

Energy Star new home certification program

BY CLAUDE ST. HILAIRE

Concerns over rising energy costs and global warming are changing the way people view new home construction. Voluntary home certification programs are becoming increasingly popular with builders and homeowners as an opportunity to protect the environment.

According to the Environmental Protection Agency, a 10% reduction in energy usage by every homeowner would save billions of dollars annually and take 40 power plants offline.

Reducing energy usage in existing homes by 10% is easy to accomplish and has the added benefit of improving home comfort and indoor air quality.

The EPA's Energy Star for New Homes program ensures that the home will be at least 15% more energy efficient than current building practices.

Energy Star is considered to be both an energy efficiency and green building program because lower energy usage results in reduced green house gas emissions.

The key features of the Energy Star program include:

- **Effective insulation:** Properly installed insulation in floors, walls and attics ensure even temperatures throughout the home.
- **Improved sealing of the building envelope:** A properly sealed home will help reduce drafts, moisture,

dust and pollen and result in a more comfortable home with improved indoor air quality.

- **Tight air duct systems:** Properly sealed duct systems keep the conditioned air inside the building. The average home loses 15% to 20% of its air conditioning as a result of duct losses.
- **Right sizing of the HVAC equipment:** By reducing air leakage and duct losses in the home, the size of the heating, ventilating and air conditioning equipment can be reduced leading to greater energy savings.

FirstCoast Homes is one of the first major builders in the Charleston region to certify their new homes via the Energy Star program.

FirstCoast President Jeremy Graves said he chose to incorporate Energy Star in his company's new homes because he recognized the importance of reducing energy usage in all of his new homes to benefit the environment and he wanted to provide his customers with a significant savings on their energy bills.

FirstCoast will be incorporating the Energy Star program in homes in the new Cane Bay Plantation in Berkeley County and at Medway Landing in Goose Creek. The company projects an average energy savings of \$300 per home per year.

Steve Heyward of Heyward Builders also has turned to the Energy Star certifi-

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cation program to build “high performance homes.”

Heyward projects a costs savings of between 30% and 50% through the use of advanced building materials and improved HVAC systems, which also result in significant indoor air quality improvements.

Energy efficiency does not have to cost a lot of money.

In new home construction, the savings achieved with smaller HVAC equipment typically pays for the improvements in sealing the building and duct systems, resulting in no additional cost to the builder or home owner.

In most cases, purchasing product upgrades such as Low-E windows, on-demand hot water heaters and higher efficiency air conditioning equipment would provide a simple payback in the first few years. When these products are financed as part of a 30-year mortgage, the additional costs, while adding a few dollars

per month, will provide a greater monthly return in lower energy costs.

The most critical component of any home certification program involves the inspection process and final performance testing.

Inspections during the various stages of construction ensure that the upgrades are installed properly. After construction has been completed, the home is then tested for air and duct leakage to verify that the home meets the client's high performance expectations.

By choosing to incorporate a home certification program in new home construction, builders and home owners can make a difference by helping secure our state's energy independence and at the same time protect the environment.

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