

SAIT shows off super eco-home

BY TAMARA GIGNAC, CALGARY HERALD FEBRUARY 11, 2010

Imagine living in a net-zero house -- a building so environmentally friendly, it produces as much energy as it consumes.

The first dwelling of its kind in Calgary was unveiled Wednesday at the Southern Alberta Institute of Technology.

A joint project with Avalon Master Builder, the house is able to completely sustain itself and is constructed using environmentally friendly materials.

Only about a dozen of the ecofriendly homes exist in Canada, but Avalon hopes to establish an affordable, net-zero community in the city by 2015. The single-family detached house includes solar panels, a balcony railing that generates heat, recycled hardwood floors and thermal window shutters.

Solar panels not only supply the house with power but can be used to send spare electricity back to the utility during peak solar production.

"The challenge is there aren't a lot of people out there with the knowledge to build houses this way. SAIT is working to correct that ... certainly we're pushing some boundaries and we hope the market is willing to accept it," said Avalon CEO Ryan Scott.

The net-zero building -- dubbed Discovery 4 and located on SAIT's main campus -- was unveiled the same day Federal Environment Minister Jim Prentice announced \$2.24 million in new funding for the school. The money will be administered by the Natural Sciences and Engineering Research Council and is to be used for a five-year research project to create green construction technologies and improve industry standards.

"This is huge for us," said David Silburn, research associate for SAIT's Green Building Technologies program.

The school hopes to work with local industry to develop new solar technologies and improved air quality systems. Many existing net-zero dwellings are not suitable for mass production. Avalon wants to change that by making homes with photovoltaic panels and state-of-the-art insulation affordable to most families.

Net-zero carbon emissions may once have been the stuff of science fiction, but research conducted at institutions such as SAIT could result in environmentally-friendly neighbourhoods across Alberta.

"I get a lot of requests for net-zero custom homes built on acreages, but that's not really what we're after," said Scott. "I want these homes to be available to everybody."

Discovery 4 is to be relocated to McKenzie Towne. The high-tech abode has double the insulation of a conventional home and triple-glazed windows to minimize heat loss in winter.

Public viewings are available on Mondays and Wednesdays between 4 and 8 p.m., and on Saturdays and Sundays from 10 a.m. until 5 p.m.