



Evergreen Brick Works – Toronto, ON

Background

Evergreen, a national charity dedicated to deepening the connection between communities and nature, has transformed the site of the former Don Valley Brick Works from an obsolete, deteriorating industrial facility into a vibrant environmental and cultural education centre.

The Evergreen Brick Works is a multi-use facility featuring refurbished heritage structures, parklands and gardens, a year-round farmers' market, children's programs and the offices of several environmentally oriented organizations.

The facility's showpiece, the Centre for Green Cities (CGC), is a Leadership in Energy and Environmental Design (LEED) Platinum certified office building combining elements from one of the site's original buildings with a new structure that incorporates energy-efficient materials, innovative architecture and other green building technologies. The five-storey CGC houses classrooms, offices and meeting space, and utilizes an automated heating, cooling and ventilation system to minimize energy requirements while providing a comfortable interior environment throughout the year.

The Viessmann Solution

In keeping with the project's environmentally-conscious vision, facility designers selected energy efficient and eco-friendly hydronic heating solutions for the CGC's space heating and domestic hot water (DHW) needs. Primary heating for the CGC and neighbouring buildings in the complex is provided by three Viessmann gas-fired boilers: one Vitocrossal 300 condensing boiler and two Vitorond 200 boilers in a cascade system.

Installation Details

Water for space heating is distributed through a variety of specialized radiator designs and a modular, in-floor radiant heating system. An array of six Vitosol 200-F solar thermal collectors provides supplementary heating for up to 50% of the building's DHW supply. A heat recovery system recirculates heat that would otherwise be lost in cold weather.



The Centre for Green Cities was integrated into the site's heritage structures



Vitosol 200-F collectors offer supplementary heating for up to 50% of the CGC's DHW supply

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The Results

Evergreen Brick Works demonstrates how high-efficiency fossil fuel and renewable energy systems can be integrated with green building technology to dramatically minimize CO₂ emissions, conserve energy and reduce heating costs.

Since its inception, the project has won numerous awards and received international recognition for its achievements in promoting urban sustainability strategies, responsible energy use and innovative environmental solutions.

Project Details

Project Year	2010
Equipment	Vitocrossal 300 CT3-22 2 x Vitorond 200 VD2-440 Low-Loss Header Vitocontrol-S Cascade Control Versatronik BACnet Gateway 6 x Vitosol 200-F Solar-Divicon-HX
Rated Output	814 MBH / 238 kW (CT3) 3052 MBH / 894 kW (2 x VD2)
Boiler Installation	Urban Mechanical Contracting Ltd., Toronto, ON
Solar Installation	SolSmart Energy Solutions Inc., Toronto, ON



Viessmann gas-fired boilers provide primary heating for the Centre for Green Cities



Courtesy of Tom Arban Photography