



ENERGY
EFFICIENCY
EXPERTS

MCW's Environmental Record



Green Design



REDUCING OUR CLIENTS' ENVIRONMENTAL FOOTPRINT



MCW's ENVIRONMENTAL RECORD

ENERGY
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Green Design

The MCW Group of Companies have created the largest block of verified carbon emissions savings of any Canadian Consulting firm

For more than a decade MCW Consultants Ltd., and its sister company, MCW Custom Energy Solutions Ltd. have been providing sustainable building designs with the goal to permanently REDUCE OUR CLIENTS' ENVIRONMENTAL FOOTPRINT.

While others have seen "being GREEN" as a fad, the MCW Group of Companies have been making it HAPPEN. How? Through turn-key provision of services followed up by monitored verification of the environmental impact. MCW has even registered our clients' Carbon Credits on the Federal/Provincial Voluntary Challenge Registry (VCR) to prepare them for KYOTO and eventually, carbon credit market trading.

Besides saving over \$125,000,000 in monitored savings for our clients, our work has reduced the amount of carbon emitted into the atmosphere by over 400,000 tonnes. The tonnes saved equate to the following:

- 66,700 domestic cars taken off the road for one year

OR



- 33,500 times around the Equator

OR

- Equivalent to the amount of carbon in 1.6 million full sized trees

REDUCING OUR CLIENTS' ENVIRONMENTAL FOOTPRINT

MCW Consultants Ltd.

Mechanical & Electrical Consulting Engineers

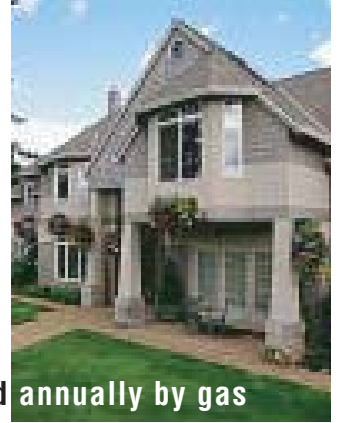


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OR

- 60,000 average Canadian homes heated annually by gas



AND

- Enough water to meet the needs of every Canadian for two days



- These combined gas and electricity savings equate to over 2 billion equivalent kilowatt hours (ekWh), implemented across a wide array of building sectors.



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MCW's ENVIRONMENTAL RECORD

SUSTAINABLE DEVELOPMENT DESIGN EXPERIENCE

- Use of **Vancouver Harbour Water** as a condenser water cooling source for the Pan Pacific Hotel and Canada Place in Vancouver
- Development of a **window draught control** device to control temperature in areas featuring large Architectural glass
- World recognized **Seasonal Thermal Storage System** using a ground water aquifer
- Use of **natural daylight** through the incorporation of appropriate circuit design and lighting control techniques
- Design of **HVAC systems** that maximize the use of outside air

Besides MCW's monitored environmental record, for over 40 years MCW has been an innovative leader in the application of building services technologies which help to REDUCE SOCIETY'S ENVIRONMENTAL FOOTPRINT.

MCW Consultants Ltd.'s list of innovative firsts and GREEN technologies includes:

DUCKS UNLIMITED

MCW Consultants Ltd. provided mechanical and electrical design services for the construction of a 55,000 square foot environmentally friendly office and conservation centre located in a wildlife sanctuary.

Design specifications included ground water cooling with no use of CFC's, electric heating, heat recovery, silencers on all air intakes to reduce night time noise pollution, well water for domestic water consumption and fire protection and a roof earth covered with local vegetation.

CANADA PLACE & PAN PACIFIC HOTEL

MCW Consultants Ltd. implemented the use of Vancouver Harbour water as a condenser water cooling source for the Pan Pacific Hotel and Canada Place in Vancouver.

UNIVERSITY OF MANITOBA

The University of Manitoba is a 4.8 million square foot campus located in Winnipeg, Manitoba. A comprehensive energy conservation and building renewal audit was undertaken tied to a long term building operations and management strategy. Annual savings targets of \$1.9 million have been superceded in every monitored year.

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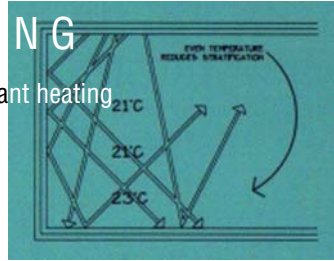


MCW's ENVIRONMENTAL RECORD

**SUSTAINABLE
DEVELOPMENT
DESIGN
EXPERIENCE**

THIRD GENERATION RADIANT HEATING

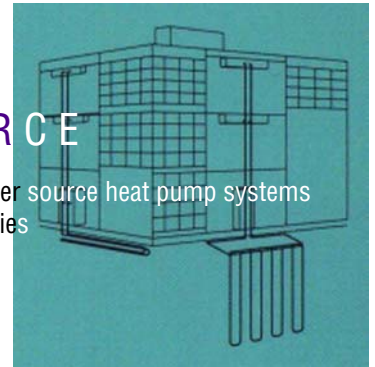
Incorporation of the third generation radiant heating into office building design



- Heat recovery potential through the design and retrofit of heat recovery systems for both exhaust air and sanitary water
- Rainwater collection for use in various water make-up systems
- Renewable energy sources through the use of solar energy for passive solar heating devices, photovoltaic panels, heat pump technology and wind turbines
- Stationary Fuel Cell Application in Northern Ontario
- Grey Water collection for use in irrigation systems

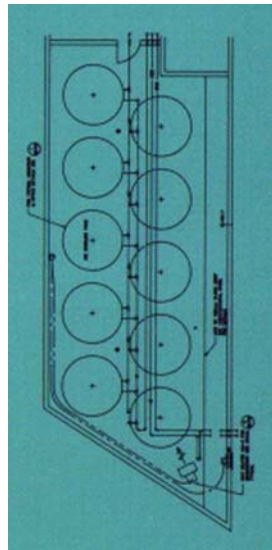
GROUND SOURCE

Design of ground source and well water source heat pump systems for commercial and institutional facilities



ICE STORAGE

Designing, tendering and having in operation the first commercial office building in Canada to utilize ice storage and low temperature air distribution to take advantage of off-peak power incentives. All this without a premium first cost



SOLAR WALL

Solar wall application in Northern Alberta



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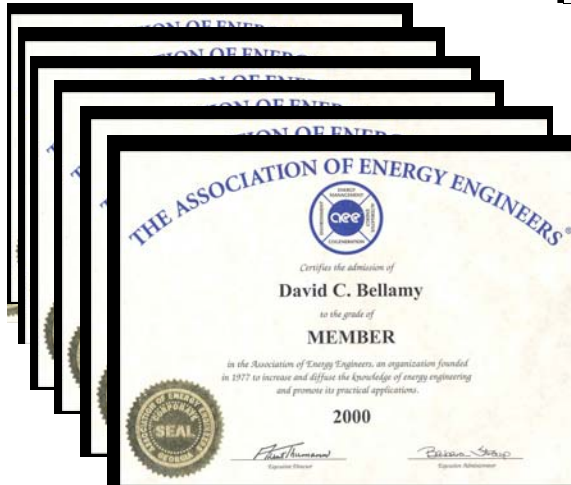
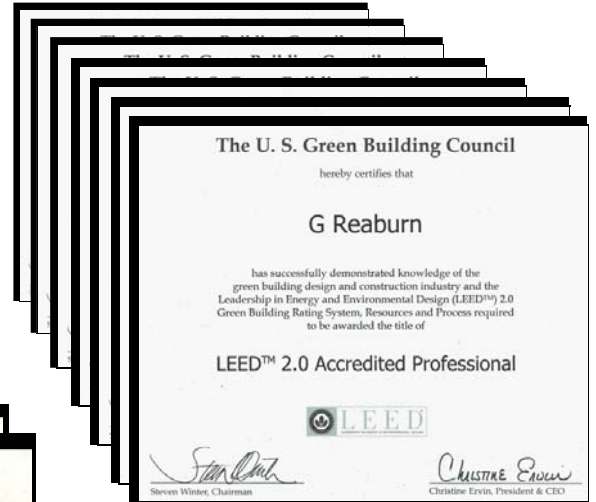
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ACCREDITATION

One of many of MCW's principals and employees currently holding or seeking LEED accreditation by the U.S. or Canada Green Building Council



One of several of MCW's principals and employees currently admitted to the Association of Energy Engineers

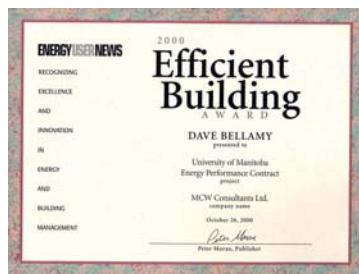
Awards

AWARDS

NATURAL RESOURCES CANADA
The City of Windsor
Sustainable Communities Award



ENERGY USERS NEWS
Association of Energy Engineers
World Energy Conference



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