

High Performance Builder Spotlight

Masco Environments for Living

Las Vegas, Nevada



The Masco home at the International Builders Show Village showcases Masco's Environments for Living Certified Green[®] program. With an E-Scale score of 44, the home meets the efficiency and quality requirements of the U.S. Department of Energy's Builders Challenge. Builders can tour the home to see a living model of building science principles at work.

barrier. All gaps and holes in the building envelope are caulked and sealed and insulation is applied carefully so that it comes in contact with the air barrier throughout, to prevent thermal bridging and cold spots. The HVAC system is right sized using Manual J calculations, ducts are mastic sealed, and ducts and air handler are located in conditioned space to minimize air leakage. High efficiency heating and cooling, ENERGY STAR appliances and lighting, low-flow plumbing equipment, and a central plumbing design with hot water recirculation pump help reduce energy and water usage. An energy recovery ventilator, spot ventilation with fans, and jump ducts ensure even distribution of fresh filtered air and low VOC cabinetry, carpets, paints, and adhesives further improve indoor air quality.

The EFL Certified Green home scores an impressive 44 on the HERS index.

BUILDER PROFILE

Palm Harbor Homes, sponsored by Masco Environments for Living Certified Green

Development: International Builders Show exhibit home, Las Vegas, NV

Size: 3,436 sq ft,
2 story, 4 bdrm, 2.5 bath

“ Builders can learn up close and in person how advanced construction techniques and other program requirements result in tangible and measurable benefits to new home buyers. ”

RICK DAVENPORT,
Vice President, Masco Corporation

The 3,436 sq ft, two-story home features four bedrooms, 2.5 baths and a host of energy saving and green features that will reduce the home's carbon footprint compared to code-built homes while providing occupants with improved comfort, better indoor air quality, low heating and cooling bills, and increased durability. The home, built for Masco by Palm Harbor Homes, features optimum value engineering with 2x6, 16 in. on center walls that hold R-21 of batten fiberglass insulation with R-3 exterior foam sheathing continuous over the OSB. Special care was taken to provide a continuous air

The Certified Green program, introduced in 2007, promotes the energy efficiency and building science components of Environments for Living along with several environmentally beneficial features like water efficiency, low-VOC and other indoor air quality benefits.

The Environments for Living program was launched by Masco Home Services Inc. in 2001. The program was developed in collaboration with nationally recognized experts such as DOE Building America team lead Building Science Corporation and Advanced Energy. Environments for Living offers builders a suite of turnkey services including plan reviews, inspections and diagnostics; building science training, sales training; and marketing assistance. An especially noteworthy feature of the program is the homeowner limited guarantees on heating and cooling energy use and comfort.



U.S. Department of Energy

Energy Efficiency and Renewable Energy

Bringing you a prosperous future where energy is clean, abundant, reliable, and affordable

KEY FEATURES

- HERS index score of 44
- 100% CFL or LED lighting, ENERGY STAR appliances
- Double-pane, low-emissivity, fiberglass framed windows
- Right-sized 17 SEER AC and 0.95 efficient natural gas furnace with air handler in conditioned space
- Insulated (R-8), sealed ducts in conditioned space
- R-19 crawlspace insulation; R-19 batt in walls plus R-3 rigid foam exterior; R-38 with radiant barrier ceiling
- Thermal barrier applied in direct contact with a continuous air barrier
- Kitchen and bath fans plus whole-house energy recovery ventilator
- Pressure balancing of rooms with jump ducts, returns, and transfer grilles
- Programmable thermostat
- Durability-tested, low-VOC paints, cabinets, carpets, and adhesives
- Hard-wired and removable CO detectors
- Follows EEBA water management guidelines for ventilation and drainage planes
- GE Hybrid Air Sourced Heat Pump Water Heater EF 2.0
- Low-flow faucets, shower heads, toilets

The Environments for Living program is a prescriptive, performance-based program that does not require builders to use specific products or adhere to a rigid list of measures but instead offers flexibility in meeting the performance goals of the program.

Regardless of how they arrive at the goals, homeowners are assured the homes will be more energy-efficient, durable, and comfortable than code-built homes.

While Environments for Living doesn't require specific products, many Masco brands and sponsor products will be visible in the demonstration home to give builders a tangible example of how the Certified Green program can be realized.



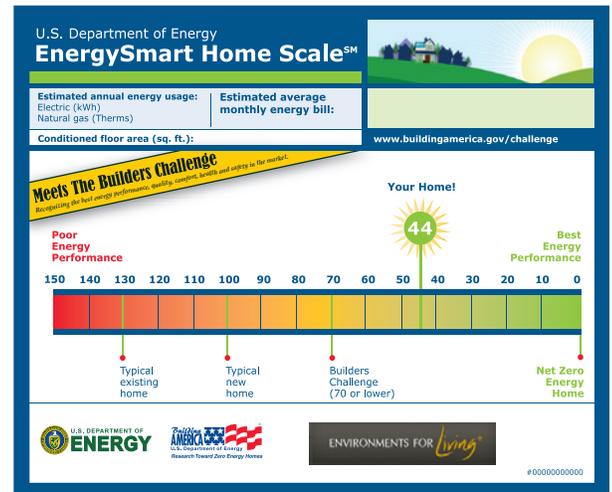
Builders can tour the Masco Environments for Living Certified Green home at the International Builders Show Village or on line at www.environmentsforliving.com

U.S. Department of Energy Builders Challenge

DOE has posed a challenge to the homebuilding industry—to build 220,000 high performance homes by 2012. Homes that qualify for this Builders Challenge must meet a 70 or better on the EnergySmart Home Scale (E-Scale). The E-scale allows homebuyers to understand—at a glance—how the energy performance of a particular home compares with others. Through the Builders Challenge, participating homebuilders will have an easy way to differentiate their best energy-performing homes from other products in the marketplace, and to make the benefits clear to buyers.

The figure to the right shows a sample E-Scale label. The E-scale is based on the well-established Home Energy Rating System (HERS) index, developed by the Residential Energy Services Network. To learn more about the index and HERS Raters visit www.natresnet.org.

To learn more about the Builders Challenge and find tools to help market your homes, visit www.buildingamerica.gov/challenge.



For more information visit www.buildingamerica.gov. The website contains expanded case studies, technical reports, and best practices descriptions.

The Building America Program

Building America is a private/public partnership sponsored by DOE that conducts systems research to improve overall housing performance, increase housing durability and comfort, reduce energy use, and increase energy security for America's homeowners. Building America teams construct test houses and community-scale projects that incorporate systems innovations. The teams design houses from the ground up, considering the interaction between the site, building envelope, mechanical systems, and other factors, and recognizing that features of one component in the house can greatly affect others. More than 40,000 energy-efficient houses have been built by the seven teams to date.