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sustainable chic

Edmonton's Riverdale net-zero home isn't just easy on the Earth – it's easy on the eyes

TEXT CAITLIN CRAWSHAW PHOTOGRAPHY MERLE PROSOFSKY

It's not uncommon for David Johnson to see vehicles slowing down or stopping in front of his river valley home. Frequently, passerby strike up conversations over the fence while he and his wife Kristi are tending the yard. Sometimes they even snap a few pictures.

This kind of attention is generally reserved for

publicity-hungry celebrities, not mild-mannered Edmonton professionals. But with its modern exterior and roof covered in solar panels, this house makes a statement in its Riverdale neighbourhood. People are curious.

Some might take offence at the looky-loos, but these homeowners take it all in stride, cheerfully

answering questions posed by people on the street and indulging dinner party guests with lengthy tours of the home. As the owners of Edmonton's first net-zero home – it produces all of the energy it uses – Johnson and his wife are willing ambassadors for green building. "I believe in leading by example. It's one thing to tell people, 'Here's what

to do.' It's another to go ahead and do it." When other Edmontonians show interest in his home, Johnson is delighted to tell them all about it.

An employee of the Alberta Urban Municipalities Association (AUMA), Johnson discovered the home via the AUMA website, which often features links to local sustainability projects.

At the time, he and his wife weren't house hunting – they were happy in their hip downtown loft – but the net-zero concept fascinated them. The recycling enthusiasts do all they can to tread lightly on the planet. After visiting the home, they decided to kick their green lifestyle into high gear.

DEEP GREEN David and Kristi were already walking the green walk, but they decided to take their eco ethos to the next level by actually applying to purchase this net-zero home, which produces all of the energy it uses.

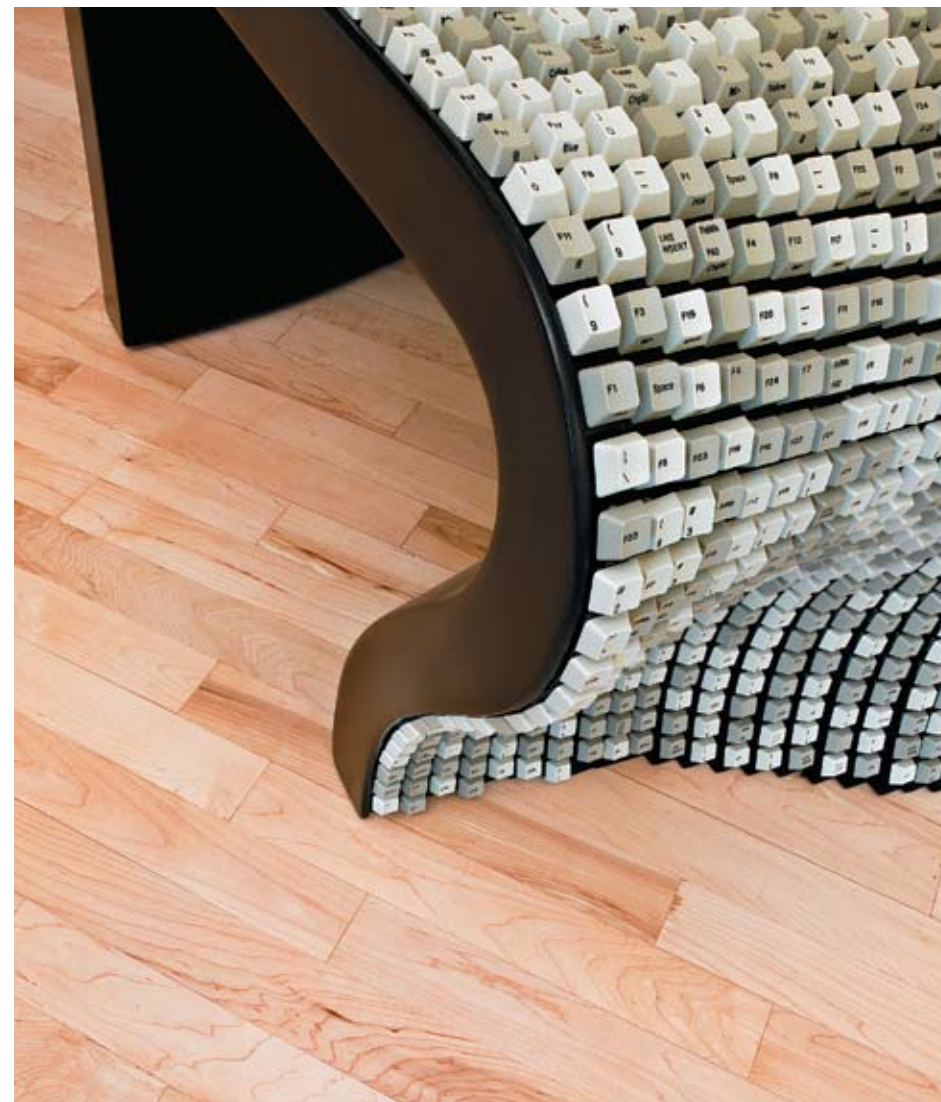


A NATURAL FOCUS Floors made from sustainable materials like wood reclaimed from the old Stony Plain High School gym. Even computer keyboards get revamped in the form of this inimitable chair (far right). In the kitchen, tiles made from recycled glass lend an organic touch to the sleek space.

The fact that the home is tucked away in the river valley, and gorgeous, didn't hurt, either. While sustainability is crucial, esthetics still matter, says Johnson. "It's one thing to have the most energy-efficient house in the entire world – if it's

ugly, it'll never catch on." Though high-tech, any of the gizmos used to control the home's utilities are discretely tucked away. On the inside, the home looks like any other.

Buying the home involved more than just



making an offer to the developer (Habitat Studio and Workshop). The Johnsons were required to submit a letter of interest. After being shortlisted, they filled out questionnaires and waited for a year to find out if they'd been picked. Finally, last August, they moved in.

"They were very interested in the environmental aspects of the house and that was very important to us," explains Peter Amerongen, owner of Edmonton's Habitat Studio and Workshop. "Building it was just the first step: there's a lot to be learned from that house and how it performs. It's never been done this far north before." As a result, University of Alberta researchers will visit the home monthly for the next few years to study how well the home's energy collection systems are working to improve future net-zero homes. "We wanted people who'd be enthusiastic about our goals in that regard and allow us to track the house and energy use over that period," he explains.

The Riverdale net-zero house was built as part of the Canada Mortgage and Housing Corporation's Equilibrium Homes challenge. The competition chose 12 different teams from across Canada to create green homes. In Alberta, four projects were chosen, including two in Edmonton: the Riverdale net-zero home and the Millcreek net-zero home, both built by Amerongen's company. The Riverdale house was the first in Alberta to be completed and is only one of a handful of similar homes in Canada. >



go green

It ain't easy being green, but fortunately, you needn't live in a net-zero house to make a difference. "Do what you can and the next time do some more, and over time, it'll be easier," says Stephani Carter, of Edmonton's EcoAmmo. The green interior designer insists that there are many little things people can do to beautify their homes with a green sensibility.

- **Low VOC paint:** Paints low in volatile organic compounds (VOCs) don't off-gas harmful airborne chemicals and are found in any hardware store.

- **Put the plastic away:** Decorating needn't involve expensive trips to furniture or department stores. Often, rearranging your furniture and artwork makes a world of difference. Edmonton interior designer Deborah Merriam (www.ecodomestica.com) can help you reinvent your home without buying more stuff.

- **Go treasuring hunting:** If your home's accessories really are beyond hope, consider thrift stores or flea markets for original finds. One person's junk is another person's treasure, after all.

- **Go green underfoot:** When the time comes to replace your flooring, consider the many green options out there. Cork floors are made from the bark of cork oak trees, which is harvested to sustain the life of the tree year after year. Recycled leather flooring takes off-cuts from the garment industry, grinds them up, glues them back together (with a non-toxic glue) and creates a super-hard, durable surface. Carpets can also be relatively green, though once terrible for off-gassing toxic chemicals. Look for Carpet and Rug Industry (CRI) certification to make sure you're getting a low-VOC carpet.

- You can also look for a carpet manufacturer that recycles. American manufacturer Interface Flor (www.interfaceflor.com) takes its customer's old rugs back at the end of their lifecycle and recycles them into brand-new carpets.

- If you've got carpet you want to dispose of right now, Calgary's 2E Reclamation Solutions (www.2ereclamation.com) will recycle the carpets of any manufacturer. □



Designed with help from local engineer Gordon Howell of Howell-Mayhew Engineering, the Riverdale house is packed with all kinds of green features. It is, first and foremost, super-

efficient, requiring very little energy (it boasts four-pane windows and extra-thick walls). An average new house has an R-value (a unit used to measure energy efficiency) of 20-25 in the

walls and 40 in the ceiling, while the Riverdale house has an R-value of 56 in the walls and 100 in the ceiling.

Using large windows to capture solar energy



GREEN HOUSE David and Kristi enjoy the sunshine, while sitting on the steps of their home. They know the solar panels will be harnessing that energy and helping them save energy in the short- and long-term. Extra-thick walls and four-pane windows help amp up the eco factor.



Naturally, the home's interior matches its exterior in function. While catalogue-perfect, every design choice – from floor to ceiling – has been made with the environment in mind. The hardwood throughout

passively, and solar panels on the roof to capture and convert solar energy into electricity and heat, the house creates its own power, heat and hot water. So while the Riverdale duplex cost about \$110,000 more for than a typical new home, the owners will dodge pricey gas and power bills in perpetuity.

the main floor is from the old Stony Plain High School gymnasium. In the kitchen, the backsplash is made of recycled tiles.

Every material in the house – including paint and flooring – is low in volatile organic compounds (VOCs) which can off-gas harmful chemicals into the air. The home uses sustainable flooring options like cork and Marmoleum, a linoleum-like flooring material made of linseed oil from Alberta flax.

All of these little details make the home a healthy place to be, says Johnson. “Even just from a mental health perspective, I sleep well knowing what I’m doing for the environment, and secondly, there’s tons of natural light. Living in a really bright home makes you feel good – and in Edmonton, you need all the light you can get, especially in the winter.”

Since building the Riverdale and Millcreek houses, Amerongen has begun another net-

zero home in Belgravia, near the University of Alberta, and says more of his clients are asking for green features in their homes. However, for the net-zero houses to become the norm, and not a novelty, the costs need to come down. “Most people can barely afford any kind of housing – it’s the single biggest investment they make,” he says. Ultimately, “If we can’t sell it, we can’t build it.” Amerongen is hoping for a carbon tax to drive the development of less expensive green technologies.

In the meantime, the fact that homeowners like the Johnsons are investing in sustainable housing is doing wonders for green builders, says Amerongen. “It’s really their vision that’s making this possible, more than anything we can do. These pioneers are able to put their money where their mouth is to reduce their carbon footprint, and in doing this, they’re helping us find solutions to do this better.” ■

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