Energy Design Update

The Monthly Newsletter on Energy-Efficient Housing, from CUTTER INFORMATION CORP.

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# INDUSTRY NEWS

## New American Home to Win HERS Rating

The New American Home, to be unveiled at the *International Builders' Show* in Atlanta, Georgia, in early February 2001, will bear a lot of resemblance to its predecessors. The three-story house is large and plush and equipped with just about every amenity known to man — typical of the show homes of the past. But this year's entry, built by Hedgewood Properties (Cumming, Georgia), boldly parts company with the others when it comes to energy efficiency.

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"This house is going to score 90 or better on its Home Energy Rating [HERS]," predicts Brad Oberg, a designer with Integrated Building and Construction Solutions (IBACOS), who acted as a technical consultant on the project.

While Oberg and colleague John Broniek brought a lot of ideas and technical expertise to the table, the real spark plug behind the home's energy efficiency is Hedgewood President Pam Sessions. Late last year, in collaboration with the Greater Atlanta Homebuilders Association and Southface Energy Institute, Sessions helped create the Earth Craft House program and declared that Hedgewood would henceforth build nothing but energy-efficient, environmentally friendly homes. This was no small change for Hedgewood, considering the fact that the company builds about 400 homes a year in some of Atlanta's most desirable neighborhoods. Following Sessions' lead, about 80 other home builders in the Atlanta metro area have now been trained to build Earth Craft homes.

"The New American Home expands on all of the things we've been doing with our Earth Craft houses," Sessions says. "The house will probably use about one-fourth the energy of ordinary construction." Sessions tells ***EDU*** that IBACOS will equip the house with sensors and monitor its energy use after the *Builders' Show* is over.

"One indication of the New American Home's energy efficiency is the fact that we're able to air-condition 5,500 square feet of living space with just two 2.5-ton air conditioners," notes engineer Broniek. "That's only about 1 ton per 1,000 square feet."

As shown in the artist's rendering (see Figure 1), the main house, with 5,000 ft² of living space, is connected via a breezeway to a two-car garage with a 500-ft² in-law apartment overhead. The house features a prefabricated Superior Wall foundation, with an inch of Owens Corning foam insulation (R-5) on the outside and R-13 batts on the inside (see ***EDU***, September 1997). Basements insulated to that extent are a rarity in the South.

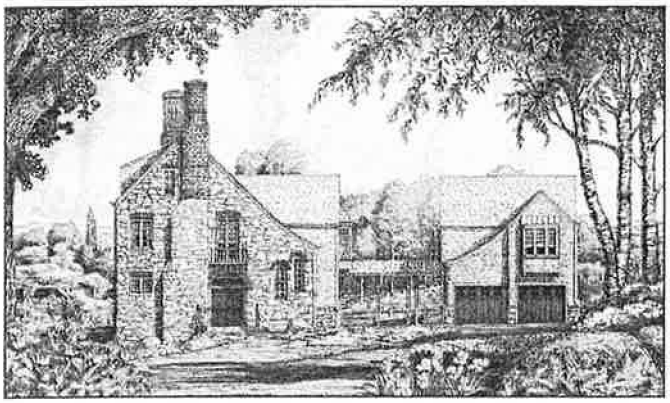

Figure 1 — The New American Home, built by Hedgewood Properties (Cumming, Georgia), is a real standout when it comes to energy efficiency.

The framing is primarily 2x4s with R-15 batt insulation, though some of the home's heavy mechanical walls are 2x6 with R-19. The attic is insulated with blown fiberglass to R-30, while the cathedral ceilings are insulated to R-26 using a combination of batts and Styrofoam configured to form a continuous baffle. The double-glazed Peachtree windows have a U-value of 0.33 and a heat gain coefficient of 0.32. The rough openings around the windows are all flashed with peel-and-stick membranes according to details supplied by the Energy and Environmental Building Association. (See related story on page 14.)

Also impressive is the home's HVAC system. Two zoned 13 SEER Carrier air conditioners handle the cooling load while a Carrier gas-fired condensing furnace (96 AFUE) performs the heating chores. The air conditioners, equipped with variable-speed fans and controlled by a humidistat, are designed to control Atlanta's often oppressive humidity. Toward that same end, the designers utilized a Honeywell enthalpy heat recovery ventilator that's designed to reject moisture from incoming ventilation air.

To be honest, we've sometimes skipped the New American Home tour in years past, but we think this one is a peach of a house and well worth a visit. For more information on the *International Builders' Show*, to be held February 9-12, visit www.nahb.com.

## EEBA Celebrates Its New Name and Record-Breaking Conference Attendance

More than 600 builders, designers, and other construction professionals attended the Energy and Environmental Building Association's (EEBA) annual conference and exhibition in Denver, Colorado, at the end of October. It was one of the largest turnouts in EEBA's history, reflecting the strong surge in the association's membership over the past year. ***EDU*** attended several conference sessions that were standing room only, with the crowd spilling out into the hallway.

Among other recent changes, the association has adopted a new name to reflect the greening of the times. Founded as the Energy *Efficient* Building Association, the group will henceforth be known as the Energy and *Environmental* Building Association. Of course the acronym — EEBA — still holds.

Conference organizers, including EEBA Executive Director Kathleen Guidera, were delighted by the record turnout. In large part, they attribute the heightened interest among builders to the spike in energy prices over the past year, which has put energy concerns back on the radar screen for many home buyers. Also, there are signs that construction activity is slowing in some markets, which tends to spur interest.

"When designers and builders are making money hand over fist, they don't much want to take time out for conferences and continuing education," notes one conference attendee. "But when things slow down a little, and builders realize they may be headed into a more competitive environment, you get more interest in designs and materials and techniques that can set them apart from the competition."

Though small, custom builders have traditionally been EEBA's core constituency, the association has started attracting large production builders to the table over the past couple of years. At the Denver show were representatives from US Homes, Centex, and Pulte Homes. Vernon McKown, president of production builder Ideal Homes (Oklahoma City, Oklahoma), was installed as EEBA's new president.

During the conference, organizers revealed plans to further strengthen EEBA's training arm — the EEBA Institute of Building Construction Technology — which will release two new white papers on rain management and best insulation practices. The institute, which aspires to be the nation's leading training group in building science, also announced that it will offer customized training sessions for local home builders associations.

For more information, contact EEBA at 10740 Lyndale Avenue South, Suite 10 West, Bloomington, MN 55420. Tel: (952) 881-1098; Fax: (952) 881-3048; E-mail: info@eeba.org; Web site: www.eeba.org.

**EDITOR:** Don Best

**Publisher:** Karen Fine Coburn

**Production Manager:** Barry Maloney

**Editorial Office:** Don Best, 65 Hallwood Drive, Surry, NH 03431; Tel/Fax: (603) 357-5689, E-mail: letters@top.monad.net.
**Circulation Office:** Cutter Information Corp., 37 Broadway, Suite 1, Arlington, MA 02474-5552; Tel: (781) 641-5118, or in North America, (800) 964-5118, Fax: (781) 648-1950, or in North America, (800) 888-1816, E-mail: info@cutter.com, Web site: www.cutter.com/energy/.
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