JDQ Engineering Limited

Manitoba Hydro Place

LEED PLATINUM

Manitoba Hydro Place on the Winnipeg skyline; Photo: Gerry Kopelow

Manitoba Hydro set ambitious goals in energy efficiency, urban revitalization, and a supportive workplace when it built its new 65,000m² 22-storey office tower headquarters. To achieve the seamless integration of design and performance goals, Manitoba Hydro mandated a formal Integrated Design Process (IDP).

JDQ Engineering Limited (formerly Groundsolar Energy Technologies) was engaged as specialist geoexchange engineering consultant to conduct site-specific geoexchange evaluation and testing, assist with integrated options analysis and subsequently to prepare detailed design of the geothermal ground heat exchanger (GHX) and review GHX construction. The GHX consists of 280 boreholes drilled to a depth of 375 feet below the building. The geothermal system is among the largest geoexchange systems in the world.

The energy savings from the geoexchange system and other integrated energy conservation systems including passive solar heating and ventilation, advanced building envelope and daylighting has exceeded design targets. The measured energy use intensity of Manitoba Hydro Place (88 kWh/m^2) is 77% lower than the national average.

From design to measured performance, Manitoba Hydro Place has received a litany of awards for excellence in energy efficiency and sustainable design. For more information visit www.hydro.mb.ca/corporate/mhplace/awards.

Project Type
Integrated Design and Construction Review
Large Office Tower

Owner
Manitoba Hydro

Location
Winnipeg, Manitoba

Year
Design 2004 – 2006
Complete 2009

Client
Earth Tech (now AECOM)

Completed As
Groundsolar Energy Technologies

Reference
Rob Andrushuk
Mechanical Systems Specialist
Manitoba Hydro