



Toronto Hydro Service Centre
500 Commissioners Street

AT A GLANCE

The facility:

- Toronto Hydro's 12-acre Service Centre at 500 Commissioners Street

Service: Renewable Energy

Upgrades:

- 189 solar panels installed on the south side of facility.
- Each solar panel is 0.8 metres by 1.3 metres and produces 190 watts of power.

Results:

Project cost: \$299,000

Provides: 12% of electricity needed to run the building's lighting system.

Generates: 36 kW of renewable, pollution-free electricity

Eliminates: 37.8 tonnes of CO₂ annually

Awarded: Canadian Solar Industries Association's Photovoltaic project of the year for 2004.

ENERGY CONSERVATION begins at home

“As the largest solar power installation in a commercial facility in Toronto, this project demonstrates that renewable energy can be a viable option for businesses today”

Jack Simpson, Vice-President, Generation, Toronto Hydro Energy Services

As electricity demand exceeds supply and air quality continues to deteriorate in Toronto, renewable energy solutions that can supplement power from the electricity grid are becoming increasingly important. So it's not surprising that Toronto Hydro Corporation piloted a solar power installation at its Service Centre at 500 Commissioners Street. The project illustrates how easily renewable energy can be introduced into a business's energy mix and demonstrates Toronto Hydro's commitment to the "triple bottom line" of economic, social and environmental returns. Toronto Hydro Energy Services, with its extensive environmental engineering experience, provided engineering design, project management and implementation of the project. Toronto Hydro Energy Services is an affiliate of Toronto Hydro Corporation and operates independently at arm's length.

Electricity savings and environmental benefits

Generating 36 kiloWatts of pollution-free electricity, the solar panel installation provides 12% of the electrical power required to run the Service Centre's lighting system. On an annual basis that's enough electricity to power four or five homes. Unlike other forms of electricity generation, solar energy is environmentally friendly, producing no harmful emissions and generating no waste. At Commissioners Street, the pilot project is eliminating 37.8 tonnes of CO₂ from entering the atmosphere annually.

Turning the sun's energy into electricity

The solar panels installed at the Service Centre use photovoltaic cells to capture the sun's energy and convert it into direct current (DC) electricity. The DC electricity is passed through an inverter to convert it to alternating current (AC) electricity and then routed to a transformer to be stepped up to the voltage level that the building can use. From the transformer the electricity is transferred to the building's electrical system, displacing power required from the electricity grid.

Turnkey services from start to finish

Toronto Hydro Energy Services has the green energy experts in-house to implement this groundbreaking project from contract to installation in just three months. With more than two decades of direct experience in the environmental engineering field, Toronto Hydro Energy Services completely looked after all aspects of the project including design engineering, sourcing of equipment, working with suppliers, and managing construction. “With the successful launch of this project we are providing Torontonians with an opportunity to see a working commercial-style solar installation in operation,” said David O'Brien, President and CEO of Toronto Hydro Corporation.

