

# Building Green in Greenville

By Hailey Carmichael

Rendering Courtesy of Johnston Design Group



Energy usage may be one of the most costly expenses for home owners, but new technology is revolutionizing the way homes operate, and Greenville is home to an innovative display of green construction.

Furman University, The Cliffs Communities and “Southern Living” joined forces to demonstrate exactly what it means to ‘go green’. The Cliffs Cottage at Furman, a Southern Living Showcase Home, is a project “demonstration for the public of how to design and build a complete green structure,” says Ed Marshall, Furman’s Director of Special Projects. “Homeowners will come in and take a look at what we’ve done, and they’ll sort of cherry pick things that make sense from a financial perspective and a design perspective.”

But what does it mean to build green?

According to Scott Johnston, the lead architect of the Southern Living Showcase Home, “a green home should enhance the health and well being of its occupants. Wellness strategies include eliminating harmful chemicals from the home’s interior finishes, improved air filtering and ample day lighting.”

“Next, a green home should provide economic benefits through energy conservation,” he adds. “Passive strategies, such as appropriate building orientation and solar shading, are coupled with active technologies such as solar thermal collectors for hot water and geothermal for space heating and cooling.”

The Cliffs Cottage at Furman features these energy saving technologies. Solar energy provides more than enough electricity to run the entire home and all

appliances, and the unused energy will be either sold back to the energy grid system or stored for future use during a peak period when temperature extremes require more heating or cooling.

The appliances found in the home – such as the dishwasher and refrigerator – are Energy Star rated, which means they are significantly below the government’s minimum energy efficiency requirement. The toilet, for example, has a two-flush mechanism, which adjusts water levels per flush as needed.

Insulation also plays a key role in energy efficiency. “If you seal your home up and use the type of insulation that will basically negate the air flow in and out of that house and then you condition that air efficiently you’ll have a 30-40 percent savings over traditional construction,” Marshall says. The showcase home is sealed with spray foam insulation products called Icynene and Spider that reduce the cold and heat exchange.

“Finally, a green home should use environmental resources responsibly,” Johnston remarks. “Rabidly renewable materials, such bamboo and recycled materials are preferred.”

Rather than using common asphalt shingles that have a lifespan ranging from 12-20 years, the roof has shingles made of a southern yellow pine, which has a 50-year warranty but is expected last up to 100 years. When it expires, the organic materials can be returned to Mother Earth. Bamboo flooring is another special green feature of the home. Bamboo is a harder, denser type of wood that can be grown and harvested at a much faster rate than any oak or cedar tree. “It is the future,” Marshall notes.

When visiting this Southern Living Showcase Home, you’ll be sure to notice the extraordinary elements surrounding the home. For Johnston, “a home doesn’t end at the exterior walls. The building and landscape integrate as a cohesive whole.” A large organic garden to the side of the home will exhibit drought-tolerant and native plant species which require less hydration than exotic species.

“The home’s roof is designed to collect rain water for irrigation,” Johnston says, “thus decreasing the potable water demand by almost tow-thirds.”

Green design is complex and costly. The essential idea behind the Southern Living Showcase Home at Furman is to model the most “green” aspects of construction on the market today. Rising consumer demand for green products is lowering prices, making it more affordable for the average homeowner. Installing energy efficient appliances and features to your home will raise your construction budget, but it also will reduce your overall home management costs in the long run.

The Cliffs Cottage at Furman is an innovative prototype of the future in home construction. Every natural nook and conservable cranny is designed to be energy efficient so that home-builders will be inspired to conserve environmental resources and build green in future construction projects.