



HUMBER
Office of Sustainability



2022-2023

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%

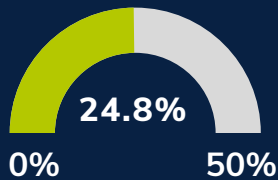


Reduce water use per student by

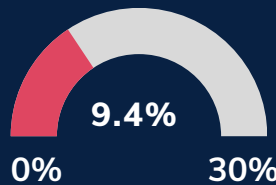
50%

PROGRESS

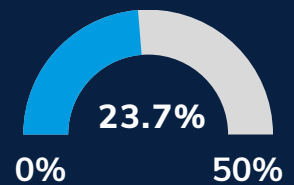
Energy



GHG



Water



FINANCIAL SAVINGS



This year, Humber College saved

\$2,280,000

in utility costs

Since 2015 Humber College has saved over

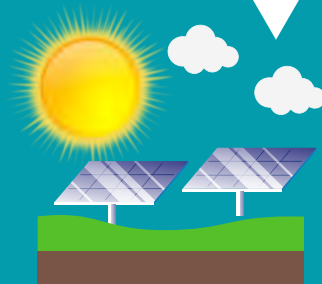
\$8,600,000



RENEWABLES

1,286,000 kWh

Solar Generation this Year



This is equivalent to the electricity used by **105** homes



NOTABLE PROJECTS

110 CAR Envelope Retrofit

The 110 Carrier Drive facility houses the centre for Skilled Trades and Technology. Originally built in the 1970s, this building had its exterior overcladded - adding insulation to exterior walls and upgrading windows to triple glazing. This 100,000 sq.ft building now uses 20% less energy than before.



B,E,F,H Solar Panels

A total capacity of 410 kW-solar PV was installed to serve the B, E, F, and H Buildings at the North campus. This set of arrays offsets the equivalent energy usage of 35 homes.



SWITCH Phase 1 Construction Start

Project SWITCH includes the conversion of the North campus's heating system from Steam to Hot Water and installation of a district energy plant that will allow for significant heat recovery. This project will reduce natural gas use at the North campus by 70% and lead to a 30% reduction in Humber's GHG emissions.



Other Notable Projects

- F AHU Guideline 36 Sequences Implementation
- LRC LED Relamping
- FX AHU Replacement
- Lakeshore Chiller Optimization

ACADEMIC ENGAGEMENT

Project SWITCH Co-Op Placements

Students from the Sustainable Energy and Building Technology (SEBT) program were hired by the design-build contractor, Ecosystem Energy. The students had the unique opportunity to work on Project SWITCH as part of their internship. As Controls Specialist Interns, these students conducted a comprehensive controls audit, analyzed the BAS, and provided crucial data for HVAC design decisions. This hands-on experience deepened their technical skills and illuminated the practical application of sustainability principles in a real-world context.

FAST Global Summer School

Humber's Faculty of Applied Science and Technology's Global Summer School course, Optimizing High Performance Building Design, hosted students for a tour of the NX retrofit project. Students from several countries got to learn about the unique characteristics and challenges from the the deep energy retrofit.

