

School District 79 (Cowichan Valley) 2019 Carbon Neutral Action Report



Declaration statement

This is the 2019 Carbon Neutral Action Report for School District 79 Cowichan Valley. This report is for the period January 1st to December 31st, 2019 summarizing our emissions profile, the actions we have taken in 2019 to reduce our GHG emissions, the amount of offsets purchased to reach net zero emissions and our plan to continue reducing emissions in 2020 and beyond.

By June 30, 2020 School District 79 Cowichan Valley's final CNAR will be posted to our website at www.sd79.bc.ca.

Executive Summary

The Cowichan Valley School District is continuing to work towards reducing their Greenhouse Gas emissions. The actions of the school district have a tremendous impact on the community it serves. In 2009, the district adopted a policy on Resource Management and Sustainability and formed a Sustainability Committee whose mandate was to deal with issues that contribute to the district's carbon footprint. The district adopted long-term reduction goals, which fall in line with the BC Energy Plan and Bill 44-2007: Greenhouse Gas Reduction Targets Act.

Due to reduced energy consumption over the past 11 years, Cowichan Valley School District's electrical consumption was down by 39% and natural gas consumption was down by 29% for the 2018/19 school year compared to the 2007/08 school year. As well, Cowichan Valley School District has been making an effort to switch to cleaner energy sources, which has resulted in a large reduction in Greenhouse Gas emissions. These efforts are noticeable all across the district influencing students and staff to become more aware of environmental issues. Cowichan Valley School District continues to upgrade and optimize mechanical systems, which have significantly reduced the district's carbon footprint. In 2019, the district continued with its window and building envelope projects. Another major project was completing the installation of heat pumps for all of the district's portables. These projects have a large impact on occupant comfort and heating energy consumption. The district continues to optimize bus routing to minimize bus runs and driving distances. The district has also continued to do exterior lighting upgrade projects.

2019 Greenhouse Gas Emissions

School District 79 Cowichan Valley 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)	2134
Total BioCO ₂	33.6
Total Offsets (tCO ₂ e)	1783
Offset Investment (\$25 per tCO ₂ e)	\$44,575

Offsets Applied to Become Carbon Neutral in 2019

As per the directive issued on March 31, 2020, the 2019 offsets are based on 2018 total offsets as reported in the Clean Government Reporting Tool (CGRT). Any variation between this 'placeholder' total and the actual 2019 total offsets will be reflected in the 2020 offset invoice, along with any annual prior year adjustments made to 2018 or earlier reporting years.

The total GHG Emissions required to be offset to become Carbon Neutral for 2019 was 1,783 tonnes CO₂e. This resulted in a charge of \$44,575.00 plus GST making it a total payment of \$46,803.75.

Retirement of Offsets

In accordance with the requirements of the Greenhouse Gas Reduction Targets Act and Carbon Neutral Government Regulation, School District 79 Cowichan Valley 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 district hereby agrees that, in exchange for the Ministry of Environment ensuring that these offsets are retired on the district's behalf, the district will pay the associated invoice issued by the Ministry in an amount equal to \$25 per tonne of offsets retired on its behalf plus GST.

Emissions Reduction Activities

Actions Taken to Reduce Greenhouse Gas Emissions in 2019

The Transportation Department has continued to work on bus routes. Due to an overall increase of ridership, the actual distance travelled has increased but through efficient routing this increase has been minimized. Anti-idling software has been activated in all buses so they will shut down after 1 minute of idling.

There is an ongoing Building Envelope project at a school that reopened in 2018; this project will continue through 2020 and will enhance occupant comfort and reduce the consumption of heating energy. The Operations Department has undertaken a number of lighting projects across the district to reduce electrical consumption. These lighting projects are exterior and parking lot LED lighting at various schools. Continuous Optimization projects were completed at two facilities which will result in a significant reduction in electricity, natural gas and fuel oil consumption. The district does end-to-end reviews of all HVAC DDC systems annually. This identifies and corrects issues that occur throughout the year which cause inefficiencies in the heating systems.

Plans to Continue Reducing Greenhouse Gas Emissions 2020 – 2021

The district will continue to implement projects in an effort to reduce energy consumption and Greenhouse Gas emissions. The district will continue with lighting projects, including the continuation of the installation of exterior and parking lot LED light fixtures at schools across the district.

The district will be completing a major heating plant upgrade at one elementary school as well as the Maintenance Shop and Bus Garage. The heating plants for the Maintenance Shop and Bus Garage will make a large impact toward emissions reduction because they will be replacing oil-fired boilers with heat pumps. The district is also continuing a building envelope project at one site. These projects will have a large impact on occupant comfort and the reduction of heating energy and greenhouse gas emissions.

The district is making plans towards the purchase of their first electric bus with the intention of increasing their fleet of electric buses in future years.

The communication of Energy Efficient and Sustainable practices will continue district wide in an effort to promote the overall awareness of sustainability issues.


Signature


Date


Name (please print)


Title

Confirmation number: 00C01114

Submitted date: 2020-06-03 14:19:29 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:
<i>Brian Branting</i>
Contact Email:
<i>bbranting@sd79.bc.ca</i>
Organization Name:
<i>School District 79 Cowichan Valley</i>
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:
<i>Facilities/Operations Manager/Coordinator</i>
Please select your sector:
<i>School District (SD)</i>

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?
<i>Yes</i>

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>There are currently 2 major boiler replacement projects that will take place in the short term. Any lighting upgrades that take place will include the most energy efficient light fixtures that are practical for the application. Building envelope projects will continue. These projects will improve the insulation of the buildings. The district will be building a new Secondary School to replace an existing building. This building will be built to current energy efficiency standards that are far better than the standards that were in place when the previous building was built.</i>
Over the long term (6-10 years)
<i>For any building upgrades energy efficiency and greenhouse gas emissions will be considered.</i>

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

Energy audits have been performed for the majority of the buildings in the school district. At this time there are no plans to do additional audits.

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

N/A

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

All retrofits are undertaken with a conscious goal of reducing energy consumption and greenhouse gas emissions.

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

20%

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

12%

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

15%

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)?

The district does annual end to end re/retro-commissioning on all it's DDC systems.

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

100%

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.

There is very little use of refrigerant in the district. To this point refilling has not been needed. Due to the fact that many small units that use refrigerant have been installed recently the HVAC department has been instructed to report any occasions where refrigerant needs to be refilled.

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?

0

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

There have not been any newly constructed buildings.

Other actions? Please describe briefly:

N/A

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)

*The main strategy is to minimize travel distances where ever possible.
The district is working on a plan to add an electric bus to it's fleet. This will act as a test case to assess the feasibility of having primarily electric buses.*

Over the long term (6-10 years)

*Continue to minimize travel distances where possible.
Depending on the results of the electric bus trial; purchase alternative fuel low emissions or electric buses when ever a bus is due for replacement.
Purchase alternative fuel low emissions or electric vehicles when replacing Operations fleet vehicles.*

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

2

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

Due to limited budgets the district is limited to the purchase of previously own gas/diesel vehicles.

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.)

None has been done at this point.

In 2020 the district will be doing the ground work to add electric buses and fleet vehicles.

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

3

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

31

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

3

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)

*All paper purchased must contain a minimum of 30% content where ever possible.
The actual goal is to purchase 100% sugar cane waste paper when ever possible. This is the default on our order forms.*

Over the long term (6-10 years)

*Only purchase 100% sugar cane waste paper when ever possible.
Evaluate any new sources of low emissions non-forest paper.*

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

Yes

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

Yes

Other 2019 actions, please specify

*Printers are set up so you must enter a code to receive your printing to avoid lost printing.
Paperless meetings are held whenever possible.*