



# Constructive Insights

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DOORS

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### Building the Case for Green

Because it's highly unlikely energy costs are ever going to decrease in the United States, consumer demand for green building products can only gain momentum. Think of the Toyota Prius, which has become America's new SUV. And as homebuyers and homeowners become better-educated about green building and the standards and products behind the terminology, it makes sense that builders and remodelers need to be at least one step ahead. On the product end of the learning curve, the first step doesn't automatically mean builders and remodelers have to begin specifying more expensive building materials, just smarter ones.

Backing up a bit, what exactly is a green home by today's standards? According to the **U.S. Green Building Council (USGBC)**, "A green home uses less energy, water and natural resources, creates less waste and is healthier for the people living inside compared to a standard home." Interestingly, new data is showing that a green home may also sell more quickly than a standard home and for more money. In June 2007, the Northwest Multiple Listing Service (servicing 19 counties in Washington state) added green design search features to its property-listing database, including environmentally certified (ECert) homes built to a higher standard than local building codes require. One year later, it was found that the new-construction ECert single-family homes sold in 18 percent less time, sold for 4 percent more, and were 25 percent smaller than non-certified homes.

You could conclude homebuyers in the state of Washington are more prone to green building and that green homes may not sell quicker or for more money in your local area at this time, but there's no denying that the green movement is happening and it is very real.

### Levels of Green

While there is no single formula for green building and remodeling, there are **multiple** national, regional and local green home programs designed to help builders, remodelers and homebuyers set sustainability goals at varying levels. According to the U.S. Environmental Protection Agency (EPA), there are more than 50 green home programs around the country. Two of the most well-known national programs are the USGBC's **LEED** (Leadership in Energy and Environmental Design) program and the National Association of Home Builders' (NAHB) **National Green Building Program**. While each program approaches green building a little differently, both incorporate the following core elements:

- Energy-efficient construction techniques and products
- Renewable energy options
- Durable and recyclable products
- Improved indoor air quality
- Water-efficient products and processes
- Waste reduction and recycling during the construction process.
- Sustainable land development practices

Energy efficiency is a critical driver in the green building movement, especially when it comes to building materials. In *Professional Builder* magazine's 2007 Green Building Survey, builders said energy efficiency was somewhat or extremely important to 97 percent of their buyers. In the NAHB's 2007 Consumer Preference Survey, 66 percent of consumers stated that a better insulated and sealed home would influence their purchase decision. Fifty one percent of same survey respondents said they'd spend up front between \$5,000 and \$10,999 to save on utility costs. Based on these results, it could be said that homebuyers more easily understand and appreciate the benefits of building green when it allows them to heat and cool their homes more cost effectively.

### Therma-Tru's Commitment to Green



Two important aspects of building or remodeling a green home is energy efficiency and durability. Therma-Tru's fiberglass doors address both with the following features:

- ENERGY STAR qualified (most all Therma-Tru Doors have earned the ENERGY STAR).
- Polyurethane foam core (CFC4-free) with five times the insulation value of a wood door. The average R-value (measure of thermal resistance) of a Therma-Tru fiberglass door is almost as insulating as the wall of an average home.
- Energy-efficient glass. All decorative designs in Therma-Tru doors, sidelites and transoms are sealed between two panes of tempered glass.
- Tight wind and water seals for improved energy savings.
- Durable fiberglass, which won't crack, swell, split or rot like wood, and can last a lifetime without damaging natural forests. Therma-Tru's lifetime warranty on its Classic-Craft® and Fiber-Classic® wood-grain doors is far and above typical one-year warranties on wood doors. Plus, Therma-Tru's grain technologies make its doors virtually impossible to tell from traditional wood doors.

### Achieving Green Program Points

Therma-Tru doors help homes qualify for the energy-related points available in most green certification programs, including the U.S. Green Building Council's LEED program and the National Association of Home Builders' National Green

## Pushing the Green Envelope

To make headway and meet criteria for green home programs, more and more builders and remodelers are specifying ENERGY STAR-rated windows and doors. ENERGY STAR is a joint program of the EPA and the U.S. Department of Energy as well as a voluntary partnership between the government and more than 9,000 organizations, including 3,500 U.S. home builders. ENERGY STAR-qualified products—windows, doors, lighting fixtures, appliances, HVAC, etc.—carry the ENERGY STAR label and contribute toward points in most green home programs.

When it comes to keeping a home's envelope green, all exterior components are not created equal. Exterior components, such as doors and windows, should be durable enough to withstand extreme impact, weather and abrasive cleaning agents, possess energy-efficient insulation and sealant properties, and contain no materials that emit noxious fumes or pollutants. To be eligible for the ENERGY STAR label, exterior windows and doors must be rated, certified, and labeled for both U-Factor and Solar Heat Gain Coefficient in accordance with the procedures of the **National Fenestration Rating Council** at levels that meet **qualification criteria** in one or more climate zones. A particular window or door may be qualified in Florida, but not Colorado. That said, the EPA does not maintain a list of qualified products because its criteria is dependent on geographic usage of the product. Builders and remodelers are advised to consult manufacturers directly to determine if a particular window or door model is ENERGY STAR compliant.

## Green Resources



The U.S. Environmental Protection Agency/U.S. Department of Energy's **ENERGY STAR** program was introduced in 1992 as a voluntary labeling system designed to identify and promote energy-efficient products to reduce greenhouse gas emissions. The ENERGY STAR label is now on over 50 product categories and has been extended as a **certification label** for new home construction.



The **U.S. Green Building Council's LEED for Homes Program** is a voluntary rating system that promotes the design and construction of high-performance green homes. LEED certification is something consumers can look for to readily identify homes that have been third-party inspected, performance-tested and certified. [Click here](#) to download the USGBC's LEED for Homes Rating System.



The **National Association of Home Builders' National Green Building Program** offers several resources and

tools to help builders, remodelers, home building associations, and homeowners learn how to build green, and the benefits of doing so.

[Click here](#) to download the NAHB's Model Green Home Building Guidelines.



**Partnership for Advancement of Technology in Housing (PATH)** PATH lists 160-plus new

technologies, from advanced framing techniques to

white LED lighting, that demonstrate great potential for improving housing performance, but that have not been widely used or accepted. PATH is maintained by the **NAHB Research Center**.



The **National Fenestration Rating Council (NFRC)** is a non-profit organization that administers a uniform, independent rating and labeling system for the energy performance of

windows, doors, skylights, and attachment products.

Through the NFRC's energy-performance ratings, architects, builders, code officials, contractors and homeowners can compare products and make informed product choices. [Click here](#) for a list of NFRC certification program participants.

## Stay Informed

For more information about Therma-Tru's green initiatives and energy-saving entry and patio door systems, [click here](#) and [download](#) the 2008 "State of Green Building" white paper.