

Community Centres and Pools

Energy Retrofit Case Study

Background

In 2008, the City of Toronto partnered with MCW Custom Energy Solutions Ltd. to implement energy saving measures on Toronto's Community Centres and Pools. This project involved work on 58 facilities and required an overall payback time of 8 years. The measures completed will reduce building operating costs, improve building conditions, and deliver environmental benefits.



The project is part of the Energy Retrofit Program that was approved by Toronto City Council in 2004 to reduce facility operating costs and deliver environmental benefits. Improvements include the installation of energy-efficient lighting and lighting controls. Many areas were redesigned using new fluorescent fixtures.

Project Summary			
Buildings:	58 Community Centres and Pools	Annual Energy Savings:	<ul style="list-style-type: none"> ○ \$205,367 ○ 634 tonnes of CO2 ○ 544 kW ○ 7,708 GJ's ○ 2,141,249 kWh elec
Simple Payback of Incremental Costs:	8 years	Incentives Received:	<ul style="list-style-type: none"> ○ \$107,062
		Total Budget:	<ul style="list-style-type: none"> ○ \$1,750,000
Start Date:	2009	Completion Date:	2010

Description of the Work Implemented

Lighting Retrofits

To save energy, existing fixtures were replaced with more energy efficient versions, such as replacing T12 lamps with T8 lamps.

Redesigns of community centre gymnasiums were done in order to remove any older inefficient lighting such as the metal halide fixtures. New gymnasium fixtures were installed complete with either T8 or T5HO lamps that improved the light levels in the facility along with providing a better illumination of the space. Below is an example of a gymnasium that used to have metal halide lamps and was replaced with new gymnasium fixtures complete with T5 High Output lamps.



Benefits of Efficiency Measures

- Reduction in operating and maintenance costs.
- Significant positive environmental and health benefits due to reduced consumption of electricity
- Reduced demand on over-burdened infrastructure including the Provincial electricity grid
- Increase in level of occupant comfort in buildings.
- Maintenance holiday for City staff as all lamps and ballasts changed out in the facilities.
- Improved aesthetics