

Construction begins on Canada's most energy-efficient office building



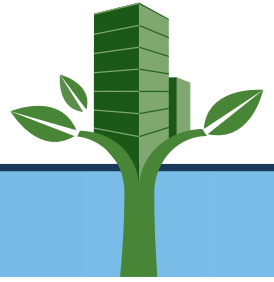
Enermodal Engineering, Canada's largest consulting firm dedicated to designing "green" buildings, is breaking ground on its own green building: a much anticipated new head office at 582 Lancaster Street West in Kitchener. The October 3 event is taking place on the building site overlooking the scenic Grand River. Kicking off the building construction are Regional Chair Ken Seiling, Kitchener Mayor Carl Zehr, Patrick Simmons (of Robertson Simmons Architects), Jeff Shantz (of Melloul Blamey Construction), and Enermodal President Stephen Carpenter. The entire Enermodal staff from offices in Kitchener, Calgary, Denver, and Toronto will be in attendance.

Enermodal looks to practice what it preaches by achieving LEED Platinum certification for their innovative design. Platinum is the highest designation in the Canada Green Building Council's LEED (Leadership in Energy and Environmental Design) green building rating system. Enermodal's 3-storey, 22,000 ft² office will be the first LEED Platinum building in Waterloo Region. The projected total building energy use is 75 kWh per square metre of floor area, only 10% of the consumption of the average Canadian office building.

"We hope this office will be more than a headquarters for our work creating innovative green buildings," said Stephen Carpenter, president of Enermodal. "We intend for this office to showcase a building design worth emulating. And we think that our investment of capital and human energy in this neighbourhood will create an exciting legacy for Enermodal."

The building site is a dramatic one, with wide-angle views over the Grand River. And it was respect for this precious resource that led to many development decisions. Stormwater from the site will pass through a vegetated swale and water treatment system before being released to the storm sewer (and hence the Grand); these measures will remove many pollutants and even out storm surges. The beauty of the night sky over the river will be protected by exterior lighting that will not "spill" off the property and is directed toward the ground, not up into the sky. Wildlife habitat will be enhanced through landscaping

For more information or to arrange an interview, contact Caitlin Carpenter at ccarpenter@enermodal.com.



composed entirely of plants native to the region.

Employees are encouraged to appreciate the out-of-doors through a third-floor terrace and gazebo on the riverbank, as well as adjacent garden plots. And Enermodal is working with the City to extend the Walter Bean Grand River Trail through the property.

Enermodal Engineering is widely respected for highly energy efficient building designs, and the new head office will achieve a remarkable 70% energy savings over the current Canadian Energy Code. Heating and cooling is provided by the latest technology in which many small heat pumps are connected together by a loop that circulates refrigerant. The refrigerant flow is varied to meet the heating or cooling demand. This arrangement allows the heat pumps to operate continuously at low speed instead of cycling full on and then off.

Ventilation air is delivered separately from heating and cooling functions (a departure from typical designs) to ensure occupants receive excellent indoor air quality without over- or under-heating. Another energy-saver is the ICF (insulated concrete form) construction technology Enermodal selected, in which the building walls are a "sandwich" of concrete and insulation (the insulation replaces traditional wooden forms). The result is an airtight and well insulated building.

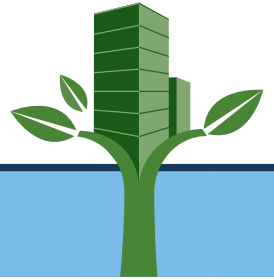
Lighting is often the largest energy operating cost in office buildings. In the Enermodal office, vacancy sensors will automatically turn off lights when a room is not in use, while daylighting sensors will automatically close exterior blinds to decrease glare and cooling loads. The building features a central atrium topped by photovoltaic (PV) cells that will generate electricity. Also, a narrow building footprint (only 12 metres across) will maximize natural daylight and minimize electricity use. The minimal amount of energy Enermodal's office will consume is to be supplied by green power, while offsets will be purchased to cover employee transportation – making Enermodal's operations truly carbon neutral.

Office designers paid particular attention to selecting building components that reduce resource consumption—the amount of raw materials used to build the office. The building will be clad with stone salvaged from a demolished church. Other resource-wise materials include recycled paint, countertops of recycled paper, and slag (a by-product of steel manufacturing) as a replacement for energy-intensive cement.

The third floor meeting room overlooking the Grand River will be a "rapidly renewable room," where the floors, ceilings, and walls will showcase bamboo, sorghum and materials made from fast growing agricultural products.

Not a drop of water is wasted by the Enermodal Head Office. Through the use of ultra low-flow plumbing fixtures and a rainwater cistern to supply water for toilet flushing, water use will be reduced by about 77% compared with a conventional building.

The Enermodal Engineering ethos includes encouraging an active and development provides space for outdoor sports (such as hockey), lockers



and showers for those who bike to work, and special parking and financial incentives for those who purchase hybrid vehicles. In addition, a lunchroom in the new office will offer subsidized employee lunches made from local, organic ingredients.

Enermodal's new office will be completed in the summer of 2009.

Enermodal Engineering is a consulting firm committed to buildings and communities that are energy and resource efficient. LEED (Leadership in Energy and Environmental Design) is the most recognized and prestigious green building rating system in North America. LEED-Canada is administered by the Canada Green Building Council (CaGBC), which uses the rating system to designate buildings—Certified, Silver, Gold, and Platinum—according to the green features they incorporate.

With professional staff in Kitchener, Calgary, Toronto, and Denver, Enermodal is working on over 180 LEED buildings across North America and is responsible for over 75% of the LEED certified projects in Ontario. Enermodal has worked on some of Waterloo Region's most important and green buildings, such as the Waterloo Region Green Home, the Region of Waterloo EMS facility, Cambridge City Hall, the new Waterloo Regional Police Service facility, and Kitchener's upcoming Activa Group Sportsplex.