

The Southeast False Creek development has transformed a former industrial site into a world-class model for sustainable community living, certified Platinum under LEED* for Neighbourhood Development standards. The Net Zero building is its centrepiece and showcase.

Net Zero Building

BUILDING LIGHTLY ON THE EARTH

The Net Zero Building in Vancouver's Southeast False Creek neighbourhood is the first of its kind in Canada.

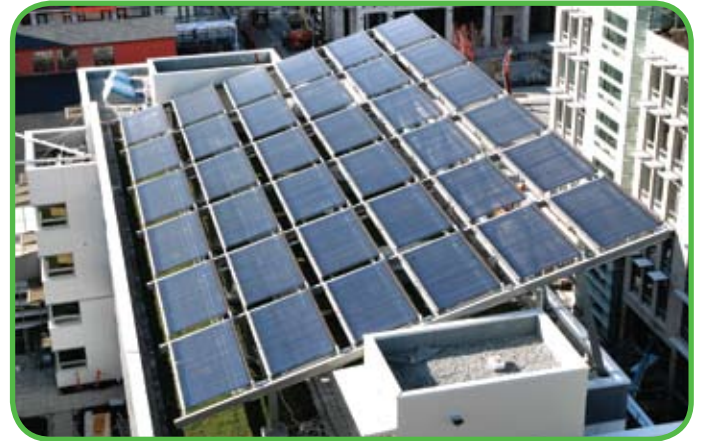
Net-zero buildings represent the highest target in sustainable design. They cleanly generate as much energy as they consume, while at the same time providing the healthiest possible indoor environment for residents. These aims demand changes to both the way buildings work, and the way people live in them.

A net-zero building must demand little energy overall, and must generate enough from renewable sources to meet that demand. Net-zero buildings can draw energy from the grid as needed, but must then generate *more* than they need at other times, feeding enough back into the grid to average zero energy use.

DESIGNED FOR GRACE AND EFFICIENCY

Of course, the Net Zero Building uses all the usual means to cut energy consumption: LED lighting, energy-efficient appliances, excellent insulation and triple glazing. Beyond these, it uses an array of cutting-edge design features and technologies:

Solar Hot Water Vacuum Tubes on the rooftop (above right) provide hot water to the building, and generate heat equal to 90 per cent of its annual energy consumption. Excess hot water will be sold to the Neighbourhood Energy Utility for use elsewhere, offsetting the building's electricity consumption. During winter months, when there is less sunlight and the weather is colder, the NEU will provide extra heat and hot water as required, from sewage heat recovery and auxiliary natural gas boilers.



SETTING THE STANDARD FOR SUSTAINABLE DEVELOPMENT

The highest performing building in the development is an affordable housing block for seniors. The Net Zero Building consumes zero energy (averaged over the year) by reduced energy consumption and by generating renewable energy to offset usage.

By pursuing all five key principles of sustainability—health, energy, resources, environment and affordability—Vancouver will continue its economic growth, improve the lives of its people, and protect the environment for future generations. By leading the way in urban design and green technologies, Vancouver will become the world's Green Capital by 2020.

* Leadership in Energy and Environmental Design - awarded by the US Green Building Council in February 2010.



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Daylighting and Natural Ventilation: The building's open-corridor design gives every suite two outside walls. Daylight and open windows replace a lot of artificial lighting and air conditioning, reducing energy use.



Energy Consumption Monitoring: The domestic water, space heating and electric loads are all continuously monitored and reported to residents, which has been shown to encourage frugal, efficient habits in the use of energy.



Green Roof: Grass and plantings on the roof will provide a green attractive space for residents, while reducing the need for air conditioning in hot weather.



Waste Heat Recovery: Excess heat generated by an adjoining grocery store is captured by the building's energy system and used to heat water.

