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For extra \$5,000, builder makes N. Kingstown house 'green'

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By Christine Dunn

Journal Staff Writer



Caldwell & Johnson Custom Home Builders bought a foreclosed and abandoned house at 53 Hancock Drive in North Kingstown and rebuilt it to be a model of energy efficiency.

The Providence Journal / Bob Breidenbach

NORTH KINGSTOWN, R.I. — In Rhode Island, building green, at least in the private sector, has often meant building expensively.

The state's first two houses certified under the U.S. Green Building Council's LEED for Homes program have been pricey new homes built near the ocean in Narragansett.

Another LEED house is planned on Block Island; developer Nick Downes, of Middletown, has said he expects to price the 3,000-square-foot home, on a 4-acre site on Swede Hill, at \$4.5 million.



Builder David A. Caldwell Jr. talks about the energy efficiency of the home while in the basement next to the gas furnace.

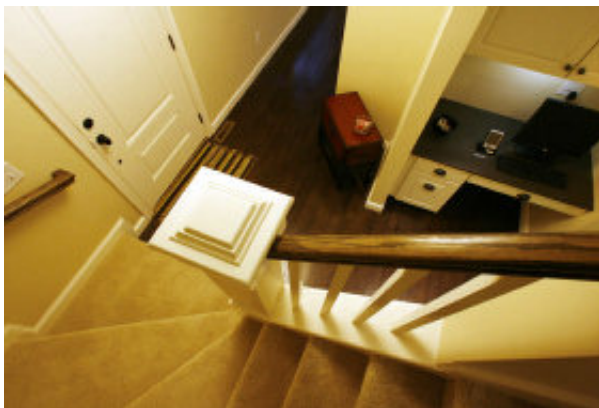
But in North Kingstown, a builder has just put the finishing touches on a green home that will be listed at \$259,900 — well below that town's median house price (\$292,000 in 2009).

The builder, David A. Caldwell Jr., said it cost just \$5,000 extra to add the green features that will allow the house to meet four different green building standards.

“You don't have to spend a lot of money to be green,” he said.

Most of the added costs were for upgrades in the house's insulation and energy systems.

Energy-efficient houses are tightly insulated, requiring an air ventilation system; to prevent heat loss, a heat recovery ventilator was installed.



A view from the stairs that lead to the new second floor. The first floor hallway has a computer station installed.

Caldwell said the air in the house will be changed with outside air at a turnover rate of 2.5 times per hour while maintaining the desired indoor temperature.

A tankless system provides hot water instantly, and a high-efficiency heater was used.

The house will be almost twice as energy efficient as a comparable new house, he said.

The project is a rebuild of a 648-square-foot, 1952 ranch house at 53 Hancock Drive. The original house, built by the U.S. Navy, had been foreclosed after the previous owner began a renovation and then abandoned the property.

The new house has 1,296 square feet of living space, 3 bedrooms and 2.5 baths.

The house is small but attractive, with bamboo flooring, a built-in computer desk in a nook near the kitchen, and a drop zone — a storage center near the back door that provides a place to drop packages, mail and recharge portable electronic devices.

Recycling bins were built in below the counter surface.



The kitchen of the house in North Kingstown built by David A. Caldwell Jr. sports a countertop made of recycled glass. The house meets four different green building standards. Below, a way to monitor energy costs online.

The Providence Journal / Bob Breidenbach

At the computer, Caldwell has placed a device that can measure the energy use of every appliance, light and outlet in the house.

The kitchen counters look like granite but are made of a recycled glass product, Eco by Cosentino, manufactured at Cosentino headquarters in Almeria, Spain. Corn oil is used in the resin.

Caldwell served in the U.S. Marine Corps and worked for a large contractor in California before moving back to Rhode Island with his wife and children to join his father's construction business.



His father cofounded Caldwell & Johnson Custom Home Builders in 1968.

The house was built on speculation, to meet four different green building standards: LEED (Leadership in Energy and Environmental Design); the U.S. Department of Energy Builders Challenge program, the National Association of Home Builders National Green Building Standard, and Energy Star.

Caldwell said it will cost about \$4,000 for all the green inspections he is having done on the house.

Caldwell said it's the first project of its kind in New England to seek certification under all four standards.

But more importantly, Caldwell said the project shows that building green can deliver significant cost savings to consumers without a huge upfront investment.

Caldwell, quoting information from Rob Sherwood, of Conservation Services Group of Massachusetts, which conducts green building inspections, said it will cost \$1 a day more to own the house versus a comparable newly constructed house (\$5,000 more for the "green premium" amortized over 30 years at a 5.125-percent fixed rate mortgage), but the owner will save \$2 a day in energy costs at today's rates.

"You're saving money from day one," Caldwell said. "And that's before we get into all the sustainable aspects and indoor air quality.

"I don't know why anyone would choose to build a house any differently," he said.

cdunn@projo.com