



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 Selkirk College's final Carbon Neutral Action Report will be posted to our website at selkirk.ca

OVERVIEW

ACTIONS TAKEN IN 2018

Selkirk College is committed to implementing practices that promote a healthy natural environment and climate change mitigation in teaching practices, administration, programming, facilities and operations, funding allocations and applied research priorities. Selkirk is dedicated to developing and supporting college-wide and regional solutions to environmental remediation, cleaner transportation, lowered emissions, and waste reduction. During 2018, the College continued to take action towards reducing its carbon emissions with the goal of achieving carbon neutrality.

Renovations at Selkirk's Silver King campus continued throughout 2018. The new carpentry shop, which meets LEED Gold standards (pending final review), opened in September to serve students of our popular Carpentry Program. Renovations to trade shops on the campus included state-of-the-art efficient air handlers with variable speed drives to minimize energy consumption (targeting LEED Silver pending final review).

The new Student Commons Building at Silver King campus has also opened. This new construction meets LEED Gold standards (pending final review), and provides a space for the campus's cafeteria, administration offices, library and bookstore, as well as a large gathering area with study space.

Building control strategies were implemented at Selkirk's Kootenay School of the Arts in Nelson during 2018 to realize low cost energy savings. These recommendations had been identified within the most recent energy audit for this campus. Nearly all lighting in the Castlegar campus gymnasium has now been upgraded to modern, energy efficient LED technologies. Lighting improvements continue College-wide.



Figure 1. The Silver King Campus Student Commons building provides a large gathering area with study space for students.

Figure 2. Members of the Sustainability Committee provide outreach to students and staff.



During the fall of 2018, Selkirk College began utilizing Prism Engineering's online utility software, PUMA (Prism Utility Monitoring and Analysis). This online energy management software now tracks energy use at our main Castlegar campus and at our three campuses in Nelson, allowing us to see historical trends, and set and meet targets.

In February, Selkirk hosted its second annual Sweater Day events on multiple campuses. The heat in campus buildings was turned down and students and staff were encouraged to wear their sweaters to keep warm and show their support for energy conservation. On the Castlegar campus, we save 8.2 gigajoules (GJ) of energy, amounting to nearly 25% savings for just one day.

SUCCESS STORIES

OVERALL INITIATIVES WHICH TIE IN WITH GHG EMISSION REDUCTIONS

Waste Reduction and Diversion

In summer 2018, new recycling stations were installed on Castlegar and Silver King campuses. The formalization and consistency of Selkirk's three waste streams has contributed to increased awareness and participation in waste diversion initiatives. After an initial learning curve, our recycling stream has shown less contamination. We continue to work to reduce our use of single-use items and of those items that are challenging and costly to recycle.

The compost program at Castlegar campus continued through 2018, diverting nearly 2000 kilograms of organic waste from the landfill.

Transportation

In December 2018, the Selkirk College Maintenance Department purchased a Chevrolet Bolt electric vehicle to replace an aging cargo van in the fleet. Selkirk will continue to place an emphasis on electric vehicles for future purchases when they suite the tasks required.

The College's carpool program expanded during the fall of 2018, with an increase in registrations and additional carpool spots installed at both the Castlegar and Silver King campuses. Bike to College events were held in both the spring and fall of 2018, encouraging students and staff to choose this alternative mode of transportation.

Outreach

Selkirk continues to nurture a culture of sustainability on campus. The College's student-based Environment Club plays an active role promoting sustainability on campus. During 2018, they carried out a waste audit, hosted several environmental documentary film screenings and volunteered in the community. Selkirk also continues to initiate and strengthen relationships with community groups working hard on climate action.



Figure 3. New recycling and waste stations streamlined Selkirk's waste diversion program.

Figure 4. Selkirk's new Chevrolet Bolt is the latest green addition to the College's fleet.

Figure 5. Dedicated members of Selkirk's student-based Environment Club assist in providing outreach on Selkirk's recycling program.

PLANS TO CONTINUE REDUCING EMISSIONS IN 2019 AND BEYOND

Selkirk College will continue to work towards carbon neutrality throughout 2019.

Projects will include:

- Feasibility study for solar installation at Castlegar campus
- Upgrades to energy efficient lighting technologies in Castlegar campus library
- Installation of recycling and waste units at all remaining campuses and learning centres
- Energy conservation campaign directed at staff during heating season
- Paper reduction campaign for staff and students

EMISSIONS AND OFFSETS SUMMARY:

Selkirk College GHG Emissions and Offsets for 2018 (tCO₂e)

GHG Emissions created in Calendar Year 2018

Total Emissions	1,162
Total BioCO ₂	1.38
Total Offsets (tCO ₂ e)	1,161

Adjustments to GHG Emissions Reported in Prior Years

Total Emissions	76
Total Offsets	76

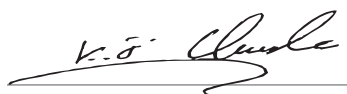
Grand Total Offsets for the 2018 Reporting Year

Grand Total Offsets Required	1,237
Total Offset Investment	\$30,925

RETIREMENT OF OFFSETS

In accordance with the requirements of the Greenhouse Gas Reduction Targets Act and Carbon Neutral Government Regulation, Selkirk College (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.

EXECUTIVE SIGN-OFF



SIGNATURE

May 21, 2019

DATE

Kerry Clarke

Vice President, College Services, CFO

NAME (PLEASE PRINT)

TITLE

Part 1: CNAR Survey

1. General Information

Name: Laura Nessman

Contact Email: lnessman@selkirk.ca

Organization Name: Selkirk 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: Yes

Administrative Assistant: No

Facilities/Operations Manager/Coordinator: No

CEO/President/Exec Director: No

Treasurer/Accounting: No

Superintendent: No

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?: - Continue to switch to energy efficient lighting

- Improving efficiency of existing heating and cooling systems

- Fuel switching initiatives

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)

- Solar generation at Castlegar campus

- Assessment of next technologies to implement at our Castlegar campus to further reduce GHG

- Installation of a biomass boiler at our Silver King Trades campus

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

- Fuel switching initiatives at Castlegar and Tenth Street campuses

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

- New building construction will include provisions to make the buildings net zero energy ready.

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.) (%): 5

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.) (%): 1

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

- Recommission studies every 5 years or less, depending on changes to buildings.

I. What % on average of your building portfolio do you recommission each year?: 5

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

No

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

n/a

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?: 0

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

- New Student Commons Building on the Silver King campus (1611 square metres) has been built to LEED Gold standards (pending final review)

- Renovations to carpentry shop on Silver King campus meet LEED Silver standards (pending final review).

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

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)

- Continue to encourage staff and faculty to use video conferencing and teleconferencing whenever feasible.

Upgrade IT

infrastructure at our satellite campuses to enable this technology

- Continue to promote regional rideshare and carpool programs

- Continue to consider electric options when purchasing new fleet vehicles

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

- Convert maintenance and School of Environment and Geomatics fleet to electric vehicles

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

Electric Vehicle – EV - (e.g., Nissan Leaf, Chevy Bolt): 1

“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: 0

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

level 2: 1

level 3: 0

How many level 2 stations (if any) are specifically for your fleet vehicles: 1

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: 1

level 3: 0

How many level 2 stations (if any) were installed specifically for your fleet vehicles: 1

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

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): 1

“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: 0

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: 15

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: 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?**

No

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)**

- Come September, Selkirk will be implementing printing charges on all remaining campuses
- In Spring 2019, new printers/copiers were installed College-wide. As part of this roll-out, there will be a focus on reducing paper use, which will include education and awareness around how much paper the College is currently consuming
- Will be working to increase recycled paper content
- Continue to decrease the number of printed materials and turn to more digital formats
- Develop policy/written procedures for paper purchasing

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

- Continue to decrease the number of printed materials and turn to more digital formats

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

No

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

No