

**Research Toward Zero Energy Homes**

## Palm Harbor Homes – Glen Cairn – “Comfortably Affordable” Home 2008 International Home Builders’ Show Orlando, FL

### Glen Cairn – “Comfortably Affordable” Home Statistics

- 1,767 square feet, 3 bedroom, 2½ bath

### Energy Efficiency and Renewable Energy Features

- Low-E, double glazed, vinyl windows (U=0.35, SHGC= 0.30) with impact resistant shutters
- 13 SEER/7.7 HSPF heat pump (dual fuel) by Carrier with programmable thermostat
- Honeywell spray foam insulation (walls = R13, roof = R21)
- Duct system performance tested
- ENERGY STAR® appliances
- 95% use of compact fluorescent lighting
- Meets Builders Challenge Standards with an EnergySmart Home Scale (E-Scale) = 69

### Indoor Air Quality and Noise Reduction Features

- VOC source control including zero and low VOC paint
- Formaldehyde-free fiberboard
- Outside air ventilation
- Central vacuum system by Beam
- Quiet exhaust fans

### Other Green Building Features and Certifications

- Resource efficient modular construction and construction waste management
- Water efficient appliances and fixtures
- Certified Florida Green Home by the Florida Green Building Coalition
- Progress Energy Home Advantage Premium Energy Saver Program
- Builder is Building America Partner and Builders’ Challenge participant

*More information at the house in the Professional Builder Show Village or at booth #W3659*



Florida Solar Energy Center leads the Building America Industrialized Housing Partnership Consortium

## A Strong Energy Portfolio for a Strong America

Energy efficiency and clean, renewable energy will mean a stronger economy, a cleaner environment, and greater energy independence for America. Working with a wide array of state, community, industry, and university partners, the U.S. Department of Energy's Office of Energy Efficiency and Renewable Energy invests in a diverse portfolio of energy technologies.

## Research and Development of Buildings

Our nation's buildings consume more energy than any other sector of the U.S. economy, including transportation and industry. Fortunately, the opportunities to reduce building energy use—and the associated environmental impacts—are significant.

DOE's Building Technologies Program works to improve the energy efficiency of our nation's buildings through innovative new technologies and better building practices. The program focuses on two key areas:

### • Emerging Technologies

Research and development of the next generation of energy-efficient components, materials, and equipment

### • Technology Integration

Integration of new technologies with innovative building methods to optimize building performance and savings

For more information contact  
EERE Information Center  
1-877-EERE-INF (1-877-337-3463)  
[www.eere.energy.gov](http://www.eere.energy.gov)



U.S. Department of Energy  
**Energy Efficiency  
and Renewable Energy**

An electronic copy of this publication is available on the Building America Web site at [www.buildingamerica.gov](http://www.buildingamerica.gov)

## U.S. Department of Energy Launches Builders Challenge

The U.S. Department of Energy is scheduled to launch Builders Challenge, based on Building America high-performance home strategies, Thursday, February 14, 2008 at 3 PM in the Professional Builder Show Village during the International Builders' Show in Orlando, Florida.

The Challenge — to build 220,000 high-performance homes by 2012. Leading builders will join senior DOE officials to “take the challenge” to build homes that are between 70 and 0 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.

### Visit our Web sites at:

[www.buildingamerica.gov](http://www.buildingamerica.gov)

[www.pathnet.org](http://www.pathnet.org)

[www.energystar.gov](http://www.energystar.gov)



### Building America Program

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### Building Industry Research Alliance (BIRA)

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### Building Science Consortium (BSC)

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### Consortium for Advanced Residential Buildings (CARB)

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### IBACOS Consortium

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### Industrialized Housing Partnership (IHP)

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### Palm Harbor Homes (PHH)

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Bringing you a prosperous future where energy is clean, abundant, reliable, and affordable