

NET ZERO ENERGY HOME

Never Be in the Dark Again

Grand Opening in Elora on September 6

What could the most advanced stone-age home construction made of timber and organic materials possibly have in common with a home construction of the future? The harnessing of the power of nature! With today's depletion of natural resources, fewer contemporary issues have become more critical than conservation, and nowhere is change more imminent than in our own homes, where fuel and energy consumption can no longer be taken for granted.

Local, multi-award-winning WrightHaven Homes leads once more in home innovation! Builder Steven Wright has taken up the challenge to construct a home with zero net energy consumption, called the Net Zero Energy Home – a featured residence of the not-too-distant future that combines advanced energy and fuel technologies with the power of nature. The display of this marvelous home will be open to the general public at its Grand Opening on September 6, from 12 - 5 p.m., in Elora.

WrightHaven Homes is one of 19 builders from across Canada that was awarded the project under the Ministry of Natural Resources Canada. "The purpose of the project is to incorporate technologies that are readily available on the market today and implement them under the program's strict modeling guidelines," Wright says. "The plan is to meet target energy usage demands, so that on an annual basis the net cost of operation is \$0. Between the home's own energy production, its usage and its consumption, the cost on an annual basis nets out to \$0."

Net Zero Energy Home Features

Traditional buildings consume approximately 40 per cent of the total fossil fuel energy in Canada and other countries, contributing significantly to greenhouse gases, according to one source. The zero net energy consumption principle is viewed as a means to reduce carbon emissions and dependence on fossil fuels. WrightHaven's off-the-grid approach means harvesting solar energy onsite. "The Net Zero Home utilizes photovoltaic energy (solar panels) to create enough energy to run the entire home for two days, which is stored in batteries ready for usage when demanded," Wright explains. "The home has a gas generator backup in case of power outage, and relies on hydro utility only for supplemental supply in the event that the solar power is not sufficient



to run the entire home."

Wright adds that energy conservation has been achieved in the model home through super-high insulation values in the wall assembly, air-tight seals, triple-glazed windows, and attic insulation in excess of R60. R50 wall assemblies have been accomplished using foam spray and 2x8" wall cavities.

Lighting in the home is 90 per cent

LED with some CFL super-high efficient appliances, while the home is heated and cooled using an air-to-air heat pump, and an air-to-water heat-source pump for domestic hot water supply and in-floor heating throughout the basement.

The home also features a drain water recovery unit to supplement hot water supply, and a rain water recovery unit, in which the water is used to flush toilets and for exterior hose connections. The result is a 30 per cent reduction on your water bill.

The tastefully decorated model Net Zero Home has been designed with the typical modern family in mind. It is approximately 2,300 square feet, featuring three bedrooms, three-and-a-half baths and a fully finished basement. "It's worth the visit on September 6, even if it's just to see the function and design of this incredible home," Wright notes.

The Home of Tomorrow Today!

As a research-and-development project, the Net Zero Home "will be monitored throughout the year to analyze both its energy usage and production," Wright notes. "We'll also be monitoring the wall assembly performance. The entire intention of the project is to find out the best techniques and technologies to accomplish the Net Zero Home, and someday the experience gained will dictate or be the basis for standard construction techniques in all homes."

Wright believes that the timeframe for this type of home may be sooner rather than later, depending primarily on the cost of hydro and gas. "As the payback on the technology accelerates, it makes the decision to invest in this type of home easier," he says.

For more information, call 519-787-6699 or view www.wrighthavenhomes.com. Net Zero Home Grand Opening on September 6 is located in the Southridge subdivision (near the south-end water tower), 134 First Line Road, in Elora.