

CASE STUDY: TORONTO CATHOLIC DISTRICT SCHOOL BOARD

BETTER BUILDINGS PARTNERSHIP



Project Address:

80 Sheppard Avenue East
Toronto, ON M2N 6E8

Key Contacts:

Mary Walker,
Communications Supervisor

Main Building Contacts:

Rose MacDonald, Supervisor
TCDSB Central Services

Project Snapshot

Project cost: **\$294,500**

Annual electricity savings:
584,535 kWh

Annual cost savings:
\$58,453

Annual CO₂ savings:
562,323 kg of CO₂

BBP Incentives: **\$68,927**

Project Background

Toronto Catholic District School Board (TCDSB) governs 208 schools in the Toronto area including 30 secondary and 178 elementary schools. In total there are 15,365 full-time equivalent teachers and 94,936 students enrolled in TCDSB schools.

TCDSB wanted to reduce operating costs and become a more energy efficient school board by making environmental changes in various schools. And with many of the schools dating back to the 1950's, many of the existing technologies and infrastructures were old and out of date.

In 2007, a lighting audit was conducted by ALD Architectural Lighting Design who designed an implementation plan to upgrade the existing lighting. TCDSB reached out to the City of Toronto's Better Buildings Partnership to access information and resources to support their energy efficient lighting retrofits.

Challenge

With all schools fully operational, TCDSB wanted to ensure students' schedules and environments were not disturbed. With these challenges in mind, TCDSB sought to reduce the carbon footprint of its combined campuses and minimize energy operating costs by upgrading their lighting systems.

“By working together with the BBP to upgrade parts of our lighting systems in multiple schools and portables, we expect to see savings of about 25% annually, lowering the payback period to just 3.5 years”

Rose MacDonald, Supervisor
TCDSB Central Services



Solution

Toronto's Better Buildings Partnership was involved in supporting the TCDSB to access the energy savings incentives that the program offers, enabling the school board to do more with its budget and improve the lighting in more schools. The existing lighting consisted of T12 linear fluorescents, incandescent and halogen lamps. The aim of the retrofit plan was to upgrade to an energy efficient lighting system including T8 linear fluorescents lamps complete with electronic ballasts, compact fluorescents and high pressure sodium lighting. The projects implemented include:

- Replacement of T12 with T8, and incandescent with CFL in seven schools
- Replacement of T12 with T8 in one school and 139 portable classrooms
- Replacement of T12 with T8, incandescent with CFL, and Halogen with HPS in one additional school

“By working together with the BBP to upgrade parts of our lighting systems in multiple schools and portables, we expect to see savings of about 25% annually, lowering the payback period to just 3.5 years”, said Rose MacDonald, Supervisor, TCDSB Central Services. “Not to mention, we’ve reduced our environmental footprint by 750,000Kg of CO₂ annually – equivalent to taking 150 cars off the road.”

Results

The energy efficient upgrades to 264,536 Sqft of TCDSB facilities resulted in 584,535 kWh of annual electricity savings and an annual greenhouse gas savings of 562,323 kg of CO₂. These reductions are expected to provide an annual cost savings of \$58,453 with a payback period of 3.86 years. These savings were accomplished with the support of a \$68,927.00 incentive payment from the Better Buildings Partnership.

All measures were accomplished without any disruption to classes by ensuring all work was conducted in the evenings.

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.



For more information
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