



BCIT

2018

CARBON NEUTRAL
ACTION REPORT

BRITISH COLUMBIA
INSTITUTE OF TECHNOLOGY

BCIT™



DECLARATION STATEMENT

This Carbon Neutral Action Report for the period January 1st, 2018 to December 31st, 2018 summarizes our emissions profile, the total offsets to reach net-zero emissions, the actions we have taken in 2018 to reduce our greenhouse gas emissions and our plans to continue reducing emissions in 2019 and beyond.

By June 30, 2019, BCIT's final Carbon Neutral Action Report will be posted to our website at bcit.ca/facilities/sustainability/energy

THE OVERVIEW

In 2018, BCIT has laid the groundwork to achieve major greenhouse gas (GHG) reductions through the creation of an Energy Team within Facilities Services. The Energy Team is responsible for reducing the institute's carbon footprint by one-third over the next four years. This will be accomplished through strategic energy efficiency projects, renewable energy sourcing, and de-carbonization of BCIT operations.

One of the first tasks undertaken by the BCIT Energy Team was to create a Strategic Energy Management Plan (SEMP). This plan is a roadmap to guide the Energy Team toward reaching our carbon emission reduction goals.

Retro-commissioning, or "tuning up" of HVAC controls is a core part of the strategic plan to reduce greenhouse gases (GHG) from BCIT operations. The SE12 and Downtown Campus buildings were two buildings selected in 2018, cumulatively resulting in an annual GHG reduction of approximately 150 tonnes CO₂e.

Other projects included: Installation of building-level real-time energy meters; Capacity testing of the Burnaby geoexchange system, revealing additional heating capacity available; Building heating and cooling system schedule alignment with actual occupancy schedules; Upgrades of older natural gas boilers with high-efficiency condensing models in 7 campus buildings; LED lighting retrofits were completed in 4 campus buildings





BCIT EMISSIONS

Over the next four years, we plan to make major investments into aging BCIT infrastructure while ensuring new construction and programming is as low-emission as possible.

EMISSIONS AND OFFSET SUMMARY TABLE

ADJUSTMENTS TO GHG EMISSIONS REPORTED IN PRIOR YEARS

8,324	Total Emissions (tCO ₂ e)*
6.89	Total BioCO ₂ * [†]
8,317	Total Offsets (tCO ₂ e)

ADJUSTMENTS TO GHG EMISSIONS REPORTED IN PRIOR YEARS

509	Total Emissions (tCO ₂ e)
509	Total Offsets (tCO ₂ e)

GRAND TOTAL OFFSETS FOR THE 2018 REPORTING YEAR

8,826	Grand Total Offsets Required (tCO ₂ e)
\$220,650	Total Offset Investment (<i>Grand Total Offsets Required X \$25/tCO₂e</i>) [†]

THIS IS THE TOTAL OF EMISSIONS THAT MUST BE
OFFSET FOR REPORTING YEAR 2018

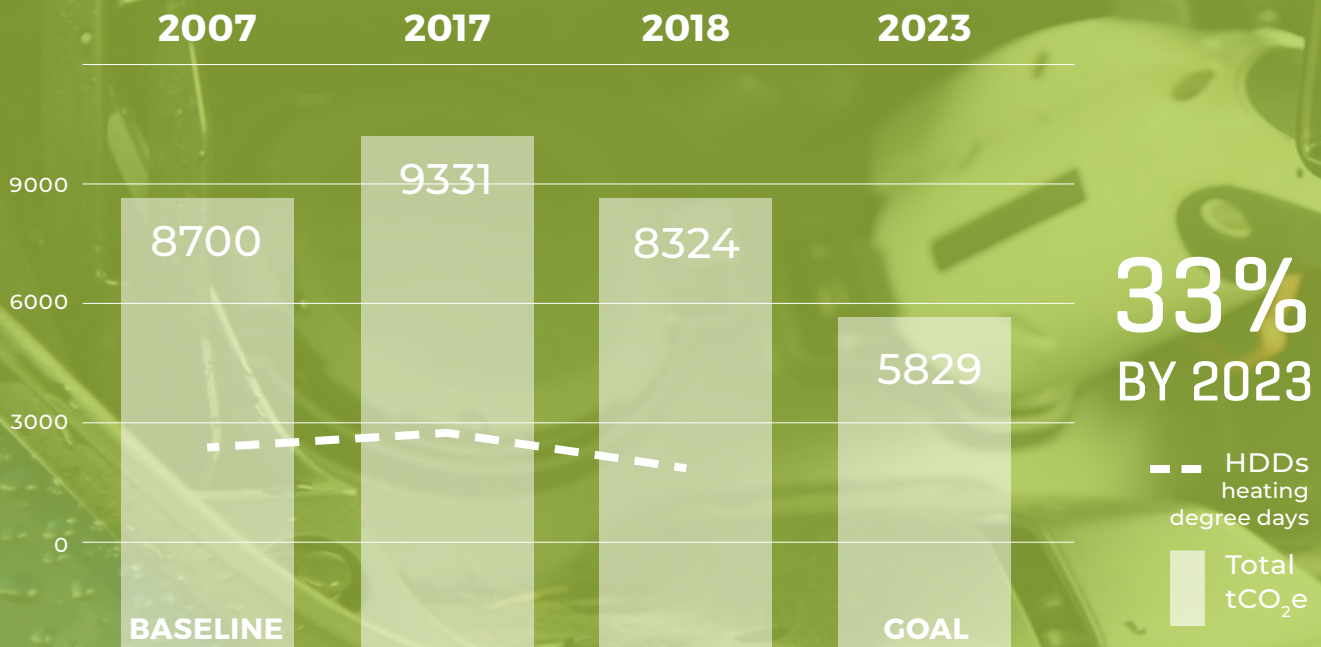
*tCO₂e refers to total carbon dioxide equivalent emissions
†BioCO₂ refers to biofuel components of gasoline and diesel emissions

33% BY 2023

GHG EMISSIONS REDUCTION GOAL

The graph below illustrates BCIT's 2007 greenhouse gas emissions (baseline), 2017, the year we committed to our GHG reduction goal, and 2018, the year the Energy Team was created at BCIT and begun work. By 2023, we will have reduced our emissions by 33% below 2007 levels.

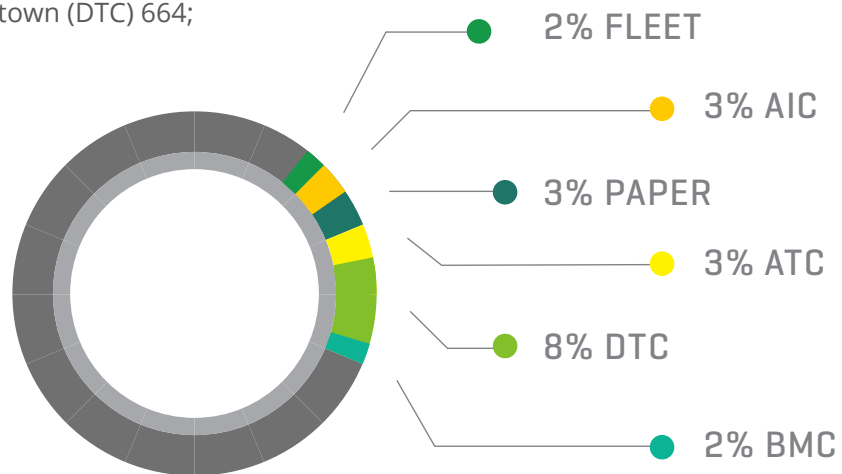
As shown in the chart to the right, 95% of BCIT's GHG emissions come from our buildings. Primary sources of emissions within the building portfolio are heating, hot water, and cooking. Accordingly, these are focus areas for Energy Team projects.



2018 EMISSIONS BY SOURCE

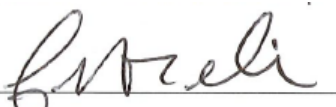
Total emissions breakdown in tCO₂e : Burnaby 6589;
Fleet 132; Annacis (AIC) 290; Paper 251;
Aerospace (ATC) 260; Downtown (DTC) 664;
Marine (BMC) 138.

79%
BURNABY



RETIREMENT OF OFFSETS

In accordance with the requirements of the Greenhouse Gas Reduction Targets Act and Carbon Neutral Government Regulation, British Columbia Institute of Technology (the Organization) is responsible for arranging for the retirement of the offsets obligation reported above for the 2018 calendar year, together with any adjustments reported for past calendar years. The Organization hereby agrees that, in exchange for the Ministry of Environment and Climate Change Strategy ensuring that these offsets are retired on the Organization's behalf, the Organization will pay within 30 days, the associated invoice to be issued by the Ministry in an amount equal to \$25 per tonne of offsets retired on its behalf plus GST.

Signature Date

LORCAN O'MELINN

Name (please print) Vice President Title
Administration and CFO
British Columbia Institute of Technology



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