



Lyle Aspinnall/St. Albert Gazette

**NEW KIND OF HOME** – Peter Amerongen of Habitat Studio and Workshop stands next to the net zero energy home he is building in Edmonton's Riverdale district. Once it is completed, the home will generate as much power as it uses, making it the first of its kind in Canada.

# NetZero home first of its kind in Canada

*House can be heated by just four toasters*

**BY KEVIN MA**  
*Staff Writer*

The future of Canadian housing is rising from the North Saskatchewan River, and Peter Amerongen is building it.

Amerongen is constructing the first net zero energy home in Canada in Edmonton. When it's finished, it will be the first home in the country that generates as much power as it uses.

Almost 300 people attended a presentation about the house by project leader Gordon Howell at the Telus World of Science

Monday. About 50 were turned away due to lack of space.

The Gazette toured the house last week with Amerongen while it was under construction.

The house, dubbed the Riverdale NetZero Project, is one of 12 similar homes planned for construction in Canada, says Amerongen, lead designer and builder for the project. "We are the furthest north and first in the ground," he says, proudly.

The house uses insulation and the sun to make all the heat and electricity it needs, Howell says. You could heat it with four toast-

ers in -32 C, he says, noting that a normal home would need about 19.

While the home does take electricity from the power grid in the winter, Howell says, it sends power back in the summer so it uses zero energy overall.

Sponsored by the Canadian Mortgage and Housing Corporation, the house is designed to show Canadians that they can have more efficient homes. "This is not about making a house," Howell says. "This is about helping people change."

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# Solar power

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## How it works

Amerongen steps across a wooden bridge into the home, nestled next to the North Saskatchewan River in Edmonton. It's a bit messy, he says, noting the occasional screw on the floor, but that's because it's a busy place, with carpenters banging away everywhere.

Net zero homes are a challenge in Canada, Amerongen says, because the sun is not around in the winter. "When we need it the most, we got it the least."

The first thing they did to counter this was to max out the home's insulation. The walls will be 16 inches thick, compared to five in a normal home. "You can hide people in them," he says. These walls will be filled with treated, shredded newspaper as insulation, similar to that used in some attics.

Next, they made the house airtight. Most homes leak their entire volume of air three times an hour, Amerongen says, and lose a lot of heat. This one leaks one sixth as much and has a heat recovery ventilation system to save more energy.

The 18,000-square-foot duplex will have solar power systems to heat its water and power its appliances, all of which are highly efficient. It's also near downtown and bus routes so the owners don't have to drive as much.

## Why it's rare

The house will probably cost about \$90,000 more than a nor-

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PETER AMERONGEN  
*NetZero Project*

mal one and will be sold on a cost recovery basis. It's pricey, Amerongen says, but this is a home that lets you feel like you're doing your part for the environment.

When asked why there weren't more highly efficient homes in Canada, Amerongen says, "That's a damn good question," and points to the house across the street. He built that in the 1980s and this house uses a lot of the same basic design principles. "A lot of the stuff I'm doing I learned 20 years ago," he says, but it's only now with rising energy costs and climate change concerns that people are interested in efficient homes again.

Builders and buyers have to start making homes more like this one, Amerongen argues. "We've got to get off our butts and do something," he says. "I don't want to be an old man saying, 'I knew how to do this. Why the hell didn't I do something about it?'"

The NetZero Home will be open to the public as part of the Eco Solar Home Tour on June 9. For details, visit [ecosolar.ca](http://ecosolar.ca) or [riverdalenetzero.ca](http://riverdalenetzero.ca)

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