



Builders Challenge

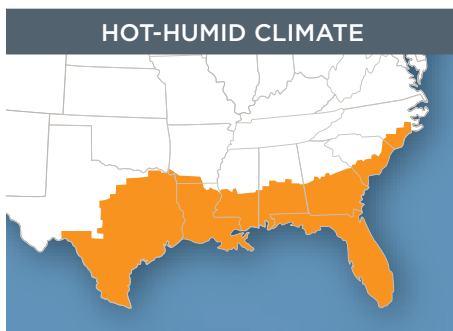
Recognizing Energy Leadership in Homebuilding

High Performance Builder Spotlight

LifeStyle Homes

Zero Energy Home (ZEH) –
St. Croix, Tralee Bay

Located in Melbourne, Florida, this revised St. Croix model is LifeStyle Homes' first zero energy home.



HOT-HUMID CLIMATE

BUILDER PROFILE

Builder: LifeStyle Homes,
Melbourne, FL

Founded: 1984

Home Built: 50 homes sold in 2009

Square Footage: 1650 sq. ft. (single story)
to 3200+ sq. ft. (two story)

Price Range: Low \$200,000s to Mid
\$400,000s



ZEH St. Croix – Tralee Bay Statistics

2,390 square feet, 4 bedroom, 3 bath, pool

Performance Features

- Home Energy Index (HERS)/EnergySmart Home Scalesm (E-Scale) = -6
- Annual Energy Use 'without pool' = -\$146

Thermal Shell

- Flat slate tile roof (medium color, 0.75 solar absorptance, custom attic venting ratio 0.01)
- R-38 attic insulation
- Fi-Foil[®] R-7 interior wall insulation w/light color exterior walls
- Low-E double pane ENERGY STAR[®] windows (U-value 0.60, SHGC-0.35)
- 50% tile, 50% carpet flooring

Airtightness & Indoor Environment Quality

- Tight ducts Qn out= 0.025 (total 4.74% loss)
- Infiltration rate (ACH50 = 4.36, CFM(50) of 1738)

HVAC

- SEER 14, 3.5 ton heat pump
- Programmable thermostat

Renewable Energy

- 8.0 kW PV system
- Flush mount integrated 50-watt panels
 - 60 panels at 202 degrees w/2500 PV power inverter
 - 100 panels at 112 degrees w/4800 PV power inverter
- Solar hot water system w/PV powered circulating pump

Efficient Appliances

- 100% compact fluorescent lighting
- All ENERGY STAR[®] appliances

Builders Challenge

LifeStyle Homes completed its first zero energy home in August 2010. Final inspection and testing of the home resulted in a HERS Index of -6, exceeding the Builders Challenge level of performance.

“This is a bold step for our company continuing the commitment made by Larry Hufford, one of our founding partners, to press forward as fast as possible toward his personal dream of building homes that power themselves.”

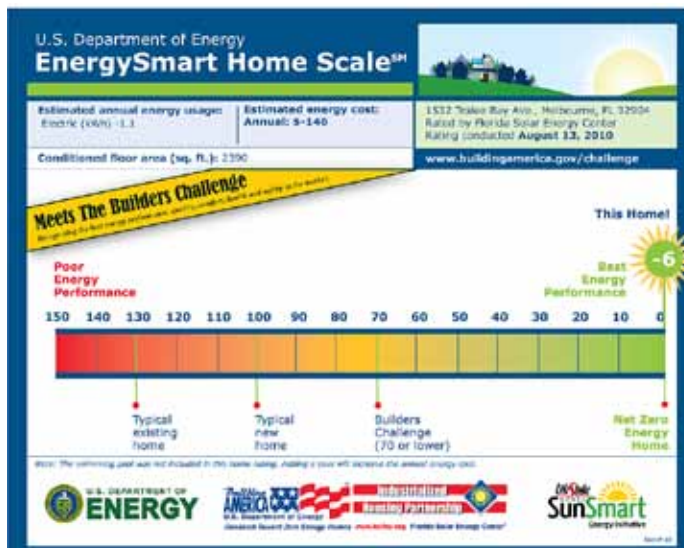
- **JAKE LUHN**, *Manager of Marketing and Sales for LifeStyle Homes*



8.0 kW PV System, Flush Mount
(160 Integrated 50-Watt Panels)

US Department of Energy Builders Challenge

DOE has posed a challenge to the homebuilding industry—to build 220,000 high performance homes by 2012. Homes that actually qualify for this Builders Challenge must meet 70 or better on the EnergySmart Home Scale (E-Scale). The E-Scale allows homebuyers to understand—at a glance—how the energy performance of a particular home compares with others. Through the Builders Challenge, participating homebuilders will have an easy way to differentiate their best energy-performing home from other products in the marketplace and to make the benefits clear to buyers. The figure below shows a sample E-Scale for LifeStyle Homes’ zero energy house. Note that the HERS Index and annual projected energy cost for this home do not include a pool. If a pool were to be added, it would lead to positive energy cost. The E-Scale is based on the well-established Home Energy Rating System (HERS) Index, developed by the Residential Energy Services Network. To learn more about the Index and HERS Raters visit www.natresnet.org.



To learn more about the Builders Challenge and find tools to help market your homes visit www.buildingamerica.gov/challenge.

Contact Information

For more information on this project contact:

Building America Industrialized Housing Partnership
www.baihp.org/

Best Practices Series: www1.eere.energy.gov/buildings/building_america/publications.html

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For information on **Building America** visit www.buildingamerica.gov. The website contains expanded case studies, technical reports, and best practices guides.