



RESNET Partnership with Habitat for Humanity: Oklahoma City

Since 1995, The U.S. Department of Energy's Building America program has been providing technical assistance to Habitat for Humanity International and local Habitat affiliates interested in building energy efficient homes. Building America researchers help Habitat identify energy improvements that:

- are proven to be cost effective,
- are readily available in the market place,
- are appropriate for Habitat's volunteer construction crews, and
- do not place an additional maintenance burden on the homeowner.

Building America recommends that Habitat affiliates striving to build high efficiency homes work with a certified home energy rater. In 2005, **RESNET-certified home energy raters** began a volunteer effort with Habitat affiliates. Each volunteer rater provides a free rating to a Habitat affiliate in their community, including infiltration and duct testing, and they make recommendations on next steps for increasing energy efficiency. RESNET members participating in this program have a "Volunteer Energy Rater" emblem (*shown at right*) in RESNET's online directory of certified raters at: http://www.resnet.us/directory/raters_builders.aspx

Central Oklahoma Habitat for Humanity (COHFH)

For some RESNET volunteers, the offer goes beyond the first free rating. Oklahoma Gas and Electric's Positive Energy Home Program™ provides pro-bono home energy ratings, tax credit calculations, and a donation of \$2000 per house for energy efficient improvements to Central Oklahoma Habitat (COHFH) in Oklahoma City. In Oklahoma, a state tax credit of \$4,000 is awarded to builders of new homes less than 2,000 square feet that are 40% or more above the 2003 International Energy Conservation Code. COHFH is entitled to this tax credit, however, as a non-profit organization, they do not use the tax credit. Instead, they sell the tax credit at the rate of 85 cents on the dollar generating \$3,400 to further offset the cost of energy efficiency improvements including:

COHFH Heating and Cooling System

- Geothermal Heat Pump - Tranquility 20 Systems Donated By ClimateMaster (COHFH Pays For Installation And Drilling)
- Room-by-room Manual J Calculation
- Blower Door Infiltration Testing To Ensure Estimated Natural Infiltration Rate Of 0.35 Air Changes Per Hour Or Less
- Ducts Sealed With Mastic And Tested To Ensure Leakage ≤ 5 Cfm Per 100 Square Feet Of Conditioned Space

COHFH Enclosure

- 2x4 Frame construction, slab on grade with R-5 perimeter insulation
- Spray foam insulation in Wall (~R-13) with R-4 exterior rigid insulation
- Spray foam insulation at Roof deck (~R-19) in unvented attic
- Low-E, double pane, vinyl frame windows (SHGC= \leq 0.4 U-Value \leq 0.35)

COHFH Lighting – 100% Compact Fluorescent Bulbs (*note: only 20% can be counted for Energy Star certification purposes*)

COHFH HERS Index ranges from 56-58 (85 or less required to meet Energy Star)

RESNET

Residential Energy Services Network

www.natresnet.org

OG+E®

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Through the RESNET-Building America-Habitat Partnership, RESNET-certified raters provide one pro-bono Energy Star rating to a Habitat affiliate in their community. Look for the "Volunteer Energy Rater" emblem above in RESNET's online rater directory at: www.resnet.us/directory/raters_builders.aspx

Central Oklahoma HFH Contact
Ann Felton (405) 232-4828



For more information on Building America's Partnership with Habitat for Humanity, see www.baihp.org/habitat

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



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

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Produced for the U.S. Department of Energy (DOE) by Florida Solar Energy Center and the National Renewable Energy Laboratory. FSEC-BAIHP-10