

CASE STUDY: SUNNYBROOK HEALTH SCIENCES CENTRE

BETTER BUILDINGS PARTNERSHIP



Sunnybrook Health Sciences Centre

Bayview Campus
2075 Bayview Avenue
Toronto

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Project Background

As a teaching hospital, Sunnybrook leads by innovation and learning in both their medical practices and the maintenance of their three campuses. Sunnybrook's environmental principles are part of the organization's corporate culture.

Desired Outcomes

In an effort to reduce the hospital's environmental impact and to create safer, more comfortable conditions for patients, staff, and visitors and a greener Toronto, a comprehensive energy efficient retrofit plan was developed for the Bayview Campus. Also, with increasing pressures on the cost of patient care, there was a desire to reduce non-patient care costs such as energy operating costs.

Project Snapshot

Energy Conservation

Project Cost: \$26,400,000

Annual electricity savings:
10,500,000 kWh

Electricity demand reduction:
787 kW

Annual cost savings:
\$2.6 million

Annual CO₂ savings:
10,000 tonnes

Incentives received:
BBP \$960,000

Toronto Energy Conservation
Fund zero interest loan:
\$1 million

Simple Payback: 10 years

With a zero interest loan of \$787,000 from the City of Toronto's Sustainable Energy Funds, more than 140 solar panels spanning two stories of a parking garage were installed and are expected to generate nearly 27,000 kilowatt-hours of electricity annually – enough energy to power 150 medical ventilators.

Solar Panels

Project Cost: \$1,605,000

Annual electricity generated:
111,500 kWh

Annual 'Feed in Tariff'
revenue: \$80,000 approx

Toronto Green Energy Fund
zero interest loan \$787,000

Simple Payback: 20 years



Project results have been verified by a third party project evaluator according to industry references and the International Performance Measurement and Verification Protocol (IPMVP)



To help cut operational costs and utility expenses, and reduce environmental impact, Sunnybrook teamed up with Honeywell Energy Solutions to implement a \$28 million facility renewal program.

Solution and Results

To help cut operational costs and utility expenses, and reduce environmental impact, Sunnybrook teamed up with Honeywell Energy Solutions to implement a \$28 million facility renewal program. The renewal program included the installation of new lighting and heating, ventilation and cooling equipment, and has ongoing plans to make improvements to mechanical and building automation systems.

Sunnybrook also accomplished an innovative solar photovoltaic installation. More than 140 solar panels spanning two stories of a parking garage were installed and are expected to generate nearly 27,000 kilowatt-hours of electricity annually – enough energy to power 150 medical ventilators. Serving as a visual reminder of the hospital's commitment to conserving energy, and producing clean renewable energy, the solar panels are mounted vertically on the wall of the parking garage. In addition, a display near the parking garage educates visitors and staff on photovoltaic technology, and provides real-time information on power generation and carbon emissions reduction.



Sunnybrook engaged with the City of Toronto's Better Buildings Partnership to determine the availability of zero interest loans through the City's Sustainable Energy Funds (SEF) and incentive grants through BBP's Energy Conservation program. Since the overall project included both energy conservation measures and a renewable energy installation, the hospital was able to arrange loans through both available SEF loan funds – the Toronto Energy Conservation Fund and the Toronto Green Energy Fund to a total of \$1.78 million, in addition to BBP incentives of almost \$960,000 for energy savings achieved.

Upon completion, the facility renewal program is expected to result in cost savings of approximately \$2.6 million per year and reduce annual greenhouse emissions by an estimated 10,000 tonnes, the equivalent of taking over 2,000 cars off the road per year.

About the City of Toronto

Toronto is Canada's largest city and sixth largest government, and home to a diverse population of about 2.6 million people. It is the economic engine of Canada and one of the greenest and most creative cities in North America. Toronto has won numerous awards for quality, innovation and efficiency in delivering public services. Toronto's government is dedicated to prosperity, opportunity and liveability for all its residents.



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