



■ Commercial Buildings

Reference Details:

Client Toronto
Renewable Energy
Cooperative and
Toronto Hydro Energy
Services Inc., Toronto,
Canada +++ **General
Contractor** Comstock
Canada, Toronto,
Canada +++ **Civil
Contractor** JDR
Construction, Toronto,
Canada +++
Consulting Engineers
Read Jones
Christoffersen Ltd.,
Toronto, Canada +++
**Geotechnical
Subcontractor** Deep
Foundation Contractors
Inc., Thornhill, Canada
+++ **Soil Consulting**
Terraprobe Ltd.,
Brampton, Canada

DSI Services Supply,
installation, testing and
stressing of 8
DYWIDAG Rock
Anchors, 18 m long, (65
mm THREADBAR[®],
grade 835/1030 double
corrosion protected
(DCP)



North America's first urban wind turbine produces power for Toronto's grid

Toronto gets its first electricity-generating windmill, Toronto, Ontario, Canada

The first wind turbine built to produce power for Toronto's electrical grid went into service at the end of January 2003. The 94-meter high, 750-kilowatt turbine is located near Band shell Park at the west end of the Canadian National Exhibition grounds. The \$1.3 million turbine produces about 1,800 MWh of electricity annually for the city's electrical grid, enough to light about 250 homes.

The foundation for a future that includes green electricity generated without producing emissions consists of 150 m³ of good old-fashioned concrete. Set in that concrete is a 6,000 kg tube anchor made of solid steel. The whole foundation is anchored to the ground by eight DYWIDAG Rock Anchors, 18 m long each, with a 7 m bond length in the bedrock below. Hovering on top of the 30-story tower, a three-blade turbine, each blade 29 m long, spins at about 21 revolutions per minute.

It took four years and the overcoming of some sizeable hurdles, for the first wind turbine established in an urban downtown setting; it's also the first green energy cooperative in Canada.

Its big city location, specifically at the waterfront and exhibition place that get about five million visitors a year, will help to educate people to know the importance of renewable energy and elevate the profile of wind energy technology across the continent.

Having already supplied into the largest wind farm in Canada a few years back, Le Nordais, with its 133 wind turbines and installed capacity of 100 MW, DSI Americas is proud to be actively involved in the windmills market, especially midst increased interest of the North American and worldwide community in green, renewable energies. Another manifestation of DSI enthusiasm was its participation in the WINDPOWER 2003 Conference & Exhibition May 18 - 21, 2003 in Austin, Texas, USA. Considering the forces of wind, rain and snow acting on the wind turbine special construction requirements for foundation construction have to be met. DSI offers many years of experience and optimal solutions in this field.

The above is another example of DSI involvement in energy producing structures from hydroelectric stations to nuclear plants.