

Green features of Walden Public School

- 60 tonne geothermal heat pump system
- 140 MMBTH solar water system
- 100 kW rooftop photovoltaic system
- 20 kW vertical wind turbine generator
- Displacement ventilation with energy recovery system
- Waterless urinals
- Increased building insulation
- IT-Smart building infrastructure
- Waste management program
- North/South orientation
- High efficiency lighting with occupancy sensors
- Radiant floor heating



Rainbow District School Board builds first planned carbon neutral school in Ontario

Rainbow District School Board is a leader in creating quality green buildings. In November 2009, the board opened its second green school, Walden Public School, in Lively, Ontario. Built in partnership with Ameresco Canada, the board is working towards creating a carbon neutral facility. To date, the board has reached 60 percent of its target.

“Our goal is to make Walden Public School carbon neutral — where the energy that is used is equal to the energy that is produced,” said Rainbow District School Board Director of Education Norm Blaseg. “We are well on our way towards achieving this vision.”

Walden Public School is built with green technology and incorporates energy renewable resources, which has a positive impact on the environment in both the short- and long-term. The greening aspects of this school are unparalleled by other schools in the province.

In addition to the 100kW Photovoltaic roofing system, which will be complete by August 2011, Walden Public School is home to a 20kW wind turbine that will generate

enough energy to offset the power used to heat and cool the school and a 60 tonne geothermal heat pump system that will provide four units of energy from the ground for every unit of energy purchased from conventional sources.

The solar rooftop panels, combined with the wind turbine, will produce 60 percent of the building’s energy requirements.

Additional energy measures include a 100 percent fresh air ventilation system that supplies the entire building with fresh air, efficient lighting, occupancy sensor controls, low flush toilets and in-floor heating. The 48,000 square foot building is also entirely electric, meaning it does not use gas or fossil fuels to operate.

To enhance the classroom environment and experience, the latest information technology systems have been installed along with state of the art “Smart Boards” that benefit both the teachers and students. Superior window, floor and roof insulation increases thermal performance of the building by 50 percent, compared to conventional facilities.

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“The philosophy behind green schools is not only to conserve natural resources, but also to encourage learning in the classroom and beyond,” states Blaseg. “These priorities, when combined with environmental awareness, will create a world where everyone benefits from the values and behaviours that are required to achieve sustainability.”

Walden Public School’s green features have put it at the forefront of sustainable buildings in Canada. Walden Public School will be showcased at an international conference on sustainability and will be one of the poster projects for a presentation on Canada’s most environmentally advanced buildings at *Sustainable Buildings 2011* to be held in Helsinki, Finland.

“By investing in new green energy technologies and working toward a carbon neutral school, the Rainbow District School Board is taking the lead in making sure we leave a clean environment for our future leaders. I have no doubt other school boards will be watching and following in this board’s footsteps,” says Mario Lusi, President, Ameresco Canada.

When the project is complete in August 2011, the utility costs at Walden Public School will be less than 80 cents per sq. ft. per year.



20 kW vertical wind turbine generator.



Students from Walden Public School approve of the Board’s greening initiatives.

To learn more about this project and Ameresco Canada, please contact:

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