BEST3 Conference

DOE Perspective

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For Net-Zero Ready Homes, There is a…

• Right Strategy
• Compelling Builder Business Case
• Compelling Consumer Value Proposition
‘Good Government’ As-A-System

**Building America:**
Develops New Innovations and Best Practices

**DOE Challenge Home:**
Recognizes Leading Builders Applying Proven Innovations & Best Practices

**ENERGY STAR:**
Recognizes Builders Who Deliver Significantly Above Code Performance

**IECC Code:**
Mandates technologies and practices proven reliable and cost-effective
There’s a Right Strategy for Net-Zero Ready Homes
Strategy #1:

Begin with Comprehensive Building Science;
by complying with ENERGY STAR for Homes Version 3.
Strategy #2:

Add proven technologies and practices, which along with complete building science ensures peak performance thermal enclosure.
Strategy #3:

Include energy efficient components to complement high-performance enclosure.

ENERGY STAR for Homes Version 3
Building America Technologies
Efficient Components
Strategy #4:

Provide comprehensive pollutant control critical in homes this tight and well-insulated.
Ensure low-cost details that can save $1,000’s downstream to install solar since homes are ready for net zero performance.
Strategy #6:

Start addressing related water efficiency issues in homes this environmentally responsive.

ENERGY STAR for Homes Version 3
Building America Technologies
Efficient Components
Indoor airPLUS
Solar Ready [where applicable]

WaterSense (encouraged)
Strategy #7:

Don’t ignore disaster resistance since homes built this well and this affordable should last 100’s of years.

- ENERGY STAR for Homes Version 3
- Building America Technologies
- Efficient Components
- Indoor airPLUS
- Solar Ready [where applicable]
- WaterSense
- IBHS Fortified Home
Strategy #8:

Encourage QA/QC practices to help ensure the success of builder partners.
All the pieces add up to DOE Challenge Home...
Strategy Summary:

…and now homes are ready for renewable power... the right way
There’s a Compelling Builder Business Case for Net-Zero Ready Homes
Minimize Cost

NAHB estimates for every $1,000 increase in sales price, nearly 250,000 households fail to qualify for a mortgage on a typical new home.

[http://www.nahb.org/fileUpload_details.aspx?contentTypeID=3&contentID=40372&subContentID=112293]
Maximize Value
so homebuyers are compelled to want new housing again.
Innovation/Value Premium

- Price Based on ‘Value’, NOT Cost

Profit
Cassette Cost

VS.

Innovation/Value Premium

Profit
CD Cost
Home Innovation Real Cost

- Marketing Cost
- Call-Back Cost
- Hard Cost

Standard Home VS. DOE Challenge Home
Home Innovation/Value Premium

Price Based on ‘Value’, NOT Cost

Standard Home VS. DOE Challenge Home

Profit

Cost

Innovation/Value Premium

Profit

Cost
Sam’s 1st Law of Innovation

The closer link to leadership, the higher the innovation/value premium.
Innovation Leadership Example
Sam’s 2nd Law of Innovation

Innovation option can’t look the same as the standard option.
Innovation Looks Different

2012 Toyota Highlander

Lexus RX400
Personal Experience

Existing Home: Low Performance

Retrofitted Home: High-Performance
Innovation Mark of Excellence

- Mercedes
- Rolls Royce
- Prada
- Rolex
- Louis Vuitton
- Chanel
Working with Production Builders

• Work the ‘Sweet Spot’
  [5-20 homes; most not ready for wholesale change]

• Measure Profit Metrics:
  - Call-Backs
  - Marketing Costs
  - Profit Margins

• High-Performance Looks Different!
There’s a Compelling Consumer Value Proposition for Net-Zero Ready Homes
The story of Dyson

Root Cyclone™ technology

Root Cyclone™ technology uses powerful centrifugal forces to separate dust from the air. New Dyson cylinder machines have three distinct stages of cyclonic separation - each engineered to capture smaller and smaller particles.

Air velocity is: 20 metres per second in the outer cyclone, 50 metres per second in the core separator, 80 metres per second in the inner cyclones. Dust particles are subjected to forces of: 500G in the outer cyclone, 29,000G in the core separator and 100,000G in the inner cyclones (around 20,000 times greater than a roller-coaster ride).
The DOE Challenge Home Story
Symbol of Excellence

Think of the extra confidence going to a doctor ranked in the top one percent in his or her field. Similarly, each DOE Challenge Home builder is in the top one percent of builders in the country meeting extraordinary levels of excellence and quality specified by U.S. Department of Energy (DOE) guidelines.

Feel great knowing you choose a home offered only by a select group of leading edge builders.
Strong Heritage

Every DOE Challenge Home starts with a solid foundation of building science specified by ENERGY STAR for Homes Version 3. Then each labeled home includes advanced technology solutions derived from world-class research conducted under the U.S. DOE building America Program.

Look for the most effective and proven innovations in every labeled home.
Beyond Current Code

There’s only one chance to build quality into a new home because it’s cost prohibitive to go back and change construction and internal systems. Every DOE Challenge Home is constructed to meet forthcoming code requirements to lock in future value.

It’s great peace-of-mind knowing the largest investment of a lifetime won’t be obsolete in a few years!
No or Ultra-Low Utility Bills

Many experts forecast it won’t be long before homebuyers insist on new homes with minimal or possibly no utility bills. There’s no reason to wait. Every DOE Challenge Home is so energy efficient, a small solar system can often offset most, or all, of your utility bills. And look for important details that can save $1,000’s installing a solar system in the future. Enjoy never having to worry about rapidly increasing utility costs.
Luxurious Comfort

Extraordinary attention to detail (e.g., insulation, air sealing, advanced windows and engineered systems) included in every DOE Challenge Home surround you with even temperatures and quiet in every room and floor. 

It’s time your next new home provides the same performance you expect in a luxury car.
Better Components

Every DOE Challenge Home is equipped with ENERGY STAR qualified appliances, lighting, fans, and space conditioning equipment. In addition, advanced water distribution helps ensure near-instant hot water at each fixture while saving 1,000’s of gallons of wasted water.

Quality products should be standard in homes this well built.
Breathe Better

Since we spend about two-thirds of our time each day inside our homes, every DOE Challenge Home has a comprehensive package of measures that control dangerous pollutants, provide continuous fresh air, and effectively filter the air you breathe.

Now you can provide a healthier home for your family.
Better Protection

DOE Challenge homes employ advanced construction practices that help mitigate risks of mold and moisture problems, ensure combustion safety, and minimize damaging UV radiation. In addition, builders are encouraged to include regionally appropriate disaster-resistant construction practices.

Experience living in a home built to last hundreds of years.
Quality Construction

Rigorous specifications are only good if they are adequately enforced. Detailed checklists, inspections, and advanced diagnostics with independent verifiers help ensure the performance of every DOE Challenge Home. In addition, builders are encouraged employ a comprehensive quality management program.

Now you can hold your next new home to a higher standard.
Sustained Value

The advanced levels of affordability, comfort, quiet, health, durability, and quality delivered in every DOE Challenge Home are too compelling to ignore. That’s why DOE believes this is where all housing is headed in the future.

*Now you can feel truly confident making one of life’s largest purchase decisions.*
For More Information

Visit the Challenge Home web site to learn more and find approved builder partners:

http://www1.eere.energy.gov/buildings/challenge/
Thank You

Questions?

For More Information:
http://www1.eere.energy.gov/buildings/challenge/

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