



Langley
Schools

School District No.35
(Langley)

2019 Carbon Neutral Action Report

Published: June 30, 2020

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Declaration Statement

This Carbon Neutral Action Report (CNAR) for the period from January 1 to December 31, 2019 summarizes our emissions profile, the amount of offsets purchased to achieve net zero emissions, the action we have taken in 2019 to reduce our greenhouse gas (GHG) emissions and our plans to continue reducing emissions in 2020 and beyond.

Overview

On behalf of School District No. 35 (Langley), we are pleased to submit our CNAR for 2019. The purpose of the CNAR is to demonstrate our District's ongoing commitment to the reduction of our greenhouse gas emissions. Our Board continues to work diligently to improve the learning environment for students and staff while reducing our carbon footprint.

In 2019, we retrofitted all interior lights to LEDs at Aldergrove Community Secondary, D.W. Poppy Secondary and Brookwood Secondary; and completed a continuous optimization program at Walnut Grove Secondary. These projects resulted in over 310,000 kWh savings. This was also the year of opening a new high school. By designing the school for high energy efficiency and low carbon emissions the annual energy savings were over 42% with CO₂ emissions over 60% lower compared to benchmark buildings.

In 2020, we plan to upgrade interior lighting at our largest high school – Walnut Grove Secondary and perform continuous optimization programs at Aldergrove Community Secondary and North Otter Elementary. In addition, plans for a new elementary school are underway with high energy efficiency and low carbon emissions as part of the design criteria.

Our District is committed to GHG emission reduction and carbon neutrality through energy efficiencies and reduction of waste. This is reflected in our Sustainable Energy Management Plan and renewal of Administrative Procedure 546. We invest what we can to create a positive legacy for the future.



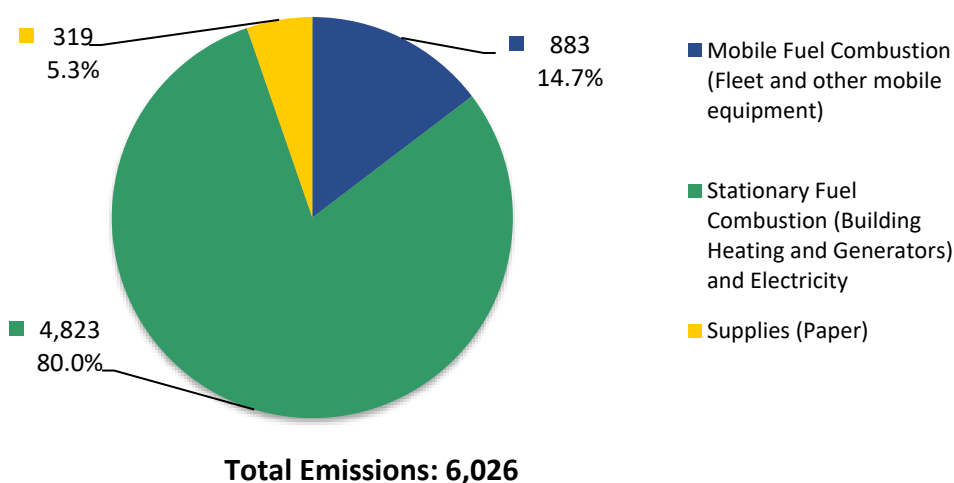
Gord Stewart
Superintendent of Schools

May 5, 2020

Emissions and Offsets Summary Table

School District No. 35 (Langley) 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.	
Total Emissions (tCO ₂ e)	6,025.7
Total BioCO ₂ (tCO ₂ e)	29.7
Total Offsets (tCO ₂ e)	5,525
Offset Investment (\$25 per tCO ₂ e)	138,125

Greenhouse Gas Emissions by Source for the 2019 Calendar Year (tCO₂e)



Retirement of Offsets

In accordance with the requirements of the Greenhouse Gas Reduction Targets Act and Carbon Neutral Government Regulation, School District No. 35 (Langley) (**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.

Actions Taken to Reduce Greenhouse Gas Emissions

- Three lighting upgrades completed
 - Aldergrove Community Secondary
 - Brookwood Secondary
 - D.W. Poppy Secondary

- One continuous optimization programs completed
 - Walnut Grove Secondary
- Two mechanical studies
 - H.D. Stafford Middle
 - Noel Booth Elementary

- Strategic Energy Management Plan outlines roadmap for reducing GHG emissions
- Administrative Procedure 546 shows District Leadership’s commitment to reducing GHG emissions
- New schools are designed to be energy efficient
- Heat pumps have priority in portables
- Behavioral programs to reduce energy consumption across the district
- Paperless work order system planned that will reduce our carbon footprint
- Feasibility study for retrofitting external lighting to LEDs
- Organic waste redirection

Confirmation number: 00C2750E

Submitted date: 2020-06-16 09:37:11 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:	Ronald Lam
Contact Email:	rlam@sd35.bc.ca
Organization Name:	School District No.35 (Langley)
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: Energy Specialist
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)
<i>Retrofit end of life equipment with efficient equipment e.g. replace atmospheric boilers with high efficiency condensing boilers.</i> <i>Integrating recommissioning and optimization of the energy consuming systems into the preventative maintenance schedule.</i> <i>Policies that favor heat pumps as primary sources for heating where possible including in new construction and portable classrooms.</i> <i>New construction proposals to include net zero energy options as per Ministry of Education requirements.</i>

Over the long term (6-10 years)

More emphasis on low carbon electrification which will lead to higher electrical consumption and much lower natural gas consumption.

Retrofits for heating equipment will emphasize on reducing carbon emissions while increasing efficiency.

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

Energy audits identifies which systems are candidates for retrofits or control upgrades or tuning.

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

20%

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

Building retrofits will be the path towards reaching our strategic goals as it is unrealistic to replace existing buildings with completely new buildings.

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

3

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

1

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.)

0

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

Increase the number of recommissioning projects as these have good payback and can reduce energy and emissions by operating equipment more efficiently.

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

5%

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.

Yes

If yes, have you quantified and reported the associated emissions? What, if any, mitigation approaches have been considered? Please describe

The purchased amount of refrigerant have been quantified and recorded. Mitigation for leakage is primarily done through preventative maintenance.

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?

1

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

The building completed was LEED Gold certification ready but there was no need to go through with certification as this would have increased cost for the building.

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)

*Ensure the requirements are updated when replacing vehicles
Explore electrification options*

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

4

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

*-standardization of fleet and associated costs of software/tooling
-cargo dimension requirements
-GVW and towing capacities
-models not available in alternative fuel sources as per above
-no infrastructure in place to support purchases at this time*

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.)

charging station feasibility studies

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

2

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

5

Gas/diesel

2

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

5

Gas/diesel

54

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 long term (6-10 years)

District has implemented user tracking software on all copier/ print devices to provide visibility on each user including "individual's use budget" to encourage annual reduction in paper use, and move to digital solutions. COVID pandemic has assisted in accelerating move to digital processes and reduction in use of paper. Implemented Cloud based software solutions including file management and document storage and access; digital signatures and online fillable forms.

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

Implemented online remote work and instructional programs, including Microsoft TEAMS and ZOOM.