

Builders Challenge



Recognizing energy leadership
in homebuilding

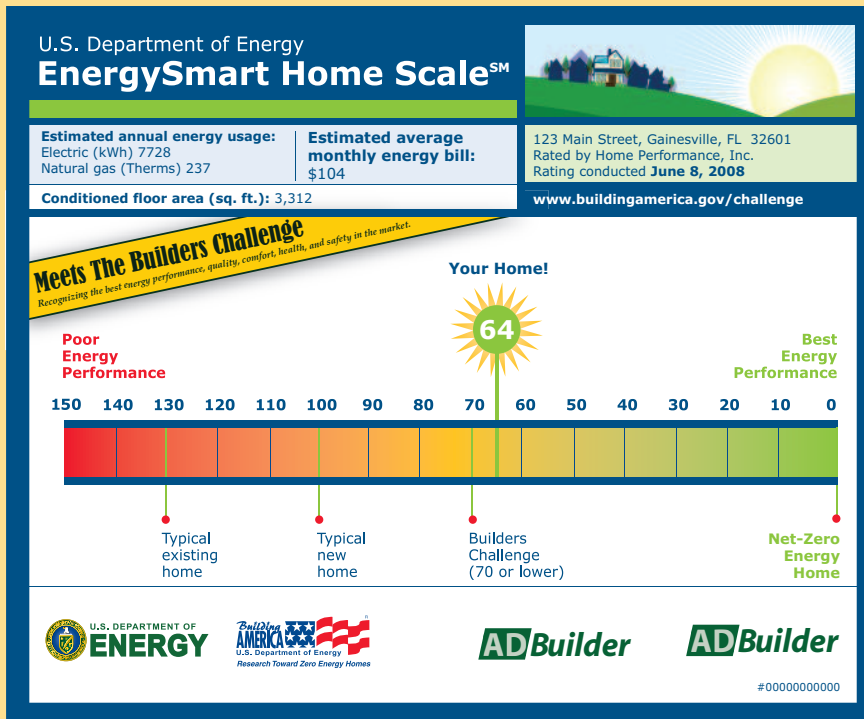


U.S. DEPARTMENT OF
ENERGY



Builders Challenge

Introducing homebuyers to the EnergySmart Home ScaleSM



How low can you go in home energy use?

In this example, a house rated 64 on the E-Scale will use only 64 percent of the energy used to power a typical new home—a 100 on the scale—saving 36 percent in energy use and utility bills.

The EnergySmart Home Scale is an easy-to-understand metric that helps consumers make smart energy decisions when they purchase a home. The “E-Scale” is based on the well-established HERS Index, a home energy rating system developed by RESNET, the Residential Energy Services Network. It is designed to provide clear, objective answers to basic consumer questions:

- How many “miles per gallon” does this home get?
- How does it compare to a code home?
- How close is it to the “ultimate”— a zero-energy home?

Participants in the Builders Challenge place E-Scale labels on the power panels of qualifying homes to indicate energy performance and exceptional attention to quality. In addition, they can:

- Co-brand the E-Scale label with their logos and program or product names
- Augment the rating with estimates of annual energy dollar savings — which can help homebuyers get better mortgage terms
- Include estimates of carbon dioxide reductions associated with the energy savings.

Sponsored by the U.S. Department of Energy, the goal of the Builders Challenge is to build 220,000 high-performance homes by 2012, with each achieving a 70 or lower on the E-Scale, or at least a 30 percent improvement in energy efficiency over a typical new home.

A Cost-Effective Net-Zero Energy Home for All Americans

Imagine the day when all homes produce as much energy as they use. When utility bills are a thing of the past. When carbon emissions from homes shrink from more than 20% to nearly nothing. That’s the ultimate goal of the U.S. Department of Energy’s Builders Challenge—a cost-effective net-zero energy home for all Americans by 2030.

In the meantime, we’re helping to support and reward the industry, and consumers, for taking the incremental steps necessary to achieve this lofty goal. That’s the Builders Challenge. Help us make this vision a reality, starting today.

Builders Challenge at a glance

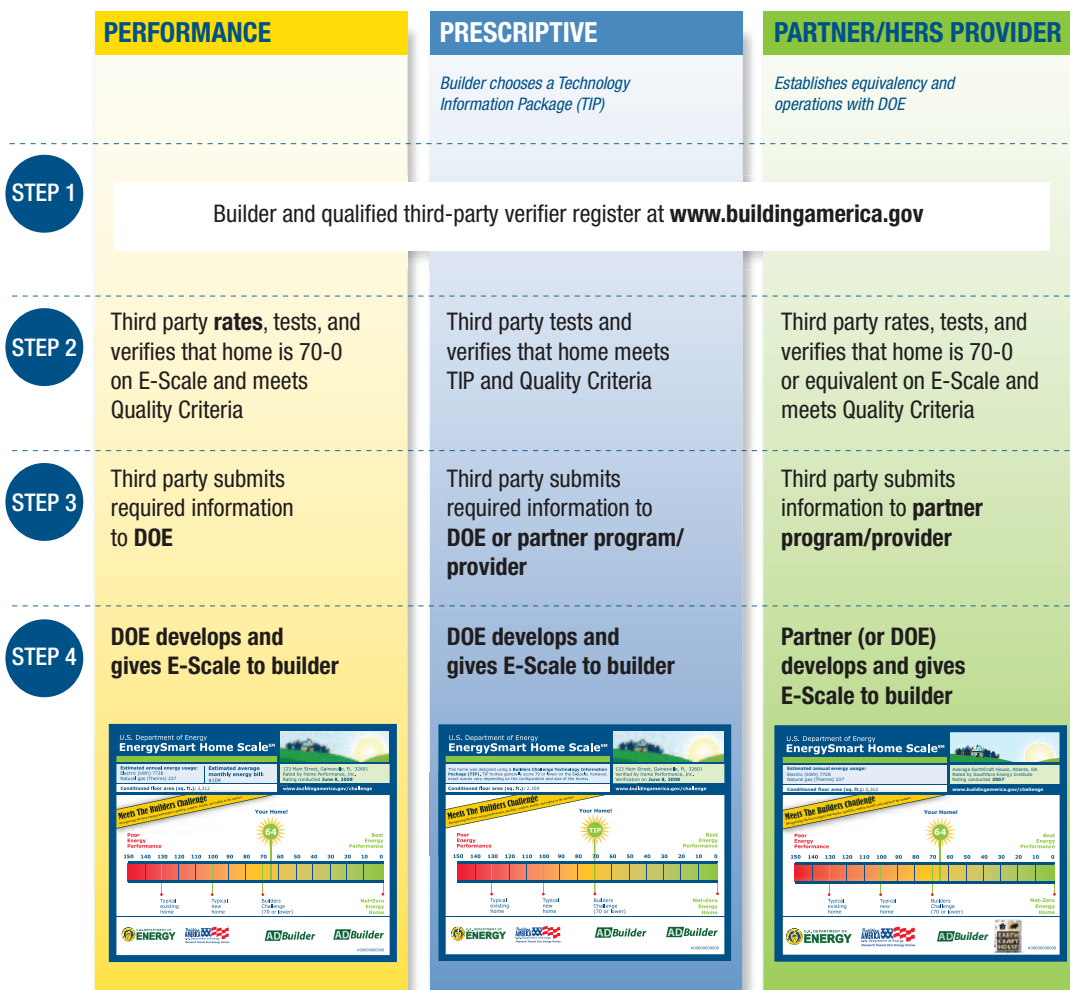
Q: What is the Builders Challenge?

A: The Builders Challenge is a voluntary public-private effort to spur demand for high-performance homes.

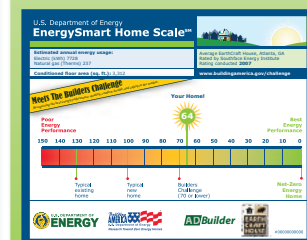
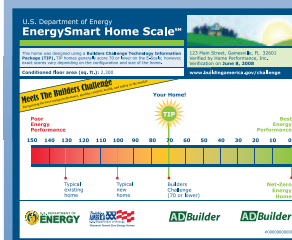
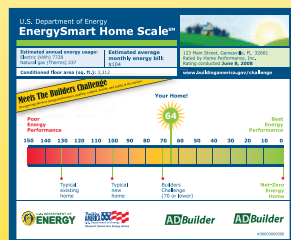
U.S. homebuilders of all sizes, from all areas of the country, report growing consumer interest in energy-efficient houses. Yet homebuyers often lack basic information that can help them make informed decisions. How can they tell exceptional energy performers from average energy performers or code homes? And how do they figure out just what that difference will mean in their energy bills?

Spearheaded by the U.S. Department of Energy (DOE), the Builders Challenge is a voluntary effort to provide compelling answers. The Builders Challenge seeks to galvanize the housing industry to build homes that are the best in energy efficiency and quality in the market, while spurring strong consumer demand for these homes. Through the Builders Challenge, participating homebuilders can differentiate their best energy-performing homes from other products in the marketplace. The Challenge highlights homes that achieve 70 or lower on the EnergySmart Home Scale (see fold-in page) and that meet the Builders Challenge Quality Criteria, making them the best-performing homes in the marketplace.

DOE's ultimate vision is that, by 2030, a consumer will have the opportunity to buy an affordable net-zero energy home (NZEH) anywhere in the United States—a grid-connected home that, over the course of a year, produces as much energy as it uses. The Builders Challenge establishes a framework for continuous improvement that will help propel the market toward zero-energy performance.



Builders can choose among three pathways for meeting the Builders Challenge, finding the best match for their business.



Q: What are the requirements for builders who choose to “join the Challenge”?

A: Builders will commit to constructing high-performance homes as part of their business.

Challenge participants will commit to building homes that rate 70 or lower on the EnergySmart Home Scale (see fold-in page) and that meet the Builders Challenge Quality Criteria to deliver comfort, quality, durability, health, and safety. Builders can choose among three different pathways for meeting the Challenge, as shown in the chart to the left. These processes are based on existing consensus standards and procedures that include verification and quality control.

Interested builders can sign up to “join the Challenge” at the Builders Challenge Web site: www.buildingamerica.gov/challenge. Participating builders are asked to post the EnergySmart Home Scale on the power panel of each qualifying house, and to voluntarily report the number of high-performance homes they construct or start by 2012 that meet Challenge criteria.

Q: What are the benefits for participating builders?

A: Builders have a unique opportunity for their homes to truly stand out from the pack.

Meeting the Challenge helps builders to:

- Qualify for incentives such as tax credits and utility benefits
- Differentiate their homes at a higher energy efficiency and quality performance level than is currently available and help homebuyers qualify for new mortgage products
- Communicate that “high-performance” means quality, comfort, and a healthy indoor environment.



With the DOE name and extensive technical and marketing tools behind them, the Challenge helps builders credibly meet increasing consumer demand for better homes. Participating builders may use the E-Scale, the Builders Challenge logo, and extensive advertising and marketing materials to promote their participation in the Challenge and the superior performance of their homes.

Q: What resources are available to help builders meet the Challenge?

A: A wealth of technical information is available online.

DOE and its partners will offer technical information, resources, and marketing tools to support builders across the nation in meeting the Challenge on their own or through a partner program. This information is available at www.buildingamerica.gov/challenge.

Performance requirements were based on years of research results emerging from DOE’s Building America program. The program has developed detailed documentation on best practices for high-performance homebuilding in major U.S. climate zones. These guidelines, along with case studies and other technical information, are available for download. The Builders Challenge Web site currently highlights resources for meeting Challenge goals.

In addition, a design competition will make high-performance home plans more readily available and annual awards will recognize and reward participation.

Q: How will the Challenge help drive consumer demand?

A: Education and outreach campaigns—leveraging energy efficiency, utility, manufacturer, and green building programs—are already in the marketplace.

Homebuyers increasingly rely on energy efficiency and green building programs to help them make smart purchasing decisions. The Builders Challenge will complement and leverage programs that seek to achieve even higher goals—leading the drive toward zero-energy performance. For example, the National Association of Home Builders recently introduced its National Green Building Program with its highest tier of performance—Emerald—meeting the Builders Challenge level.

Because no single education or outreach effort alone is likely to make the impact needed, DOE will partner with utilities, energy efficiency programs, trade associations, non-governmental organizations, state and local governments, educators, manufacturers, energy professionals, and the media to spread the message.

Q: Why does the Builders Challenge matter to our nation?

A: More efficient homes mean a more energy-independent America.

In the United States, buildings use more energy than transportation or industry. So when it comes to America’s future energy independence and carbon emissions profile, homes and commercial buildings can have a major impact.

Just consider: about 30 percent of housing stock that will exist in 2030 has not yet been built. Right now, our nation has a real opportunity to influence how the 2030 housing stock will take shape.

How will the Builders Challenge transform the housing market?

1. By **providing Building America research results and marketing tools** so builders can take the Challenge to build and sell cost-neutral high-performance homes that are third-party qualified to ensure the best energy efficiency, comfort, construction, and indoor environmental quality on the market.
2. By **driving consumer demand** through national outreach surrounding the EnergySmart Home Scale (E-Scale) so all Americans can easily understand energy performance and costs when shopping for a new home.
3. By **partnering with programs**, non-profit organizations, real estate organizations, lenders, utilities, and state and local governments to leverage and expand the existing green buildings infrastructure.
4. By **creating a design competition** and/or other mechanisms to increase the supply of high-performance home plans.
5. By **recognizing and rewarding participants** who contribute to a critical mass of high-performance homes with awards.

These elements are being implemented through collaborative efforts by the U.S. Department of Energy with states, building industry associations, building trades, colleges and universities, consumer organizations, rating organizations, realtors, utilities, lenders, and energy efficiency program sponsors. Most important of all is the voluntary participation of homebuilders across the United States. An up-to-date list of participating builders and partners may be found on the Builders Challenge Web site: www.buildingamerica.gov/challenge.





DOE invites homebuilders and partner organizations to join in making the Builders Challenge a showcase for energy leadership in American homebuilding—and a turning point in our nation's energy future.

For more information, visit
www.buildingamerica.gov/challenge.

Builders Challenge draws on the best practices developed by DOE's Building America R&D program. For more information, visit www.buildingamerica.gov.



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