

# Extreme energy retrofit transforms 55-year-old home

*Hydro Ottawa, Ontario Power Authority and Ottawa Community Housing join forces to support Ottawa's NOW House Project*

The wartime homes that line Ottawa's Overbrook neighbourhood are near carbon copies. But one among them, 954 Beaudry Street, is different - an innovative example of sustainable housing. It is a near zero home: generating almost as much electricity as it requires on an annual basis.

With the help of Hydro Ottawa, the Ontario Power Authority, the Now House Project and Ottawa Community Housing, the 55-year-old home received an extensive energy retrofit in 2009. After three months of renovations, the house is now equipped with modern conservation technology, including Whirlpool Energy Star appliances, compact fluorescent lighting, low-flow fixtures, and Low-E windows, as well as solar thermal and solar photovoltaic systems.

"One of our goals is to promote a sustainable energy future for our community," said Rosemarie Leclair, President and CEO of the Hydro Ottawa Group of Companies. "Participating in the Now House project provided a perfect opportunity to showcase some innovative technologies, and demonstrate

the incredible results that can be achieved through a combination of conservation and renewable energy at the household level."

On the roof, twelve photovoltaic solar panels have the capacity to generate approximately 2,500 kilowatt-hours of electricity per year. In addition to offsetting the energy needs of the house, the electricity generated can be sold back to the provincial grid through the Feed-In Tariff program at a guaranteed price of 80.2

cents per kilowatt-hour. This represents an estimated payback of \$2,000 per year.

Ottawa Community Housing (OCH), which owns the 1-1/2 story home,

provides affordable housing to 32,000 low and medium income residents. This house is one of OCH's 14,783 units for seniors, parents, children, singles and people with special needs.

"As we renovate our houses, we try to do so in a way that improves energy efficiency," said Jo-Anne Poirier, CEO, Ottawa Community Housing. "We would like to promote sustainability for our community, and the Now House project is a wonderful opportunity for us to learn about energy saving measures and retrofitting with renewable energy."

An energy audit was performed prior to the extensive retrofits, and the home initially received an EnerGuide rating of 55 out of 100.

"The energy audit of the Beaudry Street house showed a typical outcome for a home of this era," said Lorraine Gauthier, President, the Now House Project. "We're proud to say that a second energy audit shows this home now scores 94 out of 100 - that surpasses the standards required of new homes."

Two rooftop solar thermal panels are used to heat water for the house, and its old furnace and water tank were replaced with a new high efficiency HVAC system, tankless hot water supply and air management system.

Significant improvements were also made to improve the building envelope. Houses constructed in the 1950s generally have poor or no vapour barrier and insufficient insulation. New polyurethane foam insulation is expected to reduce energy loss by 65 per cent.

"With a project like the Now House, there are so many winners - from the tenants, to the community, to the partners," said Murray Campbell, director of corporate communications at the OPA. "We all win, and ultimately Ontario wins because we are helping to create a more sustainable energy future for our province."

While this retrofit is an Ottawa first, the Now House Project has also updated wartime homes in Toronto, Windsor and Kitchener. Hydro Ottawa is the first utility to participate in the Now House Project.



# into sustainability showcase

“The Now House provides tangible proof that a home doesn’t have to be new to be energy efficient,” said David McKendry, Hydro Ottawa’s director of customer care and conservation. “It also demonstrates the amazing results that can be achieved right now, with today’s technologies, to create a healthy comfortable home with a net zero energy bill.”

Hydro Ottawa plays an important role in promoting energy conservation in the community. Ottawa residents have saved approximately 100 million kilowatt-hours through Hydro Ottawa’s energy conservation programs.

While Hydro Ottawa has offered innovative programs for residential and business

More information on Hydro Ottawa’s efforts to promote conservation, including energy-saving tips and innovative programs, can be found at [www.hydroottawa.com](http://www.hydroottawa.com). ■

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The Now House Project received funding from the Canada Mortgage and Housing Corporation through a design competition to promote sustainable housing. Their vision to update existing “energy hog” homes won praise as the design can be applied to similar homes across Canada. With approximately one million wartime houses in Canada, the possibility for change is significant.

“We hope that this retrofit will serve as an inspiration to others who are interested in reducing their environmental footprint,” said David McKendry. “Whether it is upgrading insulation or switching to Energy Star appliances, there are opportunities for us all to make a difference.”

customers to cut their energy bills since 2005, this is the first time the company has participated in a project which also promotes renewable generation at the household level.

“With the new Green Energy Act, an increasing number of customers are showing an interest in renewable energy,” said Rosemarie Leclair, President and CEO. “The Now House shows the viability of micro generation for homeowners interested in going green.”

