

GHI Pilot Homes Analyzed by Energy Experts
Press Release by GHI (UPDATE)

In the first two weeks of November, the 28 homes in the Greenbelt Homes, Inc. (GHI) energy upgrade pilot program were poked, prodded, and generally given a thorough check-up to see how well they're doing after about 70 years of constant use. An energy assessment was conducted by staff of the NAHB Research Center, the research subsidiary of the National Association of Home Builders. The NAHB Research Center is working with GHI through the Department of Energy's Building America program, with the work being performed at no cost to GHI. The energy assessment is an early phase of GHI's effort to prepare for major improvements in 2015. It provides researchers with data on the house construction as well as information from the homeowners and their utility bills. The assessment will provide a much better picture of the actual energy use and the opportunities for improvements to reduce energy consumption.

In conducting the energy assessment of the 28 pilot homes, NAHB Research Center staff utilized a number of measuring devices. The size and placement of windows, heaters, and other appliances were recorded. Condensation problems in the homes, attics, and crawlspaces were documented on film. In one procedure, called a blower door test, a large fan was placed in the doorframe and the whole house was depressurized to determine how much the walls, windows, and other parts of the house leak air. A thermal infrared camera was also used to identify gaps in insulation and places where cold air was entering the homes.

"All of this information helps us understand how the homes are performing," said Joe Wiehagen, Senior Research Engineer at the Research Center. "We put the data into our modeling software, and it helps us determine what types of improvements provide the most energy savings for the investment. This detailed measurement process at the beginning of the project makes our models much more accurate, which should mean better results for GHI."

The GHI homeowners were asked to complete questionnaires about what they do in the winter to stay warm, such as sealing windows with plastic, using draft blockers around doors, and using plug-in heating devices in addition to the standard baseboard heaters. "The way people live in the house can have a big effect on energy usage and comfort," said Wiehagen. "People who cook a lot or take long baths are more likely to have moisture concerns in homes with poor ventilation. People who are in the home all day, compared to those who work outside the home, will usually have more energy use. But we're really looking for obvious improvements, where benefits would accrue to all homeowners regardless of individual preferences."

One GHI household documented the energy assessment process on video, and has made the footage available on YouTube. David Morse, a member of the GHI Board of Directors, welcomed this opportunity to inform members about the process. "This will give members a chance to see the Pilot Program in action. We need to do whatever we can to make the program more accessible and less mysterious, and video is a great way to do that."

For more information about the energy assessments or the energy upgrade pilot program, contact Eldon Ralph, Assistant General Manager at GHI, by email at eralph@greenbelthomes.net or by phone at 301-474-4161, extension 128. To find the YouTube video of the energy audits, navigate to www.youtube.com and search for "GHI community upgrade pilot: first hand look."