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Pima awards silver rating to 4 Habitat green homes

By Tom Beal

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Don't tell Habitat for Humanity that "green" homes are only for rich folks. The first four homes certified "silver" under Pima County's new green-building code were built by Habitat Tucson volunteers.

It is a template that will be used for all future construction, said Michael McDonald, executive director of Habitat for Humanity Tucson.

What's exciting about Habitat snaring the first four silver certifications in a green building program adopted by the county last May is that it proves affordable homes can also be "green," said Richard Franz-Under, manager of the county's green building project.

"A large portion of the public thinks green homes mean you have to open your pocket and pay a lot of green for it, and Habitat proves that's not the case.

"The payback is the reduction in energy use and VOCs (volatile organic compounds), meaning a healthier environment," he said.

McDonald said he expected that the commitment to build "green" would cost more than it did.

"We were pleasantly surprised. We had the hypothesis we could build sustainably and affordably at the same time, but this was only about 1 percent of the overall cost.

McDonald said he plans to test Franz-Under's estimate that the homes will save 30 percent in energy costs, compared to building to minimum codes.

"That can make all the difference in the world for our families," he said.

New homeowners can also collect the federal energy tax credits for money spent on qualifying materials and appliances, he said, in addition to claiming the \$8,000 tax credit for first-time homebuyers.

Some green-building techniques, such as increasing the space between studs on exterior walls to allow more insulation, actually save money, said J.J. Swinney, senior site supervisor for Habitat.

The county's program is a regionally adapted variant of the better known Leadership in Energy and Environmental Design (LEED) guidelines promoted by the nonprofit U.S. Green Building Council.

The program allows builders to qualify for green certification by selecting from a menu of options that cut down on the use of energy and consumption of materials during construction, increase the home's energy efficiency or decrease the amount of environmental pollutants used.

Habitat's unique approach to home building makes it easier for the nonprofit to build green, said Swinney. The organization's goal is to "build safe, decent, affordable, quality houses for people in need" using donations of land, material and time.

The volunteers who build the homes carpool to the site, Swinney said, earning points for certification.

They get points for saving energy by using hand tools.

The workers, some of whom have never swung a hammer before, are briefed daily and closely supervised.

That makes it easy to relay techniques not used in production home building, where the biggest hurdle is retraining the subcontractors.

Labor-intensive techniques, such as foaming or caulking every possible opening in the house, don't add much to the home's cost when the labor is volunteer.

The four "green" homes recently completed at Corazon del Pueblo and the two under construction there all have plumbing stubouts for solar water heating and graywater systems. They are landscaped with drip irrigation and low-water-use plants. Eaves are extended to shade walls and windows, all of which are double-paned with a thermal barrier in the frames.

The water fixtures are all low-flow, and the appliances are all certified "Energy Star."

In addition to the county's silver rating, the homes earned a Tucson Electric Power energy guarantee and the EPA's Energy Star rating.

Cabinets, paint and flooring are all low-VOC. The heating and cooling ducts are sealed and enclosed in "conditioned" space beneath an insulated roof.

Habitat has completed 15 homes at Corazon del Pueblo and will eventually build 60 of the 393 homes in the subdivision just east of an area known as Littletown.

It will start another four on Sept. 11, which Habitat has dubbed "Building Freedom Day" in commemoration of the 9/11 terror attacks in 2001.

Swinney said Habitat will build all of the remaining homes to silver standard or better, adding things as they go, such as dampers to direct dryer exhaust into the garage in winter and outside in summer. Donated solar water heating systems will go into the two homes currently under construction.

Thursday, Tony Helm caulked under the eaves of one of those homes, volunteering his labor to pay Habitat back for the home he and his family occupy just two doors down.

"It's nice being a part of this," Helm said. "I can honestly say I helped build my own home and now I can say I helped build my neighbors' homes."

Tony and wife Nicole, along with daughters Alexandria, 3, and Ashley, 15, find their new home a big switch from cramped apartment living. "The cupboards aren't full," marveled Tony.

The first \$200 electric bill this month was a big shock. Nicole called it a "wake-up call."

The former apartment-dwellers had never paid directly for utilities, and the Tucson summer took a toll on their energy use, despite the home's energy-efficient construction.

"We were stuck on stupid," said Tony. "We ran everything 24/7."

They went over their energy habits with Habitat staff and made some changes, putting the computer and televisions on surge protectors that are now turned off when things aren't in use.

Nicole bought 10 compact fluorescent lights on sale for 92 cents each at Wal-Mart. She's going back to buy another 15 and swap out every light in the house.

The family was briefed on operating the house when they first moved in, but they received a lot of new information at the time, said Swinney. Habitat and Pima County have also developed an operating manual for making the most efficient use of the home's green attributes.

"All in all, it's been a great experience, said Nicole, who just completed her associate's degree in accounting at Pima College and is seeking work. "We have so much room."

Tony, a truck driver for Carondelet Health Network, said he had to pull off the road when Nicole called to tell him they had been chosen by Habitat. "Being a homeowner, getting a house — it's really great," said Tony.

Contact reporter Tom Beal at 573-4158 or tbeal@azstarnet.com.

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