

2018 Carbon Neutral Action Report

School District 45 (West Vancouver)

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, School District 45's final *Carbon Neutral Action Report* will be posted to our website at westvancouver.schools.ca

Overview:

School District 45 undertook a number of actions in 2018 to reduce our carbon footprint. Most impactful of these was a district-wide retrofit of all lighting from fluorescent to LED. It is estimated that this change will save 1,970,578 kWh/year, which is the equivalent of 1,393 metric tons of carbon dioxide.

In addition, our major capital projects included a complete building envelope remediation at Irwin Park Elementary School, as well as a replacement of its boilers and complete HVAC system throughout the building. These enhancements have significantly updated and increased the efficiency of the energy management system, improved the air quality and health conditions for the occupants of the building, and significantly decreased passive energy loss by the installation of double-glazed windows, insulation, and new caulking/weather-stripping and sealing throughout the building.

We renewed our copier fleet throughout the district, beginning with a district-wide review of all devices that resulted in a reduction of devices and replacement with more efficient, multi-purpose devices. These devices are equipped with consumption monitoring software, and we are developing paper-use budgets that will be implemented in the future. We continue to work to reduce paper consumption by providing all teaching staff with personal devices, together with the implementation of on-line reporting and assessment tools, digital student portfolios, and electronic textbooks.

We reviewed and updated our DDC system with respect to temperature control within our buildings, changing the timing and levels of temperature controls to better reflect our pattern of building occupancy and reduce utility costs.


We are beginning to review our facilities vehicle fleet, and as we move forward with the replacement of aging vehicles we will be considering alternative energy sources (hybrid and electric), as well as right-sizing vehicles to specific tasks to ensure maximum efficiency. We are also exploring the installation of electric charging stations within our district.

Environmental understanding and green practices will continue to inform our work and teach, and form one of the formal goals of our district's Strategic Plan.

<i>School District 45 (West Vancouver) GHG Emissions and Offset for 2018 (tCO₂e)</i>	
GHG Emissions created in Calendar Year 2018	
Total Emissions (tCO ₂ e)	1,490
Total BioCO ₂	2.36
Total Offsets (tCO ₂ e)	2
Adjustments to GHG Emissions Reported in Prior Years	
Total Emissions (tCO ₂ e)	148
Total Offsets (tCO ₂ e)	146
Grand Total Offsets for the 2018 Reporting Year	
Grand Total Offsets Required (tCO ₂ e):	1,634
Total Offset Investment:	\$42,892.50

Retirement of Offsets:

In accordance with the requirements of the Greenhouse Gas Reduction Targets Act and Carbon Neutral Government Regulation, School District #45 (West Vancouver) (the Organization) is responsible for arranging 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.

	May 31, 2019
_____ Signature	_____ Date
Chris Kennedy	Superintendent & CEO
_____ Name	_____ Title

Part 1: CNAR Survey

1. General Information

Name: Julia Leiterman

Contact Email: jleiterman@wvschools.ca

Organization Name: School District 45 (West Vancouver)

Sector: School District

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: No

Administrative Assistant: No

Facilities/Operations Manager/Coordinator: No

CEO/President/Exec Director: No

Treasurer/Accounting: Yes

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?: Behavioural changes; Building improvements

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)

a) behavior

- reduce paper usage, set paper budgets and monitor
- turn off lights when not necessary
- turn down heat
- encourage walk to school programs

b) buildings

- address passive energy loss by remediation of window and door seals, weather-stripping at all sites
- switch to LED lights
- replace aging boilers with new technology, high efficiency systems
- replace aging HVAC systems to improve air circulation, reduce behavior related to opening windows and doors to address inadequate/excessive heating/cooling/air quality issues in classrooms

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

Fleet

- continue to replace aging vehicles with right-sized, improved emissions vehicles
- consider electric vehicles whenever replacing a fleet vehicle
- install charging stations at all sites

Buildings

- continue to replace aging boilers with new technology, high efficiency systems
- continue to replace aging HVAC systems
- seek funding for building envelope and roof remediation via MOE capital branch school enhancement programs

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

- continue using services of Prism Engineering; take actions based on their energy exception reports
- if funding becomes available, engage Prism to undertake an energy audit of all our sites

I. What % on average of your building portfolio has an energy audit completed each year (if any)?: 0

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

Retrofits are entirely governed by available capital funding from the MOE.

On an annual basis, we submit our 5 year capital plan, which always includes building envelope remediation, roof replacement, HVAC and boiler replacement. For the past 3 years we have been successful in obtaining funding from this source, including three boiler/HVAC upgrades, one roof replacement, and one building envelope replacement. In our 2019/20 Capital plan we are submitting a request for minor retrofits. We have completed a survey of all sites in our district with respect to caulking, seals, weatherstripping, etc., and have a plan to address these issues site by site as we receive funding

I. What % on average of your building portfolio do you recommission each year?: 1

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

No

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

not applicable - no new buildings

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?

Yes

I. If yes, what are its goals?

Switch to electric vehicles
Install charging stations

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)

As we replace facilities fleet vehicles, we will consider electric vehicle options. Where practicable and affordable we will switch to electric. We will also begin to install charging stations at sites as funding becomes available.

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

As we replace facilities fleet vehicles, we will consider electric vehicle options. Where practicable and affordable we will switch to electric.

Complete installation of charging stations at all sites.

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

Gas/diesel vehicle: 17

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

We have not purchased any new vehicles in 3 years, as we can't afford them. We are now looking at leasing options, and will consider alternative fuel sources as part of the process.

f) Other actions, please describe briefly (e.g. charging station feasibility studies, electrical panel upgrades, etc.)

We have upgraded electrical panels over the past few years in response to equipment failures. We intend to investigate charging station installations in 2019/20.

b) Light duty trucks (LDTs)

Gas/diesel: 15

c) Heavy duty vehicles (HDV)

Gas/diesel: 2

5. Please indicate the number of the vehicles you plan to replace in your fleet:

How many LDVs do you plan to procure annually over the next 5 years?: 3

How much do you budget per LDT?: 30000

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?

Yes

I. If yes, what are its goals?

Paperless meetings; paperless teaching methods; electronic storage of data

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)

- continue to provide personal devices to all teachers and maintain short throw projectors in all classrooms
- begin to implement "papercut" software to monitor and budget paper usage - 2019/20 develop budgets for paper usage; 2020/21 implement budgets
- continue to support, require teaching methods that utilize online reporting from students, digital student portfolios, electronic textbooks
- complete changeover to electronic assessments and reporting of student achievement - no paper report cards

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

- provide every staff member with a paper usage budget; charge for overages
- continue to update copier fleet, strictly control number of printers/copiers at school sites
- continue to promote/support/require modern teaching methods that utilize online/electronic resources and reporting

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

Yes

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

Yes

e) Other actions, please specify.

- complete replacement/reduction of copier fleet district-wide in 2018/19; beginning to implement papercut software to monitor use and develop appropriate paper budgets