

Active Houses

Setting new sustainability standards for residential development in Canada, the Active House projects were designed to meet the construction metrics outlined by the European Active House program. The program promotes a holistic approach to home design, marrying environmental responsibility and energy efficiency with the need to create spaces that contribute positively to the health and well-being of its occupants.

The design strategy for Active House 1 in Thorold, Ontario considered the environmental impact of the entire life cycle of the home from concept to performance. Prefabrication ensured a more efficient construction process while significantly reducing material waste, energy use and accident risk. Siting, massing and orientation of the rooms take advantage of passive solar gain while maximizing efficiency of the solar hot-water system. Specific energy-saving and environmentally conscious features such as interior and exterior LED lighting systems, triple-glazing, low-flow water fixtures, low-VOC finishes and energy-performance monitoring systems complement the primary design strategy of exploiting opportunities for natural daylight and ventilation. Active House 2 exceeds the superior energy performance of its predecessor, claiming the designation of the first certified Active House in the world.

An open-plan, double-height configuration in both houses achieves a sense of volumetric expansiveness, encouraging the flow of light, air and circulation. Rendered in a clean Modernist aesthetic and material palette, the formal expression of Active House 1 and 2 ushers in a new paradigm for suburban development while raising the bar for sustainable home design that operates on 100% renewable source energy.

LOCATION Thorold + Etobicoke, ON

SCOPE New Construction

SIZE 3,200 sf + 3,493 sf

COMPLETION 2013 + 2015



