

2019

Carbon Neutral Action Report



**WEST
VANCOUVER
SCHOOLS**

A world of opportunity

Organization

West Vancouver Schools (School District #45)

The school district draws students from West Vancouver, Bowen Island, Lions Bay and beyond. It is comprised of 14 elementary and 3 secondary institutions.

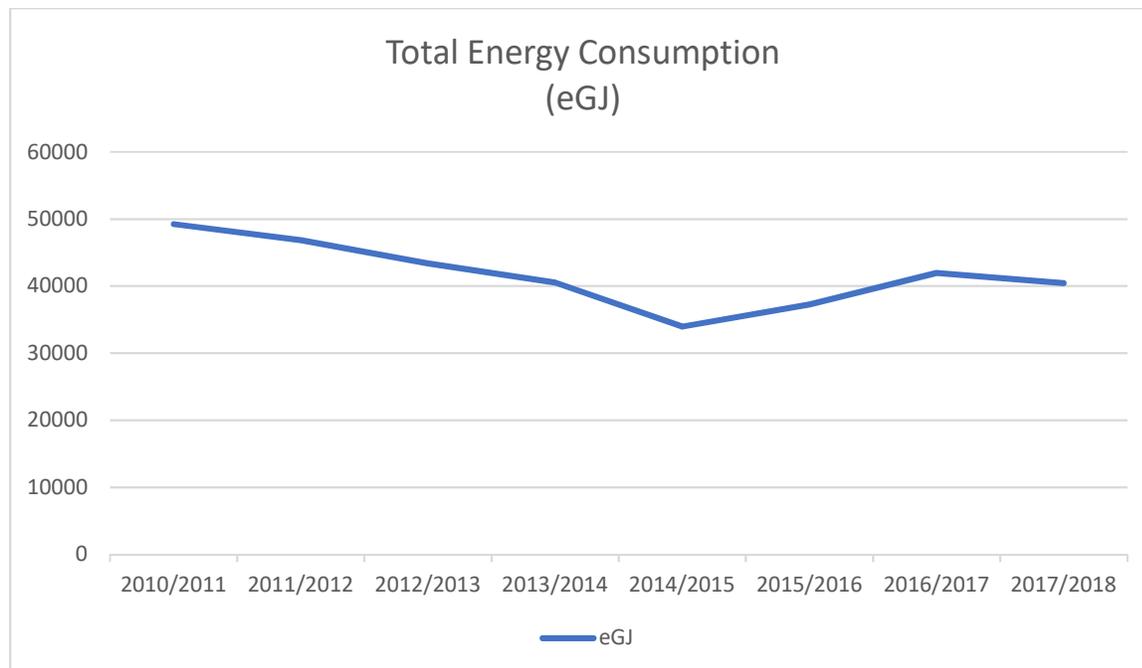
Declaration Statement

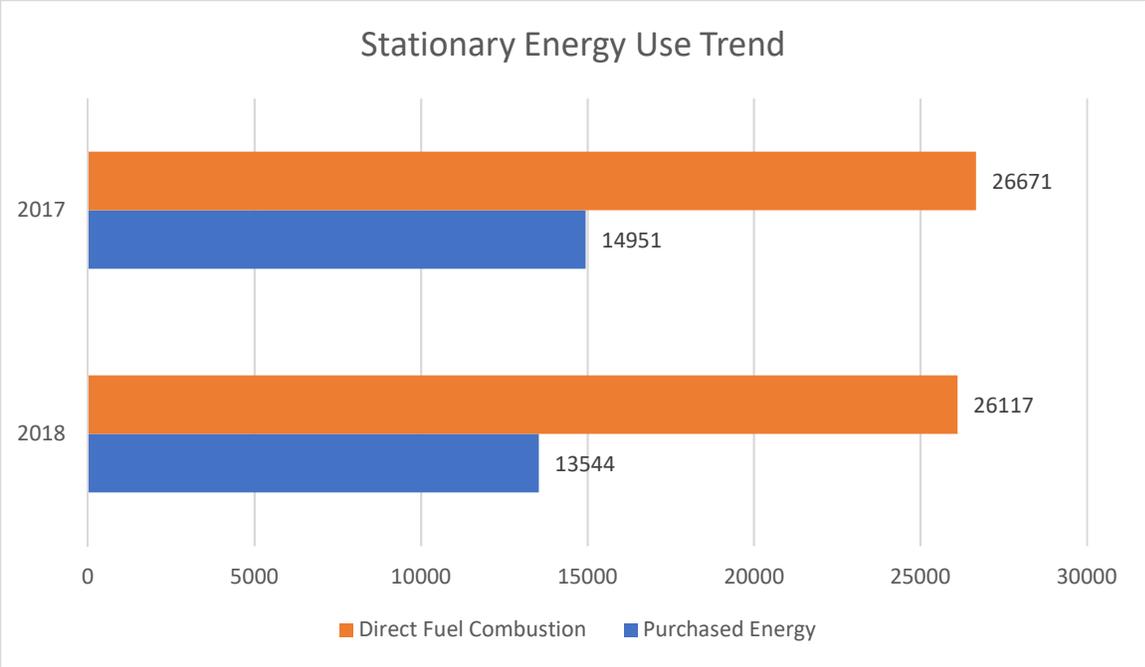
This Carbon Neutral Action Report for the period January 1, 2019 to December 31, 2019 summarizes our emissions profile, the total offsets to reach net-zero emissions, the actions we have taken in 2019 to reduce our greenhouse gas emissions and our plans to continue reducing emissions in 2020 and beyond.

Overview

The Climate Change Accountability Act legislated targets for British Columbia's public sector for reducing greenhouse gases (GHG) and provided a climate change accountability framework. Under the Act, the province's GHG emissions are to be reduced by at least 40 per cent below 2007 levels by 2030, 60 per cent by 2040, and 80 per cent by 2050. To meet these targets, West Vancouver Schools is required to be carbon neutral – involving four specific actions: measuring operation GHG emissions, reducing emissions, offsetting the balance of emissions, and reporting on the school district's actions to reduce emissions.

Over the years, West Vancouver Schools has strived to meet the reduction challenge. The school district's total energy consumption decreased by 18% from 2010 to 2018.





Actions Taken in 2019 to Minimize Emissions

In consultation with an engineering firm, the school district completed phase I of its HVAC renewal for Ridgeview Elementary. Three boilers were replaced with units of a higher 96% Annual Fuel Utilization Efficiency (AFUE).

A similar exercise was completed for Caulfeild Elementary, whereby its boiler was replaced with a unit having a 95.0% combustion efficiency.

At Rockridge Secondary, four furnaces were replaced with units having 95.0% combustion efficiency.

Aside from the energy-efficient HVAC systems, the school district also placed occupancy awareness front of mind as part of its programming during the heating season. Where there are no events lined up for specific spaces (e.g., gymnasiums, etc.), the school district’s HVAC technician adjusts the default schedule of the building systems.

Plans to Continue Reducing Emissions in 2020 And Beyond

West Vancouver Schools’ 2019-2022 Strategic Plan incorporates its commitment to adopting practices to address climate change and sustainability. Such practices include partnerships with organizations such as utility companies, energy management companies, and consultants, that track school energy consumption and identify savings opportunities.

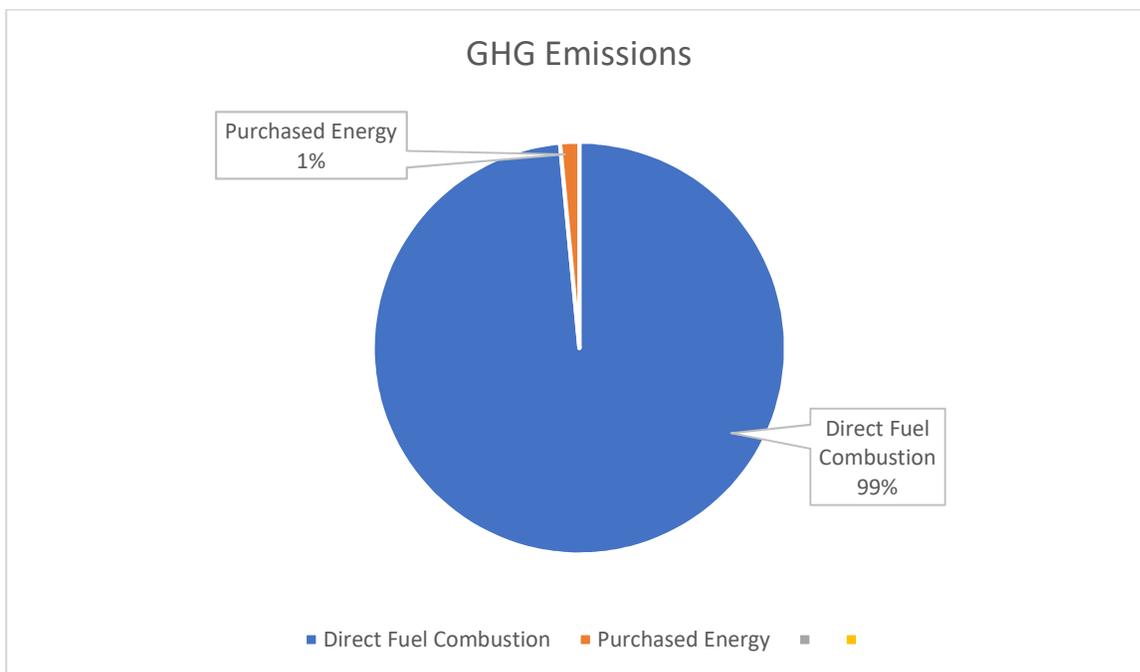
The school district will continue to invest time to find improved operating performance in its facilities and fleet – maintaining an open channel to technology offerings from its suppliers and entrepreneurs.

As part of its maintenance and renewal plan, the school district will build energy savings into its purchasing criteria when replacing building system components. This criterion may be considered integral to the school district's return on investment (ROI).

Case in point is the retrofitting of LED lighting across the school district. Since the completion of the project, electric consumption continues to fall below previous numbers. While it may have been a substantial investment, the school district will continue to enjoy the returns for many years to come.

Another example is the installation of a solar powered LED exterior lighting. A cost-prohibitive rewiring of a lamp post led to this innovative exercise. Although a very minor endeavour, it demonstrates the potential of what could end up being a retrofitting standard.

Greenhouse Gas Emissions



Emissions and Offset Summary Table

West Vancouver Schools 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 purpose of their 2019 CNAR.	
Total Emissions (tCO ₂ e)	1490.36
Total BioCO ₂	2.36
Total Offsets (tCO ₂ e)	1488
Offset Investment (\$25 per tCO ₂ e)	\$37,200

Retirement of Offsets

In accordance with the requirements of the *Climate Change Accountability Act* and Carbon Neutral Government Regulation, West Vancouver Schools (**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.

Executive Sign-Off



June 08, 2020

Signature

Date

Julia Leiterman

Secretary-Treasurer & CFO

Name (please print)

Title

Confirmation number: 00C5A720

Submitted date: 2020-06-30 09:30:18 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>Florencio de Dios</i>
Contact Email:
<i>fdedios@wvschools.ca</i>
Organization Name:
<i>West Vancouver Schools (SD45)</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)
<p><i>West Vancouver Schools' 2019-2022 Strategic Plan incorporates its commitment to adopting practices to address climate change and sustainability. Such practices include partnering with organizations such as utility companies, energy management companies, and consultants, to track school energy consumption and identify savings opportunities.</i></p> <p><i>SD45 will continue to invest time to find improved operating performance in its facilities and fleet – maintaining an open channel to technology offerings from its suppliers and entrepreneurs.</i></p> <p><i>As part of its maintenance and renewal plan, the school district will build energy savings into its purchasing criteria when replacing building system components. This criterion may be considered integral to the school district's return on investment (ROI).</i></p>

Over the long term (6-10 years)

West Vancouver Schools is currently working with a consultant for its Long Range Facility Plan, which will include items to address climate change. More specifically, the school district will strive to incorporate innovative ways to use and save energy. For example, the school district is looking to prepare a capital plan to implement occupancy sensors in all of its facilities, explore solar opportunities, and electric vehicles and power tools.

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

West Vancouver Schools will continue to use a third party utility monitoring company and leverage their expertise to identify initiatives that yield optimum results.

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

100%

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

As mentioned above, as part of its maintenance and renewal plan, the school district will build energy savings into its purchasing criteria when replacing building system components.

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

15%

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

Weather stripping and sealing exterior doors, roof top exhausts, roof/wall intersections, skylights, windows and pipe penetrations (15%)

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

HVAC system component replacements (10%)

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)?

None

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

N/A

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

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

None

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

N/A

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

N/A

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)

As its fleet vehicles need replacement, the school district will endeavour to replace them with more fuel efficient models.

Over the long term (6-10 years)

West Vancouver Schools will look into converting its fleet to electric vehicles when the municipal grid allows power upgrades.

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?

The facilities to provide electric power are not in place.

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.)

N/A

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	1

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	11

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

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)

The school district will promote the use of portable digital format (PDF) in lieu of paper printing.

Over the long term (6-10 years)

None

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

N/A