



2017-2018

IEMP ANNUAL PROGRESS REPORT

PURPOSE

In an effort to limit the impacts of climate change, [Humber's Integrated Energy Master Plan \(IEMP\)](#) was developed to meet significant water, energy efficiency and greenhouse gas reduction goals by 2034.

GOALS



Reduce energy use per square foot by

50%



Reduce **absolute** greenhouse gas emissions by

30%

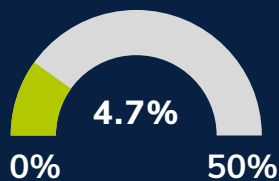


Reduce water use per student by

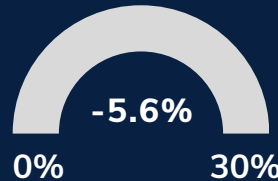
50%

PROGRESS

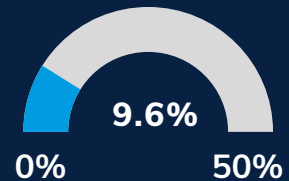
Energy



GHG



Water



FINANCIAL SAVINGS



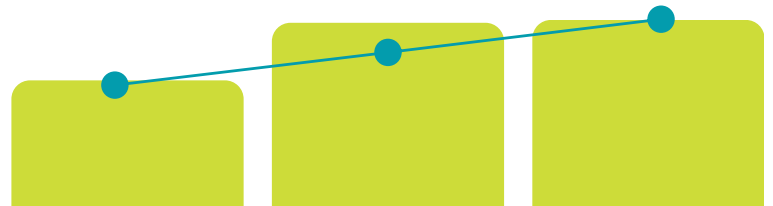
This year, Humber College saved

\$740,000

in utility costs

Since 2015 Humber College has saved over

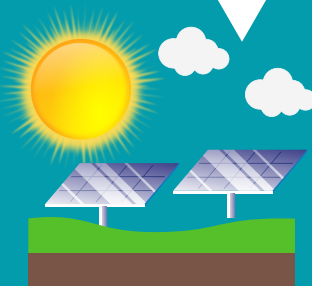
\$1,980,000



RENEWABLES

140,000 kWh

Solar Generation this year



This is equivalent to the electricity used by **12** homes



NOTABLE PROJECTS

North Campus E Building Retrofit

The building envelope was upgraded to significantly improve the energy efficiency of the building. The project included new triple-pane glazing, increased wall insulation, high-performance curtain wall systems, new parapet framing, and roof insulation upgrades.



Building N Deep Energy Retrofit

North Campus N building retrofit includes both mechanical and envelope improvements. Mechanical design upgrades include heat recovery, demand control ventilation, and equipment operation optimization. Insulation was added to walls and glazing was replaced. Transition details were improved to reduce thermal bridging. The combination of measures is expected to reduce energy consumption by 30% and GHG emissions by 43%. The project also provided opportunities for academic engagement, by allowing students to engage with industry professionals to design their own retrofit solution.



Retro-Commissioning Project

University of Guelph Humber building underwent retro-commissioning which included a boiler controls upgrade and optimizing rooftop units sequences.



Other Notable Projects

- North Campus J Glazing Retrofit
- Installation of Sub-metering System

ACADEMIC ENGAGEMENT

Building N Student Design Team

A multi-disciplinary team of students was engaged to design improvements for Building N in parallel with the design team. The team included students from Architectural Technology, Sustainable Energy & Building Technology, Civil Engineering Technology, Project Management, and Supply Chain Management. The student team benefitted from regular meetings with the architects and engineers to present their ideas and designs and obtain industry feedback – including reminders of real-life constraints like schedules and budgets. The students were placed in a multidisciplinary team environment that will mimic their future careers and gave them an opportunity to interact with industry professionals.

