

# Residential Green Building

Your guide to understanding programs, ratings and certifications.

Environmental ratings and certifications can be international, national, or regional programs that have established sustainability and efficiency standards for buildings and products. This guide will help provide a better understanding of the most prominent residential green building programs in South Carolina.

## LEED for Homes



LEED for Homes is a voluntary rating system that promotes the design and construction of high performance green homes. A green home uses less energy, water, and natural resources; creates less waste; and is healthier and more comfortable for the occupants. Benefits of a LEED home include lower energy and water bills; reduced greenhouse gas emissions; and less exposure to mold, mildew and other indoor toxins. The net cost of owning a LEED home is comparable to that of owning a conventional home.

The LEED (Leadership in Energy and Environmental Design) Rating System® is the nationally recognized standard for green building. LEED for Homes, like the other programs in the LEED Rating System, has four levels of third-party certification: Certified, Silver, Gold, and Platinum, with Platinum being the highest. LEED certification recognizes and rewards builders for meeting the highest performance standards, and gives homeowners confidence that their home is durable, healthy, and environmentally friendly. (Source: [www.usgbc.org/leed/homes](http://www.usgbc.org/leed/homes))

**Verification:** U.S. Green Building Council

**Local contact and website:** South Carolina Chapter, U.S. Green Building Council, [www.usgbcsc.org](http://www.usgbcsc.org).



Maritime Green Builders, Inc. broke ground in Horry County in the Summer of 2007 on the Plantation Lakes project, which will feature the first LEED Home on Myrtle Beach's Grand Strand.

## EarthCraft House



EarthCraft House is a voluntary green building program that serves as a blueprint for healthy, comfortable homes that reduce utility bills and protect the environment. The benefits for the home owner include savings on operating, health and repair costs, conservation of resources and energy, improved air and water quality, and a quiet and durable home. The special energy-efficient requirements of an EarthCraft House result in energy savings of as much as 30 percent.



The 2007 Symphony EarthCraft Home, built by Addison Homes in Greenville, SC, features the latest in green building practices and energy efficient, environmentally friendly construction.

To qualify for the EarthCraft House program, a builder must be a member of the local home builders association, join the EarthCraft House program, and complete a training course. Each new home must pass a final inspection, based on a flexible point system that requires 150 points to be certified, before becoming an EarthCraft House.

EarthCraft House is an award-winning program the Greater Atlanta Home Builders Association developed through a partnership with Southface Energy Institute, government and industry leaders. As of July 2007, there were over 100 EarthCraft Homes in South Carolina and one EarthCraft Community, Oak Terrace Preserve in the Noisette area of North Charleston. (Source: [www.earthcrafthouse.org](http://www.earthcrafthouse.org))

**Verification, local contact, and website:** The Southface Energy Institute, [www.southface.org](http://www.southface.org)

## ENERGY STAR Homes



ENERGY STAR is a joint program of the U.S. Environmental Protection Agency (EPA) and the U.S. Department of Energy helping us all save money and protect the environment through energy efficient products and practices.

ENERGY STAR qualified homes are independently verified to meet strict guidelines for energy efficiency set by the U.S. EPA. These homes save money on utility bills, provide a more comfortable living environment with better indoor air quality, and help protect the environment.

Typical features of ENERGY STAR qualified homes include:

- An efficient home envelope, with effective levels of wall, floor, and attic insulation properly installed, comprehensive air barrier details, and high-performance windows;
- Efficient air distribution, where ducts are installed with minimum air leakage and effectively insulated;
- Efficient equipment for heating, cooling, and water heating;
- Efficient lighting, including fixtures that earn ENERGY STAR; and
- Efficient appliances, including ENERGY STAR qualified dishwashers, refrigerators, and clothes washers.



This ENERGY STAR Home in Greenville County proves that modern green houses are available in all shapes, sizes and styles. *Photo courtesy of Terry Schager, Laurel View Log Homes.*

These energy efficiency improvements save homeowners money—about \$200 to \$400 per year on utility bills. More importantly, monthly energy savings can easily exceed any

additional mortgage cost for the energy efficiency improvements, resulting in a positive cash-flow from the first day of home ownership. As a result, the cost-effectiveness of ENERGY STAR improvements can help offset additional costs associated with other green home features. (Source: [www.energystar.gov](http://www.energystar.gov))

**Verification:** Third-party verification through independent Home Energy Raters.

**Local contact and website:** The Residential Energy Services Network (RESNET) is a non-profit organization and a national standards making body for building energy efficiency rating systems. To learn more, or to find a RESNET certified rater near you, please visit [www.resnet.us](http://www.resnet.us).

## National Association of Homebuilders/Green Building Initiative Green Globes



The National Association of Homebuilders has adopted the Green Globes system as a mechanism for certifying residential construction. Green

Globes is a green management tool that includes an assessment protocol, rating system and guide for integrating environmentally friendly design into buildings. Once complete, it also facilitates recognition of the project through third-party verification. It's an interactive, flexible and affordable approach to environmental design.

The Green Globes system is questionnaire-driven. At each stage of the design process, users are walked through a logical sequence of questions that guide their next steps and provide guidance for integrating important elements of sustainability. The construction documents questionnaire is the basis for the rating system, however, the organization recommends that builders obtain a preliminary self-assessment by registering the building with Green Globes and completing the preliminary and subsequent questionnaires. (Source: [www.greenglobes.com](http://www.greenglobes.com))

**Verification:** GBI oversees a network of Green Globes-trained regional verifiers comprised primarily of licensed architects and engineers with significant experience in building sciences and sustainability issues. No building project can be promoted as having achieved a rating of one, two, three, or four Green Globes until it has passed a rigorous two-stage, third-party verification process.

**Local contact and website:** Columbia Association of Homebuilders, [www.columbiahomebuilders.com](http://www.columbiahomebuilders.com)

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