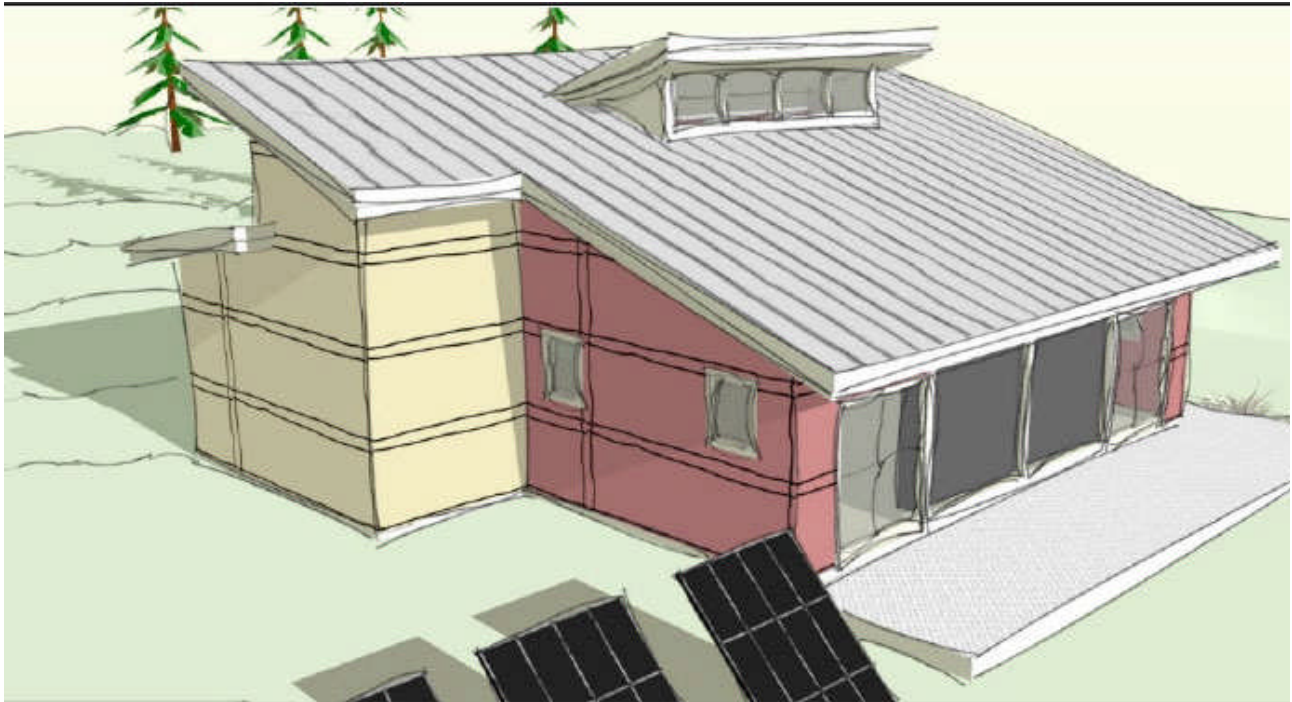


Building value in the net-zero home

Actually saving money has been considered the last hurdle for the green movement, which got sideswiped by the economic crisis

BY JANET WHITMAN, FINANCIAL POST APRIL 26, 2009



South West Green house rendering.

Photograph by: Provided by Spire Architecture, Provided by Spire Architecture

NEW YORK -- Move over granite countertops. Solar panels and tankless water heaters are catching on as the hot must-have items in new home construction.

Going green has long been considered cost prohibitive to many Americans and Canadians wanting to build eco-friendly homes. But last year's record surge in energy prices is leading a lot of consumers, architects and homebuilders to rethink the math.

The idea of opting for an environmentally friendly, energy-efficient home isn't only starting to be seen as an affordable option. It's being sold by some architects and homebuilders in United States as one that could end up saving homeowners hundreds of thousands of dollars -- and even make money.

Chris Colby, an architect in Ryebrook, N.Y., plans to break ground this summer on a US\$295,000, three-bedroom high-efficiency home that will generate all its own electricity and energy, without needing to tap into the U.S. power grid.

Over 30 years, a normal house of that size would have power bills adding up to about US\$300,000, assuming energy costs go up at about 5% a year, said Mr. Colby. His prototype -- one of many "net-zero" homes cropping up around the country that generate as least as much power as they use -- is designed to result in energy savings that ultimately could cover the cost of building the home.

"We think a 5% a year increase is conservative," said Mr. Colby. "The Department of Energy is forecasting an 11% increase between now and next year."

That calculation doesn't take into account any cheques the homeowner might get back from the utility company for selling excess power generated back to the grid, he added.

A number of states allow "net metering," in which homeowners can receive money for selling excess energy back to the utility grid. Most Canadian provinces haven't come on board with this, although Ontario and British Columbia are the exceptions.

"It's very important to us that people know they can do this without overextending themselves," said Mr. Colby, whose firm Spire Architecture started designing the prototype for its "Concept Z" home in December. "There's a wow shock factor when people realize they don't have to pay for utilities and the house can also potentially pay you back."

Actually saving money has been considered the last hurdle for the green movement, which got sideswiped by the economic crisis.

Building an eco-friendly home still has higher upfront costs than a conventional home, but the gap is narrowing in many parts of the United States, helped by increasingly generous rebates offered by federal and state governments.

Spire's "Concept Z" home, for example, would have cost as much as US\$80,000 more to build if it weren't for government rebates for solar panels, geothermal heating systems, energy efficient windows and other green features. (Rebates in Canada aren't nearly as enticing.)

Another big factor bringing down the cost of Spire's prototype is that it's not a custom design, which can often add hundreds of thousands of dollars to the overall cost of building a home.

That cookie-cutter approach is also the thinking behind Geos, a master-planned community in a suburb of Denver, Colo., that aims to be America's largest net-zero housing development.

"We are building several units of the same design," said Norbert Klebl, the lead developer behind Geos. "Most of the energy-efficient homes that have been built in this country are custom homes where people had to go to an architect."

Mr. Klebl estimates that the homes he is building -- seven designs with prices ranging from US\$300,000 to US\$500,000 -- will cost only 10% to 13% more than conventionally built homes because he won't be coming up with new concepts for each home.

Homeowners can easily offset that increase by putting the money saved on power bills toward mortgage payments, he said.

With energy prices expected to keep heading higher, green features in homes are starting to have huge appeal with some homebuyers.

According to research from the Appraisal Journal, a home's value increases by about US\$20 for every US\$1-reduction in annual utility bills, reflecting mortgage interest rates of about 5%.

"Given the recent interest in energy efficiency and the scheduled deregulation of U.S. utility providers in 2010, the actual value could be well over US\$20 for every US\$1 saved," said Charlie Green, chief executive of GreenandSave.com, a green home remodelling resource. "The US\$4-a-gallon gas last summer woke up America."

For existing homeowners, it often doesn't make economic sense to swap out conventional systems for pricey solar panels or geothermal heat, Mr. Green said. "A US\$30 energy-efficient showerhead will save more money than US\$4,000 worth of solar panels or energy-efficient windows."

But for new home construction, many of these systems can end up paying for themselves within 10 years or less, he added. "As a rule of thumb, going green is generally 10% to 20% more expensive, but the payback is there."

How much homebuyers might be willing to pay if, after a few years, they decide to sell a net-zero home is still largely a question mark.

"The problem is that the payback on many of these energy-saving things can be long, maybe five years or even 15 years before you get your money back," said John Bredemeyer, a residential appraiser in Nebraska and spokesman for the Chicago-based Appraisal Institute. "Today, the typical buyer stays in a house for seven years. With that horizon it doesn't make sense to pay for something with a 10-year payback."

Although homebuyers might not want to pay dollar-for-dollar for a US\$15,000 geothermal heating system, they might be willing to pay towards the high-end of an asking price, just as they might for homes with granite countertops, Mr. Bredemeyer added.

One big deterrent right now to building and buying green is that the technology is changing so rapidly, making products quick to go out of date and to come way down in price, not unlike flatscreen televisions over the past few years.

Those factors make government rebates all the more important for early adopters.

Canada doesn't offer much in that regard to encourage the building of net-zero homes.

"There's an emerging perfect storm of opportunity where there's more and more interest from consumers, and builders are quickly trying to learn how to develop the homes," said Gordon Shields, executive director of Net-Zero Energy Home Coalition, a Canadian industry association promoting energy-efficient home construction. "But there aren't enough resources available or support measures for early adopters."

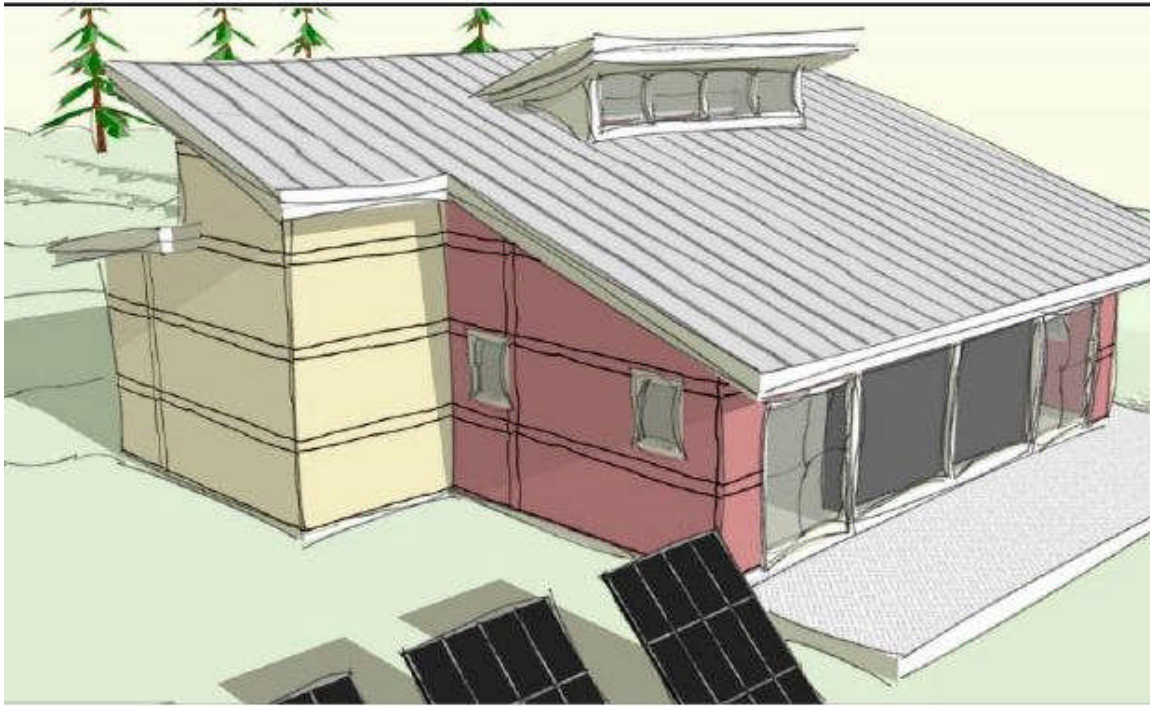
The U.S. government, through its Building America program on the other hand, has been working with homebuilders around the country to find ways of bringing down the cost of all the components that go into a net-zero home.

"Our goal is by 2030 for anybody in the U.S. to be able to afford a net-zero home," said George James, Building America's project leader in Washington D.C. "Prices are going to come down. We're optimistic we're going to be able to beat that goal."

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