

Title: “2018 Carbon Neutral Action Report”

Organization name: College of New Caledonia

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 the College of New Caledonia’s final *Carbon Neutral Action Report* will be posted to our website at www.cnc.bc.ca.

Overview:

The College of New Caledonia continues to pursue options available to reduce its overall energy consumption, reduce its overall carbon footprint, and promote green initiatives wherever possible. Highlights for the 2018 year included completion of construction of a new Heavy Mechanical Trades Training Facility. The new HMTTF which is on target to achieve LEED Gold certification replaced the lease-use of an approximately 50 year old repurposed transport truck repair shop. CNC also completed more major mechanical upgrades, exterior window and door replacements, and buildings and site electrical upgrades.

Upcoming Strategies for 2019

Moving into the 2019 year, CNC is executing a tenant fit-out project to become the home of it’s Vanderhoof Campus which replaces the lease-use of approximately 70 year-old old repurposed hospital building. This project is expected to complete in early 2020. CNC is also preparing plans to continue to move forward with its next phase of the replacement/rehabilitation of window and door, HVAC, electrical and lighting systems. The College looks forward with anticipation to the ongoing savings we will see from the completion of these initiatives, and we will continue to actively explore other avenues as they become available to further minimize our carbon footprint.

Emissions and Offset Summary Table:

[The final values to complete this table will be available in SMARTTool by May 15, 2019.

NOTE: this section has been updated from previous CNARs to separate BioCO₂ from total emissions.

Please see Appendix for instructions on populating the table.]

College of New Caledonia GHG Emissions and Offset for 2018 (tCO ₂ e)	
GHG Emissions created in Calendar Year 2018 (From SMARTTool Reports page - see Appendix for instructions and cell references)	
Total Emissions (tCO ₂ e)	2,932
Total BioCO ₂	2.03

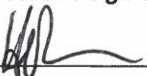
Total Offsets (tCO ₂ e)	2,930
Adjustments to GHG Emissions Reported in Prior Years (from SMARTTool Homepage - see Appendix for instructions):	
Total Emissions (tCO ₂ e)	0
Total Offsets (tCO ₂ e)	0
Grand Total Offsets for the 2018 Reporting Year (from SMARTTool Homepage): (This is the total of emissions that must be offset for Reporting Year 2018)	
Grand Total Offsets Required (tCO ₂ e)	2,930
Total Offset Investment (Grand Total Offsets Required X \$25/tCO ₂ e)	2,930 x \$25 = \$73,250.00

**Note, for School Districts, Total Offsets will not equal Total Emissions minus Total BioCO₂ because offset exemptions for school buses are included within Total Emissions.*

Retirement of Offsets:

In accordance with the requirements of the Greenhouse Gas Reduction Targets Act and Carbon Neutral Government Regulation, *the College of New Caledonia* 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.

Executive sign-off: [To be signed by a senior official, such as CEO, COO or Superintendent]

Signature  Date 21/06/2019

Name (please print) Henry Reiser Title President

Part 1: CNAR Survey

1. General Information

Name: Theo Mushumanski

Contact Email: mushumanski@cnc.bc.ca

Organization Name: College of New Caledonia

Sector: Post Secondary

Role - Please select your role(s) below.

If more than one individual completed the survey, multiple categories may be selected:

Energy Manager: No

Sustainability Coordinator: No

Administrative Assistant: No

Facilities/Operations Manager/Coordinator: No

CEO/President/Exec Director: No

Treasurer/Accounting: No

Superintendent: No

Other - Please Specify: Associate Director, Facilities Services

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

1. Actions taken by your organization in 2018 to support emissions reductions from buildings.

a) Do you have a strategy to reduce emissions from stationary sources?

Yes

If yes above, what are the main goals?: Reductions through:

- Reduce lower efficiency equipment with high efficiency equipment.
- Installation of controls sensor systems to operate HVAC equipment on a demand basis.
- Upgrading building envelopes to reduce fugitive emissions.
- Installing energy recovery equipment.
- Adoption of Step A Energy Code for renovations and new construction.
- Auto-monitoring of systems to detect malfunctions.

b) Whether you have a strategy or not (1.a), briefly describe your organization's plans to continue reducing emissions from stationary sources:

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

- Adoption of Step A Energy Code.
- Replacement/rehabilitation of Mechanical HVAC systems with high efficiency technology including, but not limited to, VFD's and automated controls.
- Replacement of old lighting technology with high efficiency dimmable LED lighting.
- Building envelope rehabilitation and upgrades for increased insulation and air tightness.
- Replacing pilot light equipment with auto-ignition systems.
- Auto-monitoring of systems for malfunctions and energy wasting for immediate repair.

II. Over the long term (6-10 years)

- Create schedule of cyclical building energy audits for all owned buildings.
- Create schedule of cyclical building re-commissioning for all owned buildings.

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

Our strategy is to include energy audits in our plans with the goals of:

- Identifying everywhere energy is being used.
- Evaluate the efficiency /effectiveness if energy use.
- Identify opportunities to reduce energy usage or replace such uses with non-emitting sources

I. What % on average of your building portfolio has an energy audit completed each year (if any)? : 0

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

Same as 1 (b) i above:

- Adoption of Step A Energy Code.
- Replacement/rehabilitation of Mechanical HVAC systems with high efficiency technology including, but not limited to, VFD's and automated controls.
- Replacement of old lighting technology with high efficiency dimmable LED lighting.
- Building envelope rehabilitation and upgrades for increased insulation and air tightness.
- Replacing pilot light equipment with auto-ignition systems.
- Auto-monitoring of systems for malfunctions and energy wasting for immediate repair.

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

Minor retrofits (e.g., low cost, easy to implement measures including caulking, lighting, adding roof insulation, etc.) (%): 10

Major retrofits (e.g., replacing windows and doors, equipment replacement such as boilers, etc.) (%): 20

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.) (%): 5

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

- Identify appropriate optimal system operation.
- Comparing system operation to optimal operation.
- Making adjustments to system operation to achieve closer to optimal operation.

I. What % on average of your building portfolio do you recommission each year?: 10

f) Do you keep records of Refrigerant gases category and refilling volumes?

Yes

I. If yes, have you included the associated emissions in your reporting?

No

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

Zero leaks and zero refilling in last 12 months, therefore no emissions.

g) How many newly constructed buildings received at least LEED Gold certification in 2018 : 0

I. How many newly constructed buildings did not receive LEED Gold certification?: 1

II. Please explain why LEED Gold certification was not obtained.

New HMTF built to LEED Gold, certification is pending and in progress.

h) Other actions? Please describe briefly.

n/a

B. Mobile Sources (Vehicles, Off-road/portable Equipment): Fuel Combustion:**3. Actions taken by your organization in 2018 to support emissions reductions from mobile sources.****a) Do you have a strategy to reduce emissions from mobile sources?**

No

I. If yes, what are its goals?

n/a

b) Whether you have a strategy or not (3.a), briefly describe your organization's plans to continue reducing emissions from mobile sources:**I. Over the medium-term term (1-5 years)**

Per CNC policy:

The most efficient and economical mode of transportation shall be used. Consideration should be given to methods of travel that mitigate the production of greenhouse gas emissions. College vehicles may be available for use when travel by road is more economical. Employees are expected to carpool where practical to minimize costs and the production of greenhouse gas emissions.

II. Over the long term (6-10 years)

Per CNC policy:

The most efficient and economical mode of transportation shall be used. Consideration should be given to methods of travel that mitigate the production of greenhouse gas emissions. College vehicles may be available for use when travel by road is more economical. Employees are expected to carpool where practical to minimize costs and the production of greenhouse gas emissions

c) 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: 3

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

-Flexibility for long distance driving is a requirement.

-Robust operation in sub-zero temperatures is a requirement for our fleet vehicles.

-Availability of fueling stations.

d) 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: 0

How many level 3 stations (if any) are specifically for your fleet vehicles: 0

e) How many EV charging station(s) did you install in 2018 in each category:

level 2: 0

level 3: 0

How many level 2 stations (if any) were installed specifically for your fleet vehicles: 0

How many level 3 stations (if any) were installed specifically for your fleet vehicles: 0

f) Other actions, please describe briefly (e.g. charging station feasibility studies, electrical panel upgrades, etc.)

We conducted a charging station feasibility study in 2017.

4. Please indicate the number of the vehicles in the following vehicle classes that are in your current fleet (including any purchased in 2018):

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)

a) 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: 13

b) 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: 2

c) 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: 2

5. Please indicate the number of the vehicles you plan to replace in your fleet:

How much do you budget per LDV?: 30

How many LDVs do you plan to procure annually over the next 5 years?: 1

How much do you budget per LDT?: 0

How many LDTs do you plan to replace annually over the next 5 years?: 0

How much do you plan to spend per HDV?: 0

How many HDVs do you plan to replace annually over the next 5 years?: 0

C. Office Paper: Indicate which actions your PSO took in 2018:**6. Actions taken by your organization in 2018 to support emissions reductions from paper supplies.****a) Do you have an Office Paper strategy?**

Yes

I. If yes, what are its goals?

Reduce paper usage through a number of innovations, including pay-per-use.

b) Whether you have a strategy or not (6.a), briefly describe your organization's plans to continue reducing emissions from paper use:**I. Over the medium-term (1-5 years)**

- Increasing the use of electronic documents.
- Increasing paper recycling.

II. Over the long term (6-10 years)

Same as 6 b) i:

- Increasing the use of electronic documents.
- Increasing paper recycling.

c) Have an awareness campaign focused on reducing office paper use

No

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

No

e) Other actions, please specify.

n/a