

CAMPUS ELECTRICITY

GE donated a hydroelectric station to Trent in 1962. In 2011 it was upgraded from a 2.4MW to a 3.9MW facility in partnership with Peterborough Utilities Group and redirected to the Ontario grid. For historical comparisons, we often remove this carbon impact as it masks insight on other, action-based inventory efforts.

DATA CAPTURE

Working with campus partners, the SO has established tracking mechanisms for more emissions sources over time. Comparing the 2023 GHG inventory to historical data, 171t from sources like fleet and diesel are now reported, which were from previously untracked sources.

BUILDING SPACE

Trent University's built space is expanding to meet the needs of our community. With additions such as Life and Health Sciences, the Student Centre, and our expanding Durham campus we see increases to GHG emissions. Two exceptions are the Forensics Building and Athletics Facility, which reduced GHGs.

GRID IMPACTS

All GHG stories in Ontario should highlight impacts of grid decarbonization due to the phase-out of coal and support of renewable energy generation. Ontario's electricity is among the cleanest in the world. Emissions factors, used to calculate carbon impacts, dropped from 240g/CO₂e in 2005 to 38g/CO₂e in 2023.

A GUIDE TO TRENT'S GHGS

GOVERNMENT BASELINES

Trent uses historical data from 2005 and 1990 to demonstrate support for provincial and federal emissions reduction targets. Our focus however is on absolute and deep reductions toward a low-carbon campus. We can learn from historical comparisons but the further back we go, the less reliable data is.

CARBON INSETS

The emerging philosophy of carbon insetting is a great fit to Trent's demonstrated practice. Collaborating to redevelop the campus hydro station, installing a Battery Energy Storage System (BESS), and addressing embodied carbon in our Forensics Crime Science Facility all reduce global carbon emissions but don't register in our campus GHG inventory.

PLUG LOADS

The demand for plug-in technology at Trent has surged over 20 years. Despite increased energy efficiency of individual devices, the need to charge personal devices for every community member has grown. Distributed ownership poses a challenge to quantify its impact.

ENERGY CONSERVATION

Trent is working on continuous improvement and enhancing energy efficiency by switching to all LED lighting, installing high-efficiency boilers, improving building envelopes, sealing ducts, implementing variable air volume systems, and adopting demand-based ventilation. These initiatives reduce campus energy use and associated GHGs.