

The Key to Efficiency



Tom Brown and Gert Jan Eikmans of Crown Home Builders with David Wooten of Global Building Solutions

Conserve energy. Save money. Building and maintaining an energy efficient home can offer many perks. Currently, the new economic stimulus plan rewards those who make environmentally friendly choices within their home, allowing homeowners to deduct 30 percent of an energy efficient improvement. Many homes lose heating and cooling energy around windows and doors that are not sealed properly, or through gaps and compressions in the insulation. If you own a home, it is important to determine where these problems are occurring and how to isolate them for improvement; and if you plan to build a home, now is the time to consider what resources will contribute to its overall efficiency.

Proactive Building

Global Building Solutions, a local SIPs manufacturer, and Crown Home Builders, a local Eco-Energy Home builder, have joined forces to create sustainable green homes constructed from Structural Insulated Panels (SIPs), a cost-effective and energy efficient alternative to traditional stud construction. Made from

a high density foam sandwiched between two pieces of oriented strand board (OSB) or fiber cement board, SIPs are well suited for constructing walls, ceilings, floors, and roofs in a residential setting. To

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reduce construction time and waste, each SIP is prefabricated by Global Building Solutions in their factory on Clements Ferry Road, then shipped to the building site where Crown Home Builders connects the panels together to erect the structure of the home. The uniform insulation of



Jim Clark of ESS conducts a blower door test during home energy audit

a SIP translates into a high R-Value, the measure of thermal resistance, producing a more airtight dwelling and reducing home energy expenditures from 15 to 40 percent. In a study performed by the Oak Ridge National Laboratory (ORNL), a SIP constructed room proved to be 14 times more airtight than an equivalent room with 2x6 construction, sheathing, insulation, and drywall. Thus, building with SIPs can help you meet the performance guidelines of an ENERGY STAR™ new home.

SIP construction is also extremely versatile as it can accommodate any style of home and is ideal for any climate, both domestically and abroad. In fact, a special use SIP with a DDS (Double Dutch Strength™) edifice is available for homes in the Caribbean and for oceanfront properties in the United States to provide extra strength and protection against the elements. The DDS SIPs are made with steel studs every two feet, steel U-beams bolted into a concrete slab, extra hurricane strapping, and hurricane windows/shutters to withstand harsh weather conditions common along coastal regions. Another benefit of SIP construction is its earthquake strength resistance which is

important for residences built on an active fault line and thus experience frequent seismic activity like those in Charleston. For more information, contact Global Building Solutions, LLC at (843) 881-3590 or globalbuilding.net and Crown Home Builders, LLC at (843) 296-5417 or crownhomebuilderssc.com.

Retroactive Remodeling

Environmental Solutions and Service (ESS), a recognized Home Energy Rater (HERS), is licensed to perform energy audits that comply with ENERGY STAR™ standards and to certify new and existing homes as ENERGY STAR™ compliant. “For a fee of 300 dollars,” Jim Clark, a Certified Indoor Environmental Consultant (CIEC), explains, “ESS will come out and perform the home energy audit and indoor air quality review. During this inspection and evaluation, we will conduct a blower door test to see how inefficient or leaky the house is and use a thermal imaging camera to locate major areas of leakage.” Once the target areas are identified, the individual specifications of the home are entered into ENERGY STAR™ approved modeling software that illustrates which improvements will provide the most savings.

A summary report detailing the areas of air leakage and possible solutions, with the expected costs and payback, is included with the evaluation; as a part of the service, the ESS Certified Indoor Environmental Consultants can indicate modifications to increase the indoor air quality of the home. ESS can also work with the homeowner to retrieve bids from qualified installers of the products and services recommended. If the homeowner decides to pursue some of the suggested improvements, the initial fee of 300 dollars is waived, and ESS will coordinate with the subcontractors to ensure all aspects of the renovation are installed properly. Upon completion of the project, ESS issues a letter detailing any changes that were made and lists their HERS number as a reference for obtaining respective tax benefits through the government. For more information, call (843) 881-0027 or visit essforcleanair.com.