

# City of Toronto – Solid Waste Transfer Stations

## The Situation

In 2008, the City of Toronto partnered with Direct Energy Business Services Limited to implement an energy conservation project at Toronto's Solid Waste Transfer Stations. This project involved work on 8 facilities and will meet an 8 year simple payback period. The measures completed will reduce operating costs, improve building conditions, and deliver environmental benefits.



## The Solution

The project is part of the Energy Retrofit Program that was approved by City Council in 2004 to reduce facility operating costs and deliver environmental benefits.

In Phase 1 of the project, the energy conservation measures implemented include the installation of energy-efficient lighting and lighting controls, building automation systems, energy-efficient boilers, power correction equipment, water conservation, and rooftop unit replacements. Phase 2 of the project involves additional lighting measures to be implemented and is currently underway.

The Program involved the following energy efficiency measures:

- **Lighting Retrofits** – To save energy, existing fixtures were replaced with more energy efficient state-of-the-art T8 technology, incandescent light sources were replaced with compact fluorescent technology, inefficient signage was replaced with new LED signage, and lighting controls were installed in areas with low or periodic occupancy.
- **Building Automation Systems** – Installation of new building automation systems at all sites to allow the City greater control of mechanical and lighting systems to reduce energy and maintenance costs.
- **Mechanical Modifications** – The mechanical measures implemented included boiler replacements, rooftop unit replacements, and installation of power factor correction equipment.
- **Water Conservation** – New high efficiency toilets and water fixtures were installed to reduce the building's water consumption and demand on the City's waste water treatment system.

The implementation of these measures has resulted in key benefits:

- Reduction in operating and maintenance costs.
- Significant positive environmental and health benefits due to reduced consumption of electricity, natural gas and water resulting from avoided emissions of greenhouse gases and other air pollutants.
- Reduced demand on over-burdened infrastructure including the Provincial electricity grid, the gas distribution system, and the municipal water supply and treatment systems.
- Increase in level of occupant comfort in buildings.

## About Direct Energy Business Services Limited

Direct Energy Business Services works in buildings to reduce energy costs. We take pride in providing an added value to customers through customized energy management solutions and integrated retrofit technologies. Through the optimization of energy, we reduce your consumption, operating costs, environmental impact, and renew your building infrastructure.