

York University 'YORKWISE' EPC

Address ([Map](#)): 4700 Keele Street, Toronto, Ontario M3J 3T8 Canada
 Sector: Educational Delivery Type: Energy Performance Contract
 MCW Office: Toronto
 Sub Categories: College & University



Project Initiated In:
2005

Project Cost:
\$41,500,000

Scope of Project:
89 Buildings - 8.5 Million Square Feet

Annual Energy Savings:
\$5,000,000

Annual GHG Emissions Reductions:
15,000 Tonnes eCO2

Project Description

The YORKWISE Energy Performance Contract began in 2006 and was designed to address York's future-ready goals at the building and infrastructure level. As the lead Project Partner on YORKWISE, MCW's focus was on how York facilities at the 8,000,000 ft² Keele Campus and 500,000 ft² Glendon campus - and campus stakeholders - consume energy, and how that energy usage can be reduced through awareness, behavioral change, demand reduction strategies, and energy retrofits to York's mechanical and electrical systems. After 10 years of working with York implementing numerous energy-saving solutions, MCW is pleased with the dividends York sees from the project in terms of energy and dollars saved, and the positive contributions the project has made towards a more sustainable future for the University and its large community of students and faculty.

Project Highlights:

- Keele Campus Central Plant Upgrades, including:
 - A 3,000 Ton Steam Turbine-Driven Chiller that is used to supply the campus' 80+ facilities with chilled water for their cooling requirements. This measure results in a 5MW peak summertime load reduction by displacing the power previously required to run electric drive units. The project earned a \$1.1M grant from Toronto Hydro in recognition of the reduction in peak hydro grid demand the system enables.
 - New Distributed Controls System (DCS) to control the campus' chilled water system, compressed air system and various steam system components to optimize the staging of equipment and monitor energy use in real-time.
- Glendon Central Services Plant energy efficiency and capital renewal improvements, including a Boiler Replacement, wherein all three existing 350hp dual fuel steam boilers were removed and three new gas fired boilers installed along with new economizers, feed water pumps and other ancillary equipment, and a new PCL system controls system.
- VAV Conversions on over 100 constant volume fan systems (over 3,200 hp of fans) representing a conversion of 2.3M CFM to variable air volume while ensuring that rooms maintained minimum ventilation levels.
- Lighting Retrofits in over 8.1M ft² across both campuses that ensure electricity demand and consumption reductions while improving lighting levels. A number of 2nd Generation LED Lighting upgrades were implemented in select residences, lecture halls,

and other specialized learning facilities for sciences, technology, and film studies.

- Campus-wide submetering at both Keele and Glendon campuses for improved metering and energy performance monitoring

Client Quote:

“YORKWISE was a critical component of how York University builds for the future. MCW’s innovation and leadership on the project has enabled York University to make strides towards more sustainable campus operations.”

- Brad Cochrane, Director, Energy Management, York University Keele Campus Services & Building Operations