



Guests at an architectural reception examine Rhonda and Nigel Farrar's "green home," which is under construction on a spot overlooking Lake Hodges. BRADLEY J. FIKES | bfikes@nctimes.com

Roof's up, time to celebrate

Couple's 'green home' gets visitors as construction nears end

Editor's note: Rhonda and Nigel Farrar are building an Escondido home incorporating the latest environmentally friendly technologies. This is the fourth installment in an occasional series about the Farrars' construction of their "green" home.

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ESCONDIDO — It's beginning to look, and feel, like a home.

The 3,000-square-foot "green home" under construction near Lake Hodges now has a frame and a roof sturdy enough to walk on. The electrical fixtures are being installed.

So, Rhonda and Nigel Farrar held their first open house there Wednesday evening.

About 60 people showed up for a self-guided tour and reception. They got to meet the various contractors and subcontractors, and the bank, who are turning the Farrars' dream into reality.

The upbeat message was that building a

home that meets the latest environmental standards and is pleasant to live in is not an overwhelming task. And pleasant is vital, Rhonda Farrar said: This is the home where she, her husband, and their dog are to spend the rest of their lives.

"We were really stunned at how easy it is to build a net zero-energy, carbon-neutral house, and we wanted to tell people how to do that," she told the guests of the American Institute of Architects' Palomar chapter.

Net zero energy means the home will generate as much energy as it uses, through photovoltaic solar panels. Carbon-neutral means the home will take out as much carbon from the environment as it adds, because the project, located on 2 acres, includes an organic farm.

Don't assume that "green living" necessarily means a project on the scale of the Farrars'. The project consists of elements that can be incorporated into other, more modest homes. The Farrars document the design and construction at www.farrargreenhome.org.

San Diego Gas & Electric Co. is working with the Farrars on the home as a case study in energy-efficient construction. All new residential construction in California must be net zero energy by 2020, under a mandate from the California Energy Commission.

"We're going to showcase this project not only to the California Public Utilities Commission, but to the California Energy Commission and others," said Chip Fox, manager of SDG&E's new construction energy-efficiency programs. "We're hoping that this will be used as a model to guide us down that path."

Green building can cost extra. The Farrars have estimated that it will add 10 to 20 percent to the overall cost.

Exact numbers won't be in until after the project is completed.

As Farrar explained it, all the parts of the home and its surrounding farm are carefully designed to work with each other.

Celebrate

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To water the farm, the Farrars had a well dug. They piggybacked on that work to install a geothermal heat pump, which taps into a constant underground temperature of 70 degrees.

To provide better insulation, they used 12-inch-thick insulated concrete form blocks.

The blocks are made with recycled polystyrene and concrete, including reinforcing metal rebar in the center.

The blocks also reduce noise, block vermin from entry, and are earthquake- and fire-resistant.

While the ICF costs more than conventional building materials, its extraordinary fire resistance — up to four hours — made it indispensable, Farrar said.

"This lot got singed in the fire, so we're not going to go to all this trouble to build this house and risk it going down in a fire," she said. "We came from the Bay Area where they have earthquakes, so we were going to do this. We felt it had enough value, even if it did cost a little bit more."

The home is angled south to best capture sunlight on the solar panels to be installed on its roofs. And that south-facing orientation also gives great window views of Lake Hodges.

"This is one way to do it. I'm sure there are many other ways to do it," Farrar said.

The home was designed not just to be environmentally friendly, but also to showcase how economy can play a role, she said.

"Some of the stuff is more expensive than traditional construction, like the solar," Farrar said. "But we look at it as pre-paying for all our heating and air conditioning and all of our power for the rest of our lives."

Construction is expected to be complete by the end of the year, or perhaps a little bit before. The schedule was delayed a bit by a piece of good news, Farrar said: the availability of new and better varieties of energy-efficient LEDs at lower costs.

The construction team changed the plans to all-LED illumination.

The Farrars took care in assembling a team to design and build the homes. It includes gardeners Bruce and Sharon Asakawa for their horticultural expertise; architect Drew Hubbell (son of famous artist James Hubbell), for his knowledge of green building practices; and Jim Backman, who designed the home's geothermal system.

Farrar gave the most praise to Phil Gaitaud, the general contractor. She said Gaitaud's adroit handling of stressful construction matters helped keep her and Nigel "married and happy."

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