

Solar design shines light on efficiency

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The house of the 21st century is being built in Riverdale.

The ultra-energy efficient duplex designed to create as much power as it uses is one of 12 finalists advancing to the construction phase of the Canada Mortgage and Housing Corporation's new Equilibrium Housing Pilot Demonstration Project.

The Riverdale Net Zero Energy Project was awarded \$50,000 towards its construction after being named a finalist among a field of 72 competitors.

"The great thing about this project is we're going all the way and will have done everything we can in order to get to net zero (energy consumption)," says Habitat Studio and Workshop Ltd. partner Peter Amerongen. Also involved in the local project are Howell-Mayhew Engineering and Solnorth Engineering.

Once completed, the duplex is expected to sell for between \$500,000 and \$600,000 a side.

That includes around \$100,000 worth of extra insulation and solar panelling.

However, it isn't known how long it would take to recover the cost of the system.

"We haven't really done a detailed analysis on that kind of thing. That's one of the things we'll do, we'll certainly analyze the thing to death," he says, adding once construction is completed, one half of the duplex will remain open to the public for one year.

"We were really determined to submit a high-quality design that would work, that would generate as much energy over the course of the year that it uses," says Amerongen. "We've done the costing but we haven't really done a payback analysis on it."

He says he's not sure why more houses aren't being built with basic features such as extra insulation and thicker outer walls to make them more energy efficient.

"All of our houses have upgraded insulation, better windows, they're more air-tight and they have better furnaces and better hot water tanks," he says. "We've been doing that for 20 years and gradually as the technology's improved we've gone further, and that's really a big part of our interest in this project."

As cutting back on greenhouse gas emissions becomes more of an issue and less of a choice, Amerongen says more people will become interested in more efficient designs too.

Although Edmonton was the most northern location among the entries, Amerongen says it was teamwork that set the project apart.

"This team collectively has got hundreds of years of experience. I think that was a big part of it," he says. "There's an amazing amount of commitment to making this kind of improvement. I've always been interested in this but I was shocked at how easy it was to get people to dig in and really give it their best."

With 1,775 square feet of space above grade on each side, Amerongen says the house will have all the amenities and is a nice location in the river valley.

"We have to sell this thing for what it costs us to put it up," he adds, pointing out the government funding will help keep it open to the public longer. "We're just a tad worried about our ability to recover in that kind of price

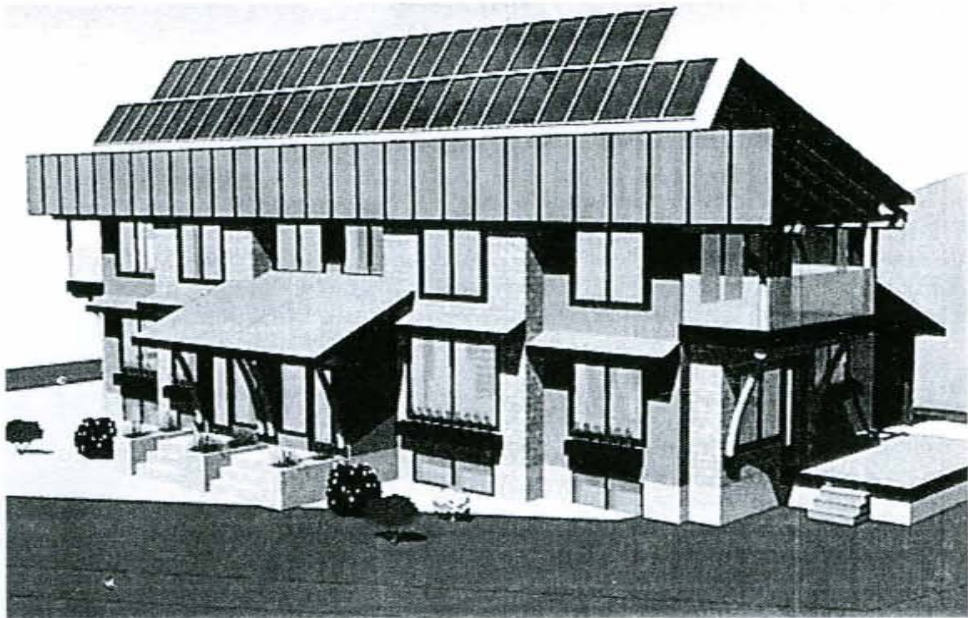
range."

Whoever buys it will be leaving less of a footprint on the earth, he says.

"We're hoping the same kind of good feeling will entice people to spend the extra money that goes into this," says Amerongen.

"If I had any sense I'd sell the lot and pocket the money," he says. "We're doing it because we believe in it. But it's not like we're totally altruistic — we think this is a serious problem that has to be solved and this is going to give use a market advantage. We've always been leaders in this area but there's regulation coming down the pipeline that is going to make everybody move up to our level."

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