HVAC QI with WHV
- Water Management
- Independent Verification

Stepping up to ZERH…
### Exhibit 2: DOE Zero Energy Ready Home Target Home

<table>
<thead>
<tr>
<th>HVAC Equipment</th>
<th>Hot Climates (2012 IECC Zones 1,2)</th>
<th>Mixed Climates (2012 IECC Zones 3, 4 except Marine)</th>
<th>Cold Climates (2012 IECC Zones 3, 4 Marine 5,6,7,8)</th>
</tr>
</thead>
<tbody>
<tr>
<td>AFUE</td>
<td>80%</td>
<td>90%</td>
<td>94%</td>
</tr>
<tr>
<td>SEER</td>
<td>18</td>
<td>15</td>
<td>13</td>
</tr>
<tr>
<td>HSPF</td>
<td>8.2</td>
<td>9</td>
<td>10(^{23})</td>
</tr>
<tr>
<td>Geothermal Heat Pump</td>
<td></td>
<td><strong>ENERGY STAR EER and COP Criteria</strong></td>
<td></td>
</tr>
<tr>
<td>ASHRAE 62.2 Whole-House</td>
<td>1.4 cfm/W; no heat exchange</td>
<td>1.4 cfm/W; no heat exchange</td>
<td>1.2 cfm/W; heat exchange with 60% SRE</td>
</tr>
<tr>
<td>Mechanical Ventilation System</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Typical DOE ZERH-Compliant HERS Index by Climate Zone

Based on 1800, 2400, and 3600 ft² prototypes on climate-appropriate foundations.
Warm Climate, Affordable
HERS 49

DOE TOUR OF ZERO: VISTA PALM DRIVE BY SOUTHEAST VOLUSIA HABITAT FOR HUMANITY
Cold Climate, Production HERS 3 (low 40s w/o PV)

DOE TOUR OF ZERO: THE HALE PLAN BY NEW TOWN BUILDERS
DOE TOUR OF ZERO: VIA DEL CIELO BY PALO DURO HOMES
## Performance Path Example - Atlanta
### CZ3 Prototype - 4 BR, 2400 SF

<table>
<thead>
<tr>
<th>Specification</th>
<th>Target Home Spec</th>
<th>Design Home</th>
</tr>
</thead>
<tbody>
<tr>
<td>AGW Insulation</td>
<td>R13+5 or R-20 (U 0.060)</td>
<td>R-20 (U 0.060)</td>
</tr>
<tr>
<td>Attic Insulation</td>
<td>R38 (U=0.030)</td>
<td>R38 (U=0.030)</td>
</tr>
<tr>
<td>Basement Walls</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Windows</td>
<td>U=0.30; SHGC=0.25</td>
<td>U=0.30; SHGC=0.25</td>
</tr>
<tr>
<td>Infiltration</td>
<td>2.5 ACH50</td>
<td><strong>3.0 ACH50</strong></td>
</tr>
<tr>
<td>Ducts</td>
<td>Total ≤ 8% cfm25/CFA (192 CFM25)</td>
<td><strong>Total: 96 CFM25</strong></td>
</tr>
<tr>
<td></td>
<td>LTO ≤ 4% cfm25/CFA (96 CFM25)</td>
<td><strong>LTO: 0 CFM25</strong></td>
</tr>
<tr>
<td>AFUE or HSPF</td>
<td>9.0 HSPF</td>
<td>9.0 HSPF</td>
</tr>
<tr>
<td>A/C SEER</td>
<td>15</td>
<td><strong>16.5</strong></td>
</tr>
<tr>
<td>Whole-House Mech. Vent.</td>
<td>62 cfm; 1.4cfm/W no heat exchange;</td>
<td>62 cfm; 1.4cfm/W, supply ventilation</td>
</tr>
<tr>
<td>Water Heater</td>
<td>HPWH (EF 2.0)</td>
<td><strong>Electric Storage Tank (0.95 EF)</strong></td>
</tr>
<tr>
<td>Hot Water Dist.</td>
<td>RESNET Reference Home</td>
<td><strong>On-Demand (occ sensor)</strong></td>
</tr>
<tr>
<td>Lighting</td>
<td>80% Energy Star</td>
<td><strong>90% Energy Star LEDs</strong></td>
</tr>
<tr>
<td>HERS Index</td>
<td>58 (Target)</td>
<td><strong>57 COMPLIES!</strong></td>
</tr>
</tbody>
</table>
Stepping up to ZERH...

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>HERS 70-80</td>
<td>HERS 65-75</td>
<td>HERS 55-65</td>
<td>HERS 55-75</td>
<td>HERS 48-55</td>
</tr>
<tr>
<td>IECC 2012</td>
<td>ENERGY STAR v3</td>
<td>ENERGY STAR v3.1</td>
<td>Indoor airPLUS</td>
<td>ZERH</td>
</tr>
</tbody>
</table>

- Independent Verification
- Water Management
- HVAC QI with WHV

- Solar Ready
- Eff. Comps. & H₂O Distrib.
- Optimized Duct Location
- EPA Indoor Air Package

- IECC 2012/15
- ENERGY STAR v3.1
- HERS 48-55
- ZERH

Buildings.Energy.gov
2012/2015 IECC Insulation

• Compliance with next generation code

• Three Options for Compliance:
  ✓ Prescriptive
  ✓ Alternative equivalent U-factor
  ✓ **Total UA calculation**
    - allow for modest trade-offs of insulation levels from one part of the envelope to others.
## 2012/2015 IECC Insulation

<table>
<thead>
<tr>
<th></th>
<th>CZ 2</th>
<th>CZ 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Walls</td>
<td>R-13 (rec. R13+5)</td>
<td>R-20 or R-13+5 (rec. R-13+5)</td>
</tr>
<tr>
<td>Ceiling</td>
<td></td>
<td>R-38</td>
</tr>
<tr>
<td>Floor</td>
<td>R-13</td>
<td>R-19</td>
</tr>
<tr>
<td>Basement</td>
<td>R-0</td>
<td>R-5/13</td>
</tr>
<tr>
<td>Crawl Space</td>
<td>R-0</td>
<td>R-5-13</td>
</tr>
<tr>
<td>Slab</td>
<td>R-0 (rec. R-5 slab edge)</td>
<td></td>
</tr>
</tbody>
</table>
How to Check UA Compliance

- Run UA compliance report within HERS Rating software
- Design Home UA must be ≤ 2012 IECC version of the home
### High Performance Windows

**ENERGY STAR Window Specs to Apply to DOE Zero Energy Ready Home Projects**

<table>
<thead>
<tr>
<th>Hot Climates IECC CZ 1 2</th>
<th>Mixed Climates IECC CZ 3 4 except Marine</th>
<th>Cold Climates IECC CZ 5 8 and 4 Marine²</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>U Value</strong></td>
<td><strong>SHGC</strong></td>
<td><strong>U value</strong></td>
</tr>
<tr>
<td>0.40</td>
<td>0.25</td>
<td>[CZ 3] 0.30</td>
</tr>
<tr>
<td></td>
<td></td>
<td>[CZ 4] 0.30</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1. DOE Zero Energy Ready Home offers multiple compliance paths including area weighting and allowances for passive solar design. See the National Program Requirements, Exhibit 1 with footnotes, for details.

2. These U & SHGC values are based on the ENERGY STAR v5.0 Window Specifications. DOE ZERH will review the feasibility of adopting ENERGY STAR v6.0 Window Specifications, which entail lower U values, periodically. Any program update to require the v6.0 window specs will be announced with a minimum 1-year phase-in.
Stepping up to ZERH…

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>HVAC QI with WHV</td>
<td>HVAC QI with WHV</td>
<td>HVAC QI with WHV</td>
<td>HVAC QI with WHV</td>
<td>HVAC QI with WHV</td>
</tr>
<tr>
<td>Independent Verification</td>
<td>Independent Verification</td>
<td>Independent Verification</td>
<td>Independent Verification</td>
<td>Independent Verification</td>
</tr>
<tr>
<td>HERS 70-80</td>
<td>HERS 65-75</td>
<td>HERS 55-65</td>
<td>HERS 55-75</td>
<td>HERS 48-55</td>
</tr>
<tr>
<td>IECC 2012</td>
<td>ENERGY STAR v3</td>
<td>ENERGY STAR v3.1</td>
<td>Indoor airPLUS</td>
<td>ZERH</td>
</tr>
</tbody>
</table>

- Solar Ready
- Eff. Comps. & H₂O Distrib.
- Optimized Duct Location
- EPA Indoor Air Package
- EPA Indoor Air Package
- IECC 2012/15 Enclosure
- IECC 2009/12 Enclosure
- IECC 2012 Enclosure
- IECC 2009 Enclosure
- IECC 2012

63 | INNOVATION & INTEGRATION: Transforming the Energy Efficiency Market
The Importance of Duct Performance

<table>
<thead>
<tr>
<th>95% Condensing Furnace</th>
<th>80% Furnace</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>60% Efficient Duct</td>
<td>90% Efficient Duct</td>
</tr>
<tr>
<td>Distribution</td>
<td>Distribution</td>
</tr>
<tr>
<td>57% System Efficiency</td>
<td>72% System Efficiency</td>
</tr>
</tbody>
</table>

Cooling:

If we’re using a SEER 21, variable speed A/C system…
- SEER 21 has *twice* the run time vs a SEER 13 system
- Ducts in conditioned space: SEER 21 offers 40% savings
- Ducts *not* in conditioned space: SEER 21 offers 27% savings
Options for Optimized Duct Location

- Ducts in Dropped Ceiling
- Ducts in Modified Attic Truss
- Ducts in Unvented Attic
- Ducts Between Floors
- Ducts in Unvented Crawl Space/Basement
- Ductless Systems

Ducts in Vented Attic

- Buried & SPF encapsulated (Humid Climates)
- Buried (Dry Climates)
- Buried (2018 IECC)
Optimized Ducts Exemptions

• **Short Duct Run**
  up to 10’ of total length is permitted to be outside of the home’s thermal and air barrier boundary.

• **Jump Ducts**
  may be located in attics if all joints, including boot-to-drywall, are fully air sealed with mastic.
Stepping up to ZERH…

<table>
<thead>
<tr>
<th>Solar Ready</th>
<th>Eff. Comps. &amp; H₂O Distrib.</th>
<th>Optimized Duct Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>EPA Indoor Air Package</td>
<td>EPA Indoor Air Package</td>
<td>✓</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>HVAC QI with WHV</th>
<th>HVAC QI with WHV</th>
<th>HVAC QI with WHV</th>
<th>HVAC QI with WHV</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water Management</td>
<td>Water Management</td>
<td>Water Management</td>
<td>Water Management</td>
</tr>
<tr>
<td>Independent Verification</td>
<td>Independent Verification</td>
<td>Independent Verification</td>
<td>Independent Verification</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>HERS 70-80</td>
<td>HERS 65-75</td>
<td>HERS 55-65</td>
<td>HERS 55-75</td>
<td>HERS 48-55</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>IECC 2012</th>
<th>ENERGY STAR v3</th>
<th>ENERGY STAR v3.1</th>
<th>Indoor airPLUS</th>
<th>ZERH</th>
</tr>
</thead>
</table>
Components and MEL’s are increasingly larger part of total energy use in low-load homes (~50%).

Energy Use - Then
- Heating & Cooling
- Lighting & Appliances
- Hot Water
- MELs

Energy Use - Now
- Heating & Cooling
- Lighting & Appliances
- Hot Water
- MELs
Zero Energy Ready Home requires:

- **ENERGY STAR Certified Appliances**: refrigerators, dishwashers, clothes washers
- **ENERGY STAR Certified Fans**: bathroom ventilation, ceiling fans
- **ENERGY STAR Certified Lighting**: Min. 80% of fixtures or lamps (CFL or LED)
- **WaterSense Hot Water Distribution**

*Only where installed by builder*
Traditional Hot Water Distribution

Built for when water was free and energy was cheap!

Copper L piping:

- 1” = 5.53 ounces/ft
- ¾” = 3.22 ounces/ft
- ½” = 1.55 ounces/ft

Example:

- Stored Volume: 1.6 gallons
- 30' trunk
- 10' branch
- Wait Time: 1 – 1.5 minutes
- 2 GPM showerhead

Innovation & Integration: Transforming the Energy Efficiency Market
Efficient Hot Water Distribution

• Based on EPA WaterSense Specifications:

  Hot Water Source

  WH

  ≤ 0.5 gallons of water

  Loop

  Furthest Fixture
Core Plumbing Layout
Manifold Plumbing System
Demand Pumping System

Sensor or Controls (or “Smart” Systems)

Recirc. Systems based **ONLY** on a timer or a temp sensor not permitted

Demand Pump

Dedicated Return
Verifying Efficient Hot Water Distribution

Prime loop (if applicable)
Start flow
Take $T_{\text{init}}$ (of flow)

Stop at 0.6 gallons
Take $T_{\text{fin}}$ (of flow)

$T_{\text{fin}} - T_{\text{init}}$ must be at least 10 F

0.6 gal

0.6 gal

INNOVATION & INTEGRATION: Transforming the Energy Efficiency Market
Stepping up to ZERH...

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>HVAC QI with WHV</td>
<td>HVAC QI with WHV</td>
<td>HVAC QI with WHV</td>
<td>HVAC QI with WHV</td>
<td>HVAC QI with WHV</td>
</tr>
<tr>
<td>Independent Verification</td>
<td>Independent Verification</td>
<td>Independent Verification</td>
<td>Independent Verification</td>
<td>Independent Verification</td>
</tr>
<tr>
<td>HERS 70-80</td>
<td>HERS 65-75</td>
<td>HERS 55-65</td>
<td>HERS 55-75</td>
<td>HERS 48-55</td>
</tr>
<tr>
<td>IECC 2012</td>
<td>ENERGY STAR v3</td>
<td>ENERGY STAR v3.1</td>
<td>Indoor airPLUS</td>
<td>ZERH</td>
</tr>
</tbody>
</table>

- Solar Ready
- Eff. Comps. & H₂O Distrib.
- Optimized Duct Location
- EPA Indoor Air Package

Buildings.Energy.gov
PV-Ready Allowances

Not required in areas lacking access to significant solar resources:
- Tree Shading
- Tall Buildings
- Available South Facing Roof

Multifamily Building Allowances:
- PV-ready features may be provided for the common space instead of at the dwelling level
Documentation of the maximum allowable dead load and live load ratings of the existing roof (Rec DL.: 6 lbs./sq. ft.)

Conduit to run DC wire from roof to inverter

Dedicated Area for installing inverter and balance of system

Conduit to run AC wire from inverter location to electric panel

Circuit Breaker designated and/or installed for use by the PV system in the electric panel
Stepping up to ZERH...

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>HVAC QI with WHV</td>
<td>HVAC QI with WHV</td>
<td>HVAC QI with WHV</td>
<td>HVAC QI with WHV</td>
<td>HVAC QI with WHV</td>
</tr>
<tr>
<td>Independent Verification</td>
<td>Independent Verification</td>
<td>Independent Verification</td>
<td>Independent Verification</td>
<td>Independent Verification</td>
</tr>
<tr>
<td>HERS 70-80</td>
<td>HERS 65-75</td>
<td>HERS 55-65</td>
<td>HERS 55-75</td>
<td>HERS 48-55</td>
</tr>
<tr>
<td>IECC 2012</td>
<td>ENERGY STAR v3</td>
<td>ENERGY STAR v3.1</td>
<td>Indoor airPLUS</td>
<td>ZERH</td>
</tr>
</tbody>
</table>
Recognition
Lots of Recognition Choices…

- Energy Star
- Green Approved
- Zero Energy Ready Home
- PHIUS
- LEED For Homes
- Craf
- Fortified
Recognition with Certificate

• **Rater Prints Certificate**
  directly from rating software

• **Certificate Includes:**
  – Rating Details
  – Graphic HERS Index
  – Optional Programs
Recognition with ZERH ‘Brand’

Independent Voice of Authority vs. “Trust me.”
Recognition with ‘Brand’
Recognition with ‘Brands’
Recognition with ZERH Locator

Links Buyers to Leading Edge Builders:
- Contact Information
- Optional Commitments:
  - # Labeled Homes
- Website link

For All Active Partners
DOE Zero Energy Ready Home: Partner Profile

Mandalay Homes

Partner ID: 620
Organization Type: Builder
Main Contact: Dave Everson
Address: 2320 E BASELINE RD #148-605
PHOENIX, AZ 85042
(602) 864-3800
Primary Phone Number: 183
Certified DOE Zero Energy Ready Homes (2012 - Present): 0
Certified Builders Challenge Homes (2008 - 2012):
Website: http://www.mandalayhomes.com
Homes to the Power of ZERO

A Symbol of Excellence

- HEALTHFUL ENVIRONMENT
- COMFORT PLUS
- ADVANCED TECHNOLOGY
- ULTRA EFFICIENT
- QUALITY BUILT
- DURABILITY

What is the DOE Zero Energy Ready Home™ Label?
It is a Symbol of Excellence for energy savings, comfort, health, quality, and durability met by a select group of leading builders meeting U.S. Department of Energy Guidelines.

What is a Zero Energy Ready Home?
It is a high-performance home so energy efficient, all or most annual energy consumption can be offset with renewable energy. In other words, it is the Home of the Future.

303-231-4567
ThriveHomeBuilders@net.com
123 Main Street, Denver, CO 34567
Recognition as a Leader

DOE 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.
Recognition with ‘Voice of Authority’

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 certified 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.

- Healthy 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 Rashkin, 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 Rashkin, Chief Architect at the U.S. Department of Energy’s Building Technologies Office.
“Zero Energy Ready Homes are the future of U.S. housing, and innovators like New Town Builders are leading the way for the entire industry. Zero Energy Ready Homes can provide a vastly superior homeowner experience at a lower ownership cost – an experience all Americans should want in their next home.”

Sam Rashkin, Chief Architect for U.S. Department of Energy Building Technologies Office
Recognition After-Sale

Your Zero Energy Ready Home Story

BROUGHT TO YOU BY

Thrive Home Builders
303-231-4567
ThriveHomeBuilders@net.com
123 Main Street, Denver, CO 34567
Recognition After-Sale

Welcome to Your Zero Energy Ready Home

THIS IS YOUR STORY.
The story of your Zero Energy Ready Home and how it leverages advanced technology for a better homeowner experience.

IN THIS BROCHURE
you will learn about the following seven complete systems and why they make your home so special.

- High-Performance Thermal Enclosure
- Whole-House Water Protection
- High-Performance Comfort System
- High-Efficiency Components
- Whole-House Health Protection
- Solar-Ready Construction
- Enhanced Quality Assurance
Recognition with Awards

Housing Innovation Award
Recognition with Awards

Michigan’s Most Respected Builder

Cobblestone Homes

Contact Us

Sales: (989) 692-0210
Office: (989) 692-0140
Fax: (989) 692-0142

Design Studio Address:
5474 Garfield Rd
Suite 2
Saginaw, MI 48603

Mailing Address:
P.O. Box 604
Freeland, MI 48623

Why Cobblestone Channel | Innovation Channel | Cobblestone Care Channel
Recognition with Awards

BrightLeaf Homes

High-Performance Home Builders Specializing in Affordably Efficient, Green-Built Homes and Additions.

Speak with Us Today About Building Your Dream...

630-254-9745

www.MyBrightLeafHome.com

Certified and Qualified by These Third Parties:

ZERO
LEED

Our Green Built, High-Performance, Energy-Efficient Homes Are:

- Less expensive to own and maintain
- More comfortable
- Healthier to live in
- Constructed with the environment in mind
- Built to last

ENERGY READY HOME WINNER 2015
Zero Energy Ready Home
Getting Started
ENERGY STAR, IAP, & DOE ZERH

- Same rater network
- Same modeling software (at least 3 different options)
- Same plan review & site inspection protocol
Getting Started with Zero Energy Ready

Process:
• Become a Builder or Rater partner (online)
• No need to pre-register projects; no program fees
• Recommend integrated design process (MEPs)
• Rater: plan review & site inspections
• Project Certification
  • Rater sends compliance report (generated by modeling software) to DOE or RESNET Registry
• Builder credited with certified home on DOE website
Thank You!

Resources & Next Steps

www.buildings.energy.gov/zero/

• Become a Partner
• Program Specs
• DOE Tour of Zero
• 24+ Recorded Webinars
• Marketing Took Kit