

**FIRST
NET-POSITIVE
office building
in Canada!**

HOWLAND GREEN

Cachet Woods Court, Markham Ontario

BEYOND NET-ZERO

Howland Green Homes Ltd. new mission is simple: Build Beyond Net Zero. This objective is to be realized in the City of Markham, where the company has developed the 'Howland Green Business Centre,' a commercial building which will produce more energy than it will consume. "THE FIRST BUILDING OF ITS KIND IN CANADA" For Dave de Sylva Eng., President of Howland Green Homes, the future is now. This set a whole new standard for environmentally conscious development that goes above, and beyond the current objectives Canadian developers must meet.

The 'Net Zero' energy standard describes a building's self-generating ability to produce energy by renewable, onsite means. This practice has been increasingly realized in Ontario by several developers, and Howland Green is a pivotal example of such developments in the GTA.

To go beyond Net Zero, or to become 'Net Positive' a building must generate more energy than needed for its annual operation. Howland Green 'raises the bar' in development practice, not only with regards to ensuring a clean ecological footprint but also in terms of economic efficiency by reducing high energy-related costs with less efficient buildings.

Project Stats

Completion Date	September 2020
Project Type	Net Positive Building
Project Sq.Ft.	70,000
Products Used	Nudura XR35
# of Storys	3 above with 2 underground parking

Construction Team

Owner	Dave de Sylva
ICF Contractor	Elite Building Group
ICF Distributor	FastForm
Architect	Keith Loffler McAlpine Architects





WHY ICF?

The building was built with the XR35 which is an enhanced insulated concrete form to the effect that the building's combined thermal resistance value is considerably higher than the insulated formwork of typical structures.

The Nudura XR35 which increases the walls from 2 5/8" of Expanded Polystyrene Insulation (EPS) on each side to over 4", creating an estimated R35 value, approximately three (3) times more than the Ontario Building Code guideline.

Howland Green, insulated concrete forms were a top factor in saving the building owner and its future occupants on heating and cooling costs.

Some of Howland Green's net-positive strategies are:

- ✓ Triple-glazed windows
- ✓ Geothermal Heating & Air Conditioning
- ✓ Photovoltaics (solar panels)
- ✓ High-efficiency appliances
- ✓ Clean- and grey-water harvesting
- ✓ Insulated Concrete Forms, totaling 20.32 cm (8 in) of EPS foam insulation

For more information on Nudura ICF's visit us at: [nudura.com](https://www.nudura.com)

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10/2020


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