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New LEED house in North Kingstown comes with below-average price

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The foundation was made with concrete poured between Styrofoam layers to conserve energy.

NORTH KINGSTOWN — New ovens and refrigerators are required to have EnergyGuide labels that spell out the expected annual energy cost of using the appliance.

The Federal Trade Commission recently announced that EnergyGuide labels will be required for televisions manufactured after May 10, 2011.

Why don't houses — the most expensive things most people ever buy — come equipped with the same consumer information? It's a question that rankles builder Dave Caldwell Jr.

Caldwell has just finished his latest energy-efficient house in North Kingstown. It is one of the very few houses in the state registered with the U.S. Green Building Council's LEED (Leadership in Energy and Environmental Design) for Homes program.

Even though the house has the latest in green technology, including a solar-powered heating and cooling system, it is priced at \$239,900, almost \$65,000 below the town's median house price (\$304,505 in 2010).

Caldwell said that price is possible because he was able to get the house lot for \$10,000, which he said is "almost nothing." Caldwell's parents own the two-family house next door, and they gave up part of their property to help form the new lot.

Before the house is sold, Caldwell will ask potential owners to agree to share information about the actual energy costs of living in the home.

He said green builders must be able to document energy performance to prove to mortgage lenders that buyers can afford to spend more for a house when they will spend less for energy.

From the outside, the new house at 58 King Phillip Drive looks like another LEED house in North Kingstown, 53 Hancock St., which Caldwell's company, Caldwell & Johnson, Inc., sold in 2010.

But Caldwell is aiming for platinum LEED status, the highest LEED for Homes rating, on the King Phillip Drive house; the Hancock Street house, which doesn't have solar panels, achieved gold LEED certification. LEED homes can be certified at one of four levels: certified, silver, gold or platinum.

Caldwell said the shell of the King Phillip Drive house is built "like a bunker" because it is constructed entirely out of insulated concrete forms. There is an 11-inch exterior wall — 6 inches of reinforced concrete sandwiched between 2½ inches of styrofoam on each side.

Photovoltaic panels on the roof capture solar power; Caldwell expects the 2.1-kilowatt system will generate about \$400 per year in electricity, which "will offset almost the entire cost to heat and cool the house."

Minisplit heat pumps heat and cool the air, and a heat-recovery ventilator exchanges the interior air with fresh air from the outdoors while maintaining the desired indoor temperature. The house also has a tankless, on-demand hot-water system and a denitrification sand filter septic system.

Caldwell said building LEED houses has been "a learning process" for his North Kingstown company, which was cofounded by his father. Caldwell is a Marine Corps veteran who served in the Mideast, and he said he feels strongly about reducing our country's dependence on foreign oil.

The state's roster of LEED houses includes two luxury houses in Narragansett and a house on the East Side of Providence that sold last year in the \$800,000s. Caldwell's LEED houses are among the few in Rhode Island that middle-income families could afford.

Although there was a slight increase in the number of single-family building permits issued in Rhode Island in 2010 — 744 permits compared to 701 permits issued in 2009 — the current economic climate is a particularly difficult one for builders. More than 2,000 single-family permits were issued in the state annually from 1996 through 2002.

"I'd say that more stringent lending practices and the general downturn in the economy are the primary drivers of whether the average homeowner will build at all, regardless of whether they choose to build green," said Connie McGreavy, executive director of the Green Building Council's Rhode Island chapter.

To date, there are 11 LEED for Homes projects in Rhode Island, representing 20 buildings; 10 of the

buildings are multifamilies (Kingstown Crossings, also in North Kingstown) with 3 units in each building, according to McGreavy. “Most of the single-family [LEED] homes are located in coastal communities, which likely indicates an owner with more income than on average.”

Nationally, more than 10,000 homes across the United States have earned LEED certification, according to the U.S. Green Building Council.

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