



2019 CARBON NEUTRAL ACTION REPORT



EXECUTIVE SUMMARY for School District No. 51 (Boundary)

- This Carbon Neutral Action Report for the period January 1st, 2019 to December 31st, 2019 summarizes our emissions profile, the total offsets to reach net-zero emissions, the actions we have taken in 2019 to reduce our greenhouse gas emissions and our plans to continue reducing emissions in 2020 and beyond.

By June 30, 2020, School District 51's final *Carbon Neutral Action Report* will be posted to our website at www.sd51.bc.ca.

- SD51 Board of Education continues to believe that we should all be lifelong learners, and as a District we try to cultivate as well as teach a respect for our environment that will follow our students into adulthood. We believe that the District and its schools have a unique opportunity to reinforce positive environmental concepts, that will enhance the relationship between living things and their natural and built surroundings.

OVERVIEW OF ACTIONS TAKEN IN 2019

In 2019 School District No. 51 continued to strive to improve our efficiencies and help reduce our footprint.

The actions we took in 2019 that had the most impact increasing our efficiencies were the:

- Replacement of all windows and exterior doors at Hutton Elementary School
- Upgrades to the HVAC system at Boundary Central Secondary School.

In addition we:

- completed washroom upgrades at Grand Forks Secondary and Boundary Central Secondary Schools.
- continued to work on the building envelope upgrades at West Boundary Elementary.
- completed auditorium lighting upgrades at Grand Forks Secondary.
- replaced roofing on the Technology Building and Perley Elementary portable
- Installed three (3) high efficiency heat pumps and furnaces at the Technology Building and Grand Forks Secondary art room and server room.

(Continued)

- Replaced older photocopiers/printers with more printing controls and monitoring
- We are supporting a “Re-wilding Project” at Perley Elementary and are excited to see this continue to develop and the enthusiasm of the students as they pour into this project.

We are committed to being responsible environmentally, and the District will continue to look for opportunities through a continuous improvement approach to energy management.

PLANS FOR REDUCING EMISSIONS IN 2020

In 2020, School District 51 plans to continue to find ways to move forward with energy saving upgrades. Several projects are in the queue:

- Continued work on air balancing and upgrades to the HVAC system at Boundary Central Secondary School.
- Centralized climate control systems on all facilities.
- HVAC room unit upgrades to match the upgraded low temperature boilers
- Irrigation water consumption reduction with control system
- Completion of LED change over and lighting controls



- Windows and doors upgrades
- Weather stripping older doors
- Water efficiency through plumbing upgrades to reduce leaks
- Reducing travel time with maintenance crews.
- Replacement of older less efficient vehicles with newer hybrid or electric vehicles.
- Continue to monitor paper use and as well as increase electronic meetings

2019 GREENHOUSE GAS EMISSIONS AND OFFSETS APPLIED TO BECOME CARBON NEUTRAL

School District No. 51 (Boundary) GHG Emissions and Offsets for 2019

As per the [Directive](#) issued March 31, 2020, each PSO will use their 2018 GHG Emissions as a placeholder for the purposes of their 2019 CNAR.

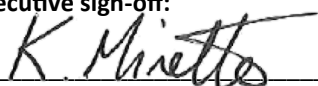
[See the Appendix for instructions on how to access your 2018 emissions data from the Clean Government Reporting Tool (CGRT).]

Total Emissions (tCO ₂ e)	893.9
Total BioCO ₂	10.9
Total Offsets (tCO ₂ e)	659
Offset Investment (\$25 per tCO ₂ e) <i>[Total Offsets x \$25/tCO₂e]</i>	\$16,475

Retirement of Offsets:

In accordance with the requirements of the Greenhouse Gas Reduction Targets Act and Carbon Neutral Government Regulation, *School District No. 51 (Boundary)* (**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. 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 29, 2020

Signature

Date

Ken Minette

Superintendent of Schools

Name (please print)

Title

Confirmation number: 00BAE3D0

Submitted date: 2020-06-22 10:08:55 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. <p>*Deadline extended from May 29, 2020.</p> <ul style="list-style-type: none"><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:

Charlene Wiebe, Executive Assistant

Contact Email:

charlene.wiebe@sd51.bc.ca

Organization Name:

School District No. 51 (Boundary)

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:

Administrative Assistant

Please select your sector:

School District (SD)

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?

Yes

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)

SD51's plan to continue reducing emissions from stationary sources over the medium-term include:

- HVAC low temperature boiler upgrades
- HVAC room unit upgrades to match the upgraded low temperature boilers
- Weather stripping older doors
- Windows and doors upgrades
- LED lighting upgrades
- Water efficiency through plumbing upgrades to reduce leaks

Over the long term (6-10 years)

SD51's plan to continue reducing emissions from stationary sources over the long-term include:

- HVAC room unit upgrades to match the upgraded low temperature boilers
- Irrigation water consumption reduction with control system
- Completion of LED change over
- Lighting controls

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

Currently SD51 is comparing energy consumption between buildings in order to identify areas that may need further investigation for energy efficiency.

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

I am new to the position, and therefore we are laying out the auditing process.

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

One of our strategies is to check the quantity surveys for insulation value in the facilities and ensure that they have the appropriate amount of R-value.

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

*1% minor retrofits upgrading lighting;
2% major retrofits upgrading windows and doors, HVAC, and some leaking faucets;
4% deep retrofits with roof replacements.*

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

When lighting fixtures show signs of fatigue or they burn out we try to change to LED.

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

Replaced all the windows and doors at one of the Elementary schools.

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.)

Replaced roofing on the Technology building and the Perley Elementary portable. We also installed 3 high efficiency heat pumps and furnaces in the: Technology building, Grand Forks Secondary school art room as well as their server room.

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

Working on air balancing and upgrading the HVAC system at Boundary Central Secondary school (BCSS). We are also working toward centralized climate control systems on all facilities.

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

0%-3% on average

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.

None at this time

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

0 - No new buildings

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

0 - No new buildings

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

N/A

Other actions? Please describe briefly:

None at this time

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?

Yes

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)

Reducing travel time with maintenance crews. Replacement of older less efficient vehicles with newer hybrid or electric vehicles.

Over the long term (6-10 years)

Make the transition with maintenance vehicles and start changing/replacing buses to electric or hybrid.

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

0

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

No new fleet vehicles and the two buses that we purchased were diesel with purchasing group. Looked at electric buses but need to put in the infrastructure to support that transition.

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.)

0

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

0

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

3

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

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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)

We will continue to monitor paper use as well as increase holding electronic meetings.

Over the long term (6-10 years)

Nothing at this time.

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

No

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

No

Other 2019 actions, please specify

Replaced older photocopiers/printers with more printing controls and monitoring