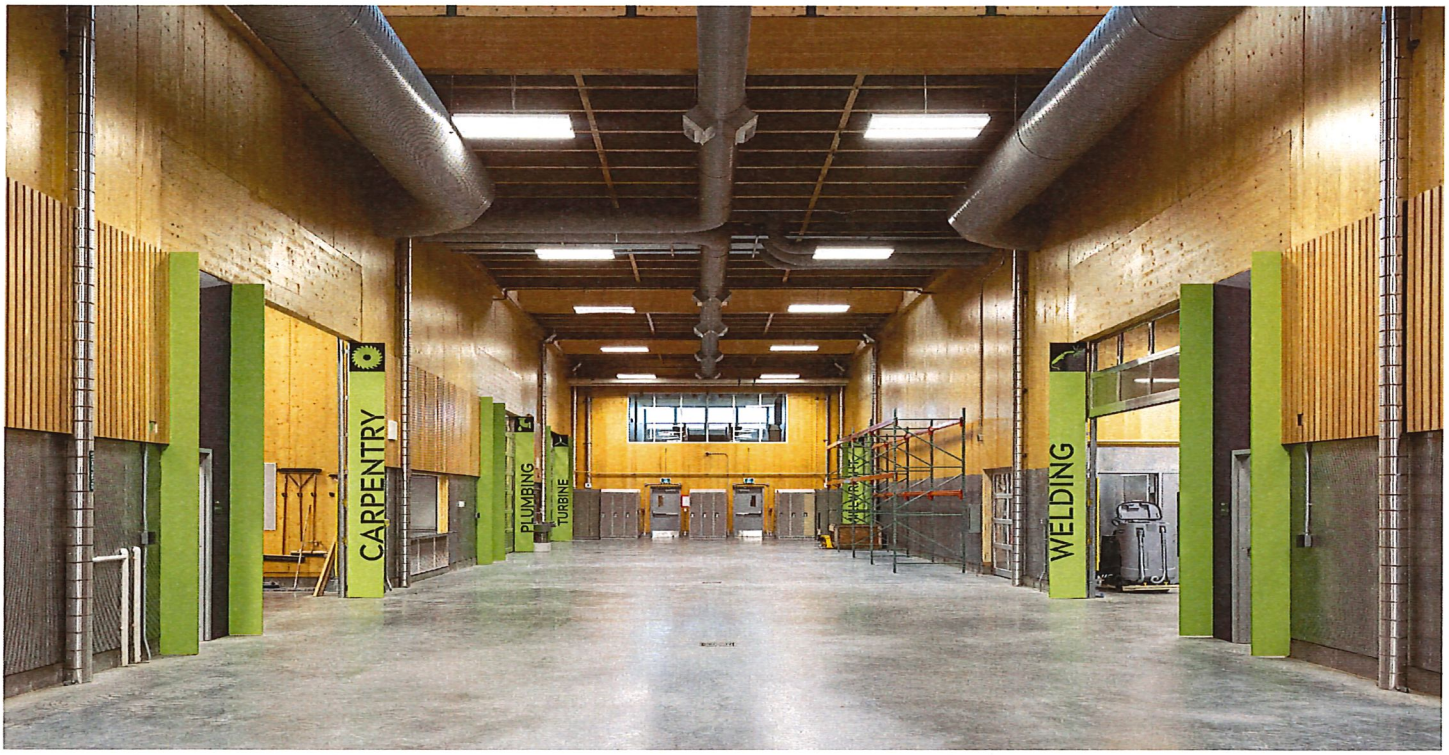
2018 Carbon Neutral Action Report

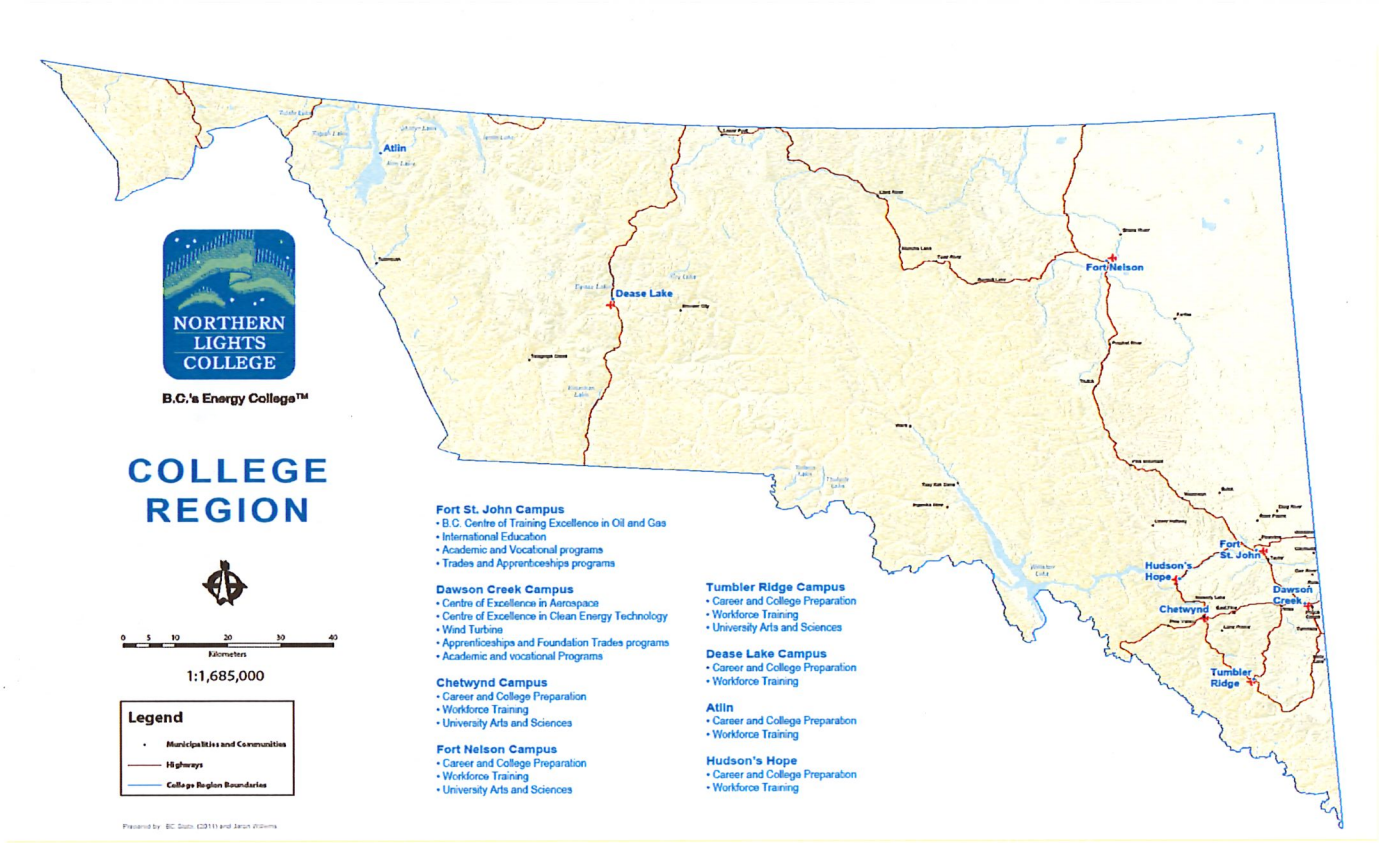
Northern Lights College



This Carbon Neutral Action Report for the period January 1st to December 31st, 2018 summarizes our emissions profile, the amount of offsets purchased 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.

Overview/Executive Summary

Northern Lights College continues with our commitment towards carbon neutrality. We are continuing to focus on building improvements with energy audits and upgrades throughout all of our locations in Northeastern British Columbia.



Key Actions Taken in 2018 to Reduce Emissions:

Buildings

- Indoor lighting is continuously being retro fitted with LED in all areas of the College and its Campus's (will continue throughout 2019 and beyond).
  The Dawson Creek Campus is about 95% complete and we are now working on the Fort St John and Chetwynd Campus's.
- Continue to replace faucet fixtures with more energy efficient models, thus helping to ensure water savings.
- Continued to upgrade inefficient doors and windows
- Continued to clean venting ducts to improve efficient airflow in buildings. By cleaning these vents, it also helps the health of staff as we can then help ensure that there is less dust being introduced to areas.
- The new Gold Leeds standard Trades Training Centre completed with new upgraded equipment and building materials.

Fleet

- We have upgraded most fleet vehicles to more efficient ones, to reduce emissions
- Northern Lights College is looking into how well hybrid models of vehicles work in colder climates for future purchasing considerations
- Encourage car pooling

Other Items

- Northern Lights College continues to use recycled copy paper and when not available uses "FSC Certified" paper
- Northern Lights College is seeking ways to reduce the use of paper by copying 2 sided, and making applicable resources "paperless"
- We have collaborated with Waste Management and are hosting "how to recycling" lunch and learn sessions for staff and students
- Our Janitorial Department continues to use environmentally friendly cleaning products

Carbon Neutrality Linked to NLC's Mandate

We continue to practice and promote principles that protect and sustain our natural environment, for Students, Programing, People and Cultures.

Broader Sustainability Goals for NLC for 2019-2020

- Continue to work towards identifying energy saving projects that will reduce our carbon footprint.
- Replacing old water fountains with bottle fillers that keep track of how many times they are used, giving us the availability to see how many bottles are being saved. In 2018 the amount of bottles that were refilled have been over 3000, thus lessening the amount of plastic bottles that either are recycled or just end up in the landfill.
- Smaller plans such as putting up idle free zone signs, using rain barrels to catch water for grounds maintenance, planting more trees to offset C02 levels, using less lights during spring and summer seasons. Educating staff better on how to help lessen their carbon footprint.
- With the decommissioning of older buildings on the Campus, we will look for ways of recycling materials from these buildings as they are being demolished.
- Renovate and upgrade buildings to add better insulation and efficient windows, doors and lighting, for a better insulation factor, which will reduce heating costs and lower the usage of natural resources and also reduce electrical costs
- By continuously upgrading our Video Conferencing we have been able to cut down on driving between Campus's for meetings, thus reducing emissions from vehicles and fuel costs
- We are looking into a compost station on the Dawson Creek Campus as a trial to see how it could help with compostable waste on the Campus, so we can reduce our landfill totals. The compost that comes from that could be used on the Campus for a variety of landscaping purposes.
- Upgrading our heating and cooling controls to more efficiently control temperatures in offices, classrooms and common areas.

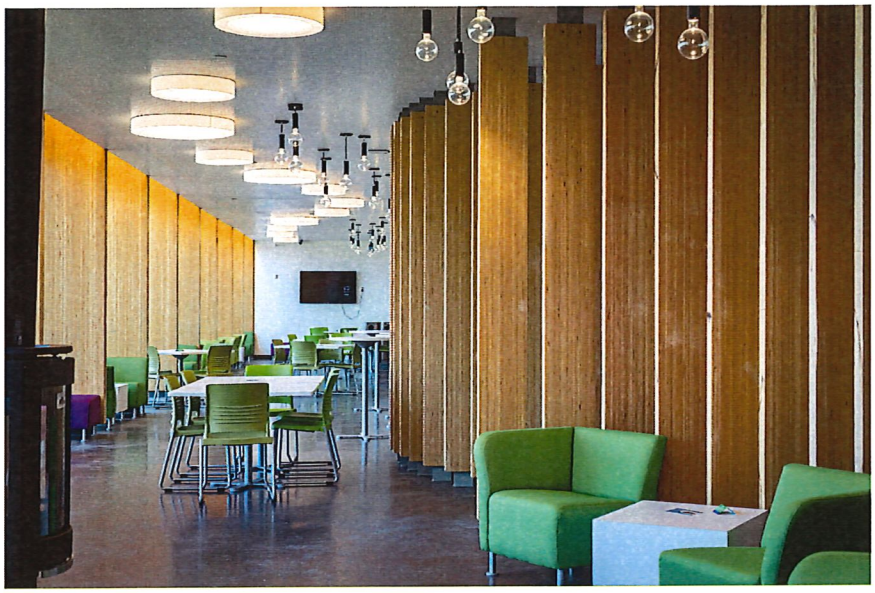
Anticipated Financial, Environmental, or Social Benefits of Reducing Energy Use and/or GHG Emissions

Financial and Environmental – Replacing the old energy intensive facilities with new energy efficient facilities and equipment, the College will lower currently high operational and maintenance costs for existing facilities due to poor building performance, lack of insulation and poorly performing mechanical systems.

The new Trades Training Centre that we moved into in September of 2018 is LEED's Gold standard, which includes using green materials and new upgraded materials to insulate which will reduce the amount of heating and cooler that should be required for that building. The Trades Centre has some interesting features, including a "green roof", which helps to reduce energy consumption and reduce carbon emissions.

Cost and emissions savings will be gained by the upgrading of older fleet vehicles and using video conferencing more for meetings, thus saving the amount of vehicles on the road.

Social Benefits – The new and more efficient Trades Centre building has improved Northern Lights College facilities, which will in turn helps enhance student life, revitalize the Dawson Creek Campus, and improve the College's image and ability at recruitment and retention of students. In the process showing the students, staff and the community some newer building methods, using greener materials, to LEED standards.



By introducing a better recycling program to the Campus's and hosting lunch and learn sessions on recycling, we can show staff and students the benefit of recycling. Possibly, they can then take the knowledge and introduce it into their day-to-day lives.

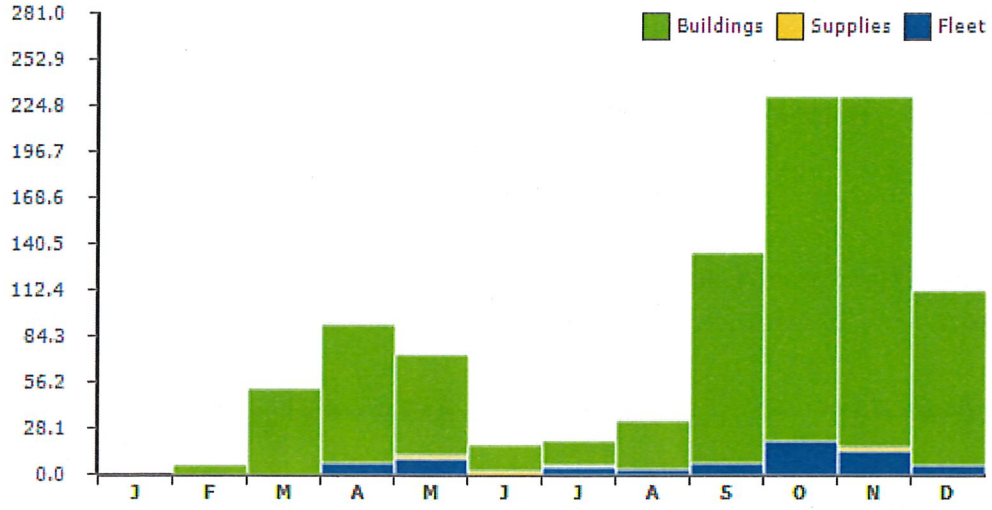
Efforts made to Reduce Emissions and Improve Overall Sustainability

- Continue to complete mechanical and electrical renovations to our existing facilities to reduce our energy consumption.
- Continue to use 100% recyclable copy paper and/or paper that is "FSC-Certified"

- Reduce the amount of cleaning products we use, many of which can be used for multiple applications and switching over to more environmentally friendly supplies.
- Encourage car pooling.

Total Emissions
Calendar Year 2018
Northern Lights College

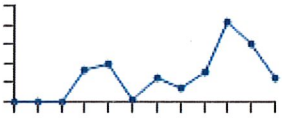
Metric tonnes
CO2 equivalent (tCO2e)



Click on the bars to view data for each month

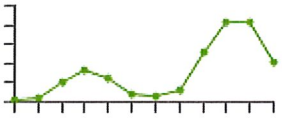
Fleet

GHG Emissions
(Metric Tonnes CO2e)



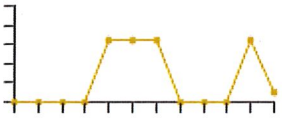
Buildings

GHG Emissions
(Metric Tonnes CO2e)



Supplies

GHG Emissions
(Metric Tonnes CO2e)



Totals Calendar Year 2018, Northern Lights College

			Greenhouse Gases in Tonnes				
	Measure	**Quantity**	**CO_2**	**BioCO_2**	**CH_4**	**N_2O**	**tCO_2e [1]**
Scope 1 (Direct) Emissions							
Mobile Combustion	Litres	32,808.05	73.78	2.53	0.01	0.02	**81.75**

(Fleet)							
Stationary Combustion, Reported [3]	GigaJoules	18,336.93	910.43	0.00	0.02	0.02	**915.93**
Scope 2 (Indirect) Emissions							
Purchased Energy, Reported [3]	GigaJoules	6,989.30	20.97	0.00	0.00	0.00	**20.97**
Scope 3 (Business Travel and Office Paper) Emissions							
Office Paper	Packages	1,660.00	10.55	0.00	0.00	0.00	**10.55**
Total Emissions, Calendar Year 2018			**1,015.74**	**2.53**	**0.03**	**0.03**	**1,029**
Carbon Neutral or Offset Exempt			**0.00**	**2.53**	**0.00**	**0.00**	**3**
Total for Offsets[4]			**1,015.74**	**0.00**	**0.03**	**0.03**	**1,027**

1. Each greenhouse gas has been converted to a standard measurement (tCO_2e) by multiplying its emissions by its global warming potential (GWP). The GWP of carbon dioxide (CO_2) from both anthropogenic and biogenic sources is 1; methane (CH_4) is 25, and nitrous oxide (N_2O) is 298. The Totals for tCO2e are shown here rounded to the nearest whole metric tonne as only whole tonnes of tCO2e can be purchased for offsets.
2. Estimated data has been calculated based on the methods described in the Methodology Document.
3. Reported data refers to consumption which has been directly billed to the organization.
4. The tCO_2e value from the "Total for Offsets" line represents the quantity of offset purchases required to become carbon neutral.

Executive sign-off:

Andrea Graff	May 13, 2019
Signature	Date
Andra Graff	VP Finance: Corporate Services
Name (please print)	Title

Part 1: CNAR Survey

1. General Information

Name: Jason Krauchi

Contact Email: jkrauchi@nlc.bc.ca

Organization Name: Northern Lights College

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: Yes

Facilities/Operations Manager/Coordinator: Yes

CEO/President/Exec Director: No

Treasurer/Accounting: No

Superintendent: No

Other - Please Specify: Vice President Finance and Corporate 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?: As of right now Northern Lights College is in the process of decommissioning and/or demolishing older less efficient buildings that are very old.

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)

Within the next 5 years we will have demolished 3 older buildings that are no longer in use and thus reducing emissions from out dated equipment. We will also be re purposing as much of the materials in the buildings that will be demolished as possible reducing the amount that goes to the landfill sites. We will continue to retro fit and change out older less efficient doors, windows, lighting and heating and cooling systems for more energy efficient ones.

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

Do not currently have any formal strategic goals related to energy audits.

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.

Northern Lights College is in the process of retrofitting all lighting to LED in all buildings on our various Campus's. We are also looking at the windows and doors to see where there may be issues in relation to heat loss. There are also older boiler have been replaced and others that are being looked at.

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.) (%): 50

Major retrofits (e.g., replacing windows and doors, equipment replacement such as boilers, etc.) (%): 25

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.) (%): 25

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

Re-commissioning basement area in Campus Centre on the Dawson Creek Campus, area completely demolished and will be re commissioned during the fiscal year 18-29

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

No

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

No

g) How many newly constructed buildings received at least LEED Gold certification in 2018: 1

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?

Yes

I. If yes, what are its goals?

Northern Lights College has and is in the process of replacing older Fleet vehicle with newer, more efficient ones. As our Campus's are not close together we encourage car pooling and video conferencing to help reduce the emissions from our fleet

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)

We will continue to replace older fleet vehicles and equipment with new more efficient models and continue to encourage car polling. We are upgrading our video conferencing equipment on all Campus's to ensure better quality and easier access as to fleet vehicles on the roads.

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

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?

As our Campus's are in various cities and towns across remote Northern BC and with the colder climates many of the electric type vehicles are not always reliable up here. There are also limited charging stations in smaller communities, for example Tumbler Ridge Dease Lake, Atlin, and Fort Nelson. There is also a higher cost in purchasing other categories of vehicles.

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

level 2: 1

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)

Gas/diesel: 12

b) Light duty trucks (LDTs)

Gas/diesel: 9

c) Heavy duty vehicles (HDV)

Gas/diesel: 3

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

How many LDVs do you plan to procure annually over the next 5 years?: 2

How many LDTs do you plan to replace annually over the next 5 years?: 1

How many HDVs do you plan to replace annually over the next 5 years?: 2

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?

We encourage double sided printing and the use of electronic storage for all files.

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)

Northern Lights College is in the process trying to have each Department keep electronic files instead of paper files when possible.

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

No

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

No