



2019 Carbon Neutral Action Report

May 7, 2020

Table of Contents

Declaration Statement	1
Overview	1
Greenhouse Gas Emission Reduction Activities Undertaken in 2019.....	2
Plans to Further Reduce Greenhouse Gas Emissions in 2020 and Beyond	2
Emissions and Offset Summary Table.....	3
Retirement of Offsets	4
Executive Sign-off.....	4

Declaration Statement

This Carbon Neutral Action Report for the period January 1st, 2019 to December 31st, 2019 summarizes the Justice Institute of British Columbia's (JIBC) emissions profile, total offsets to reach net-zero emissions, actions undertaken in 2019 to reduce greenhouse gas (GHG) emissions and plans to continue reducing emissions in 2020 and beyond.

By June 30, 2020, JIBC's final 2018 Carbon Neutral Action Report will be posted to the Institute's website at www.jibc.ca

Overview

JIBC is Canada's leading public safety educator, a dynamic post-secondary institution recognized nationally and internationally for innovative education in the areas of justice and public safety. JIBC offers a range of applied and academic programs (certificates, diplomas, and degrees) that span the spectrum of safety, from prevention to response and recovery. JIBC has six campuses in British Columbia, located in New Westminster, Maple Ridge, Pitt Meadows, Chilliwack, Victoria and Kelowna.

JIBC is committed to reducing its carbon footprint and improve sustainability through environmentally responsible practices. Since 2008 the Institute has implemented operational changes resulting in significant reductions in energy consumption. Energy consumption is monitored at all campuses to identify trends in usage and to ensure buildings operate at optimal conditions for the season. Tracking energy usage allows JIBC to gauge the effectiveness of implemented energy-efficiency strategies designed to achieve carbon neutrality through the reduction of greenhouse gas emissions.

In 2019, JIBC joined BC Hydro's Energy Manager Associate Program. The program assisted JIBC with the development of a strategic energy management plan to support the Institute's commitment to energy efficiency and conservation by providing a framework for reducing energy consumption and its associated environmental impact.

Greenhouse Gas Emission Reduction Activities Undertaken in 2019

In 2019 the following projects were undertaken to reduce greenhouse gas emissions:

- Retrofitted fixtures and lamps to LED types at the New Westminster campus;
- Retrofitted fixtures and lamps to LED types at the Maple Ridge campus;
- Conducted an energy audit and implemented recommended energy savings strategies at the Maple Ridge campus;
- Conducted retro-commissioning study and implemented recommended energy savings adjustments to building system components at the Maple Ridge campus;
- Installed new direct digital controls for heating/cooling plants and lighting systems at the Chilliwack campus; and
- Installed new direct digital controls for heating/cooling plants and lighting systems at the Pitt Meadows campus.

Plans to Further Reduce Greenhouse Gas Emissions in 2020 and Beyond

Potential projects to further reduce greenhouse gas emissions in 2020 and beyond include:

- Retrofit remaining lighting to LED, including fixture replacement, and addition of motion sensors;
- Replace original circulation pumps in the water treatment plant system with high-efficiency types of equipment with variable speed drives;
- Add destratification fans to the atrium and gym areas;
- Add variable speed drives to chilled water pumps;
- Add power misers to vending machines;
- Replace older fleet vehicles with more fuel-efficient and/or electric vehicles;
- Install charging stations for fleet electric vehicle charging;
- Implement additional virtual servers to replace physical servers;
- Upgrade network switches to energy-efficient types;
- Refresh desktops to remove older less energy efficient computers;

- Engage with travel booking agency to receive GHG emission reporting for flight bookings;
- Review administrative processes using Lean methodology to reduce unnecessary paper-based filing and forms;
- Implement personal printing account program to raise individual staff awareness of printing and copying habits; and
- Participate in the STARS program – Sustainability Tracking and Assessment Rating System administered by the Association for the Advancement of Sustainability in Higher Education.
- Participate in BC Hydro’s Energy Manager Program to support the strategic approach to energy management and organizational change to reduce energy waste, costs, and improve energy efficiency.

Emissions and Offset Summary Table

In accordance with the Carbon Neutral Government Regulation, JIBC activities generating direct and indirect greenhouse gas emissions were recorded throughout the calendar year. In 2019, JIBC realized direct and indirect greenhouse gas emissions measured in tonnes per carbon dioxide equivalent (tCO₂e) in the categories of mobile fuel combustion, stationary fuel combustion, purchased energy and office paper.

JIBC GHG Emissions and Offset for 2019	
As per the <u>Directive</u> issued March 31, 2020, each PSO will use their 2018 GHG Emission as a placeholder for the purposes of their 2019 CNAR.	
Total Emissions (tCO ₂ e)	628
Total BioCO ₂	3
Total Offsets (tCO ₂ e)	625
Offset Investments (\$25 per tCO ₂ e)	\$15,625

Retirement of Offsets

In accordance with the requirements of the Climate Change Accountability Act and Carbon Neutral Government Regulation, Justice Institute of British Columbia (the Organization) is responsible for arranging for the retirement of the offsets obligation reported above for the 2019 calendar year, together with any adjustments reported for past calendar years (if applicable). The Organization hereby agrees that, in exchange for the Ministry of Environment and Climate Change Strategy (the Ministry) 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.

Executive Sign-off



May 8, 2020

Signature

Date

Mike Proud

Vice President – Finance and Operations

Name (please print)

Title

Confirmation number: 00BE6A97

Submitted date: 2020-07-08 16:55:02 Pacific Daylight Time

Carbon Neutral Action Report Survey - 2019

Public sector organizations (PSOs) are required to complete this survey, in addition to a Carbon Neutral Action Report (CNAR) as mandated by BC's [Climate Change Accountability Act](#) and the [Carbon Neutral Government Regulation](#).

Due to the COVID-19 pandemic, the following [Directive](#) was issued on March 31, 2020. Certain deadlines were also extended for the 2019 reporting year (see below).

March 31, 2020 Directive:

Under my authority as the Director for the purposes of the Act, and under the authority delegated to me in Section 6 of the Carbon Neutral Government Regulation, I hereby direct that all ministries and Public Sector Organizations covered by the Carbon Neutral Government requirement shall use their 2018 GHG emissions as a temporary estimate for their actual 2019 GHG emissions, for the purposes of the 2019 Carbon Neutral Action Reports and 2019 Carbon Neutral Government reporting required under the Climate Change Accountability Act.

Neil Dobson, Executive Director, Clean BC Implementation
Climate Action Secretariat

Although 2018 emissions data will be used as a placeholder for 2019, **all other (qualitative) components of the CNAR and CNAR Survey are to be completed with information from 2019 (e.g., actions taken or planned to reduce emissions)**. The only change to the survey is that the deadline was extended by one month to June 30, 2020.

This survey is divided into two parts:

Part 1 - Will be made public on the Climate Action Secretariat (CAS) [website](#) after June 30, 2020; however, it will not be appended directly to each individual PSO CNAR as was done in previous years. This section collects details about actions taken or planned to reduce emissions and is intended to supplement the legislative requirements in your CNAR.

Part 2 - Will NOT be made public. Information you provide in this section is important and will be used internally to help CAS staff with planning for emissions reduction and climate change adaptation initiatives. Although not required, PSOs are highly encouraged to complete Part 2.

Note: Survey progress can be saved at any time by clicking the "Save and continue later" button at the bottom of each page. A new window will open and you will be asked to provide your name and email. An email will be sent to you from Carbon.Neutral@gov.bc.ca with the subject line: "Questionnaire Link", which will include a hyperlink for the "Project: Carbon Neutral Action Report Survey – Broader Public Sector 2019". You can then continue responding at another time or email the hyperlink to a colleague to complete remaining section(s).

May 29, 2020	<ul style="list-style-type: none">The final, signed version of the CNAR (or Small Emitters Form) must be submitted by email to: Carbon.Neutral@gov.bc.ca
June 30, 2020*	<ul style="list-style-type: none">Ministry of Environment and Climate Change Strategy must post a final CNAR for each organization on the BC Government's CNG website and each PSO is encouraged to post the report on their website.The CNAR Survey (optional for Small Emitters) must be completed and submitted online. *Deadline extended from May 29, 2020.<u>All offset invoice payments must be submitted to CAS.</u>
Sept 30, 2020*	<ul style="list-style-type: none">Clean Government Reporting Tool (CGRT) Data Entry must be completed for the 2019 reporting year.

	*Deadline extended from April 30, 2020.
Oct 15, 2020*	<ul style="list-style-type: none"> • Self-Certification checklist must be completed, signed and submitted by email to: Carbon.Neutral@gov.bc.ca. *Deadline extended from May 15, 2020.

*See the [Carbon Neutral Government – Program Requirements website](#) for more information on program requirements, timelines and templates.

PART 1 - Included as part of your public CNAR report.

Reminder that Part 1 will be made public on the CAS [website](#).

Contact Name:	<i>Julie Brown</i>
Contact Email:	<i>jbrown@jibc.ca</i>
Organization Name:	<i>Justice Institute of British Columbia</i>
Role – Please select the best category for your current role with your organization. If more than one individual completed the survey, multiple categories may be selected:	Other - Please Specify: <i>Director</i>
Please select your sector:	Post Secondary (PS)

Stationary Sources (e.g. Buildings, Power Generators): Fuel Combustion, Electricity use, Fugitive Emissions.

Actions taken by your organization in 2019 to support emissions reductions from buildings

Do you have a strategy to reduce emissions from stationary sources?
<i>Yes</i>

Whether you have a strategy or not, briefly describe your organization's plans to continue reducing emissions from stationary sources:

Over the medium-term term (1-5 years)
<i>Conduct energy management assessments to identify/focus areas in policy development, target identification and reporting, planning, and actioning, working group formation and employee awareness and training development. Continue to develop strategic energy management plan (SEMP) informed by energy management assessments and energy audits, to further develop goals and plans to achieve reductions in emissions and promote sustainable practices.</i>
Over the long term (6-10 years)
<i>Focus on continuous improvement in the areas of operational performance of building systems, employee awareness/training and use of innovative technologies for retrofits.</i>

Please describe your strategy's goals (if any) related to energy audits.

Complete initial energy audits at all campuses to inform the ongoing updating of the strategic energy management plan.

What % on average of your building portfolio has an energy audit completed each year (if any)?

Not applicable.

Please describe your strategy's goals (if any) related to building retrofits.

Complete retrofits at all campuses to continue to reduce GHG emissions from stationary sources.

What % on average of your building portfolio is retrofitted each year in the following categories (if any) - click here for further information:

16%

Minor retrofits (e.g. low cost, easy to implement measures including caulking, lighting, adding roof insulation, etc.)

33%

Major retrofits (e.g. replacing windows and doors, equipment replacement such as boilers, etc.)

16%

Deep retrofits (e.g. replacing roof, replacing the heating, ventilation and air-conditioning system with a renewable technology like a ground-source heat pump, etc.)

16%

Please describe your strategy's re/retro-commissioning goals (if any)?

Complete initial retro-commissioning at all campuses and establish and ongoing schedule through the strategic energy management plan.

What % on average of your building portfolio do you recommission each year?

16%

Do you keep records of Refrigerant gases¹ category and refilling volumes?

[1] Fugitive emissions from stationary cooling equipment are attributed to the leakage and loss of HFC and PFC based coolants from air conditioning and commercial type refrigeration systems. Coolant loss can occur during the manufacturing, operation, and disposal of such equipment. Gases that may be reported via CGRT include HFC R-134, HFC R-134a, HFC R-404a, HFC R-407c, HFC R-410a.

No

What, if any, mitigation approaches have been considered? Please describe.

Our service providers maintain records.

How many newly constructed buildings received at least LEED Gold certification in 2019?

0.

How many newly constructed buildings did not receive LEED Gold certification?

0.

Please explain why LEED Gold certification was not obtained for those new buildings.

Not applicable.

Other actions? Please describe briefly:

Not applicable.

Mobile Sources (Fleet Vehicles, Off-road/portable Equipment): Fuel Combustion:

Actions taken by your organization in 2019 to support emissions reductions from mobile sources?

Do you have a strategy to reduce emissions from mobile sources?

No

Whether you have a strategy or not, briefly describe your organization's plans to continue reducing emissions from mobile sources:

Over the medium-term term (1-5 years)

Promote video conferencing to reduce travel. Install direct digital controls (DDC) at remaining campuses to remotely manage HVAC and lighting to reduce need for travel.

Over the long term (6-10 years)

Replace existing fleet vehicles with EVs.

How many fleet vehicles did you purchase from the following categories:

Electric Vehicle – EV - (e.g., Nissan Leaf, Chevy Bolt)

0

“Plug In” Electric Vehicle – PHEV (e.g., plug-in Prius, Chevy Volt)

0

Hybrid vehicle – HEV – non “Plug In”- (e.g., Toyota Highlander Hybrid)

0

Hydrogen fuel cell vehicle

0

Natural gas/propane

0

Gas/diesel vehicle

2

If you purchased new gas/diesel vehicles, can you briefly explain why vehicles from the other categories were not chosen?

Purchased same vehicle types used by clients.

Actions taken by your organization in 2019 to support emissions reductions from mobile sources? (Continued)

How many existing EV charging stations does your organization have in each category:

Level 2?

0

Level 3?

0

How many level 2 stations (if any) are specifically for your fleet vehicles?
As defined as Level 2 stations only your organization's fleet vehicles may use

0

How many level 3 stations (if any) are specifically for your fleet vehicles?
As defined as Level 3 stations only your organization's fleet vehicles may use

0

How many EV charging station(s) did you install in 2019 in each category:

Level 2?

0

Level 3?

0

How many level 2 stations (if any) were installed specifically for your fleet vehicles?
As defined in the previous section

0

How many level 3 stations (if any) were installed specifically for your fleet vehicles?
As defined in the previous section

0

Please briefly describe any other related actions, (e.g. charging station feasibility studies, electrical panel upgrades, etc.)

Updated estimates and reviewed available incentives for installing EV charging stations.

Please indicate the total number of the vehicles in the following vehicle classes that are in your current fleet

Definitions:

- Light duty vehicles (LDVs) are designated primarily for transport of passengers <13 and GVWR<3900kg
- Light duty trucks (LDTs) are designated primarily for transport of light-weight cargo or that are equipped with special features such as four-wheel drive for off-road operation (include SUVs, vans, trucks with a GVWR<3,900kg)
- Heavy duty vehicles (HDV) includes vehicles with a GVWR>3,900 kg (e.g. ¾ tonne pick-up truck, transport trucks)

Light duty vehicles (LDVs)

Electric Vehicles – EV - (e.g., Nissan Leaf, Chevy Bolt)

0

"Plug In" Electric Vehicle – PHEV -- (e.g., plug-in Prius, Chevy Volt)

0

Hybrid vehicles – HEV – (e.g., non "Plug In"- older Toyota Prius, Toyota Camry hybrid)

0

Hydrogen fuel cell vehicles

0

Natural gas/propane

0

Gas/diesel

6

Light duty trucks (LDTs)

Electric Vehicles – EV

0

"Plug In" Electric Vehicle – PHEV

0

Hybrid vehicles – HEV – (e.g., non "Plug In"- older Ford Escape Hybrid, older Chevrolet Silverado pickup hybrid, etc)

0

Hydrogen fuel cell vehicles

0

Natural Gas/propane

0

Gas/diesel

6

Heavy duty vehicles (HDV)

Electric Vehicles – EV

0

"Plug In" Electric Vehicle – PHEV

0

Hybrid vehicles – HEV – (e.g., non "Plug In")

0

Hydrogen fuel cell vehicles

0

Natural Gas/propane

0

Gas/diesel

5

Actions taken by your organization in 2019 to support emissions reductions from paper supplies.

Briefly describe your organization's plans to continue reducing emissions from paper use:

Over the medium-term (1-5 years)

*Continue to track printing use by school/division/office and individual to promote awareness of usage.
Utilize new print use software to raise further awareness of printing usage.*

Over the long term (6-10 years)

Place limitations of printing and promote paperless office strategies.

Do you have an awareness campaign focused on reducing office paper use?

Yes

Purchased alternate source paper (bamboo, hemp, wheat, etc.)

No

Other 2019 actions, please specify

Support Sustainability Group to address behaviours to improve sustainable practices.