

# 2016 Carbon Report



School District No. 85

May 2016

## Executive Summary

On behalf of the Vancouver Island North School District, I am pleased to submit the 2016 Carbon Neutral Action Report. This report provides an overview of the steps that Vancouver Island North School District has taken to reduce its greenhouse gas emissions as well as other environmental sustaining actions that have been undertaken in the 2016 calendar year.

Environmental sustainability is deeply important to the Vancouver Island North School District. Our Energy Management Committee is now celebrating its fifth year in existence. Our Board of Education continues to support effective practice in the Environmental Sustainability focus areas such as Curriculum, Energy Conservation, Community Gardening, Sustainable Purchasing, Sustainable Transportation, Water Conservation and Waste Management.

The Greenhouse Gas reduction initiatives in 2016 continued to be focused primarily on reducing emissions from buildings, which is our largest source. Six new high efficiency boiler units were installed at Port Hardy Secondary School and lighting upgrades were continued throughout the District.

We continue to engage both our students and our employees, leveraging their knowledge and enthusiasm as we strive for lower GHG emissions. Doing so has benefits beyond the environment as it generates both financial savings and social benefits. Our employees are more engaged in working towards sustainability, and the students who create our future are becoming more passionate about caring for their communities and the world that surrounds them.



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**Ms. Carol Robertson**  
**Acting Superintendent of Schools**



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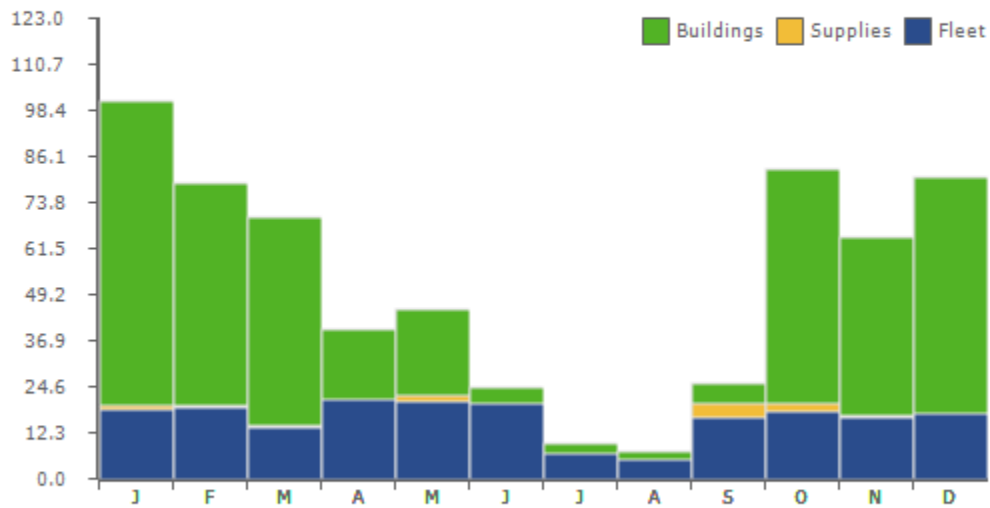


## Greenhouse Gas Emissions

The total Greenhouse Gas Emissions for School District No. 85, Vancouver Island North for the 2016 calendar year were 644 tonnes CO<sub>2</sub>e, which is a slight increase from 637 tonnes in 2015. The graph below shows the district emissions by source.

### Total Emissions Calendar Year 2016 School District 85 - Vancouver Island North

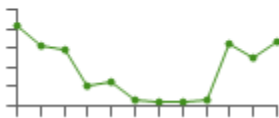
Metric tonnes  
CO<sub>2</sub> equivalent (tCO<sub>2</sub>e)



Click on the bars to view data for each month

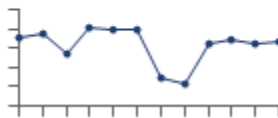
#### Buildings

GHG Emissions  
(Metric Tonnes CO<sub>2</sub>e)



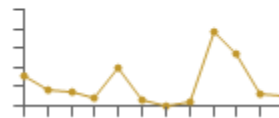
#### Fleet

GHG Emissions  
(Metric Tonnes CO<sub>2</sub>e)



#### Supplies

GHG Emissions  
(Metric Tonnes CO<sub>2</sub>e)



## Fugitive Emissions

Fugitive emissions are the unintentional emissions from the production, processing, transmission, storage and delivery of fossil fuels; as well as the intentional combustion of fossil fuels not used to generate useful heat or electricity.

The following fugitive emissions are deemed by the British Columbia Provincial Government Carbon Neutral Government Regulation as out-of-scope for reporting:

- Gases used for research purposes (e.g.: science labs)
- Type R-22 coolant from stationary air conditioning and refrigeration units in schools
- Any emission sources that comprise less than 1% of the district's total GHG's

In scope fugitive emissions (HFCs released to the environment as a result of leaks in cooling equipment) for School District 85 are well below the 1% threshold for reporting and are therefore not included.

## Travel Related Emissions

Under the Carbon Neutral Public Sector commitment, only core government organizations that report through the Consolidated Revenue Fund (government ministries, tribunal employees, Crown Corporations) are required to track and report emissions from business travel of public officials. Vancouver Island North School District does not fall within “core government” and therefore does not track travel related emissions.

## Offsets Applied to Become Carbon Neutral

In order to achieve carbon neutral status for 2016, the Board of Education of School District No. 85 (Vancouver Island North) purchased carbon offsets totaling 501 tonnes of CO<sub>2</sub>e from Pacific Carbon Trust in May of 2017 at a cost of \$13,151.25

## Actions Taken To Reduce Greenhouse Gas Emissions in 2016

In 2016, School District No. 85 continued in its efforts to replace aging heating systems with newer more energy efficient models. Port Hardy Secondary School had six aging boilers replaced with five new condensing units as well as two aging copper finned hot water boilers replaced with one new condensing unit. North Island Secondary School saw the Shop and Gymnasium Air Handling Units and Exhaust systems replaced as they were beyond useful service and no longer WorkSafe compliant.

Lighting systems are being upgraded on an ongoing basis with LED lights being introduced in place of fluorescent. Motion sensor light switches have been installed in washrooms, offices and some classrooms to reduce hydro consumption and waste.

Meeting packages within the District are being sent out electronically in an effort to reduce paper waste. Documents are being stored on internal servers whenever possible and photocopying is set to double sided. All schools and offices within the District recycle whenever



possible and garbage cans have been removed from low use areas in order to reduce the number of bags being wasted.

Eight new water bottle refill stations have been installed in school facilities in place of regular fountains in an effort to reduce the number of plastic bottles being used in the schools.

2017 saw the replacement of four aging school buses with newer more efficient models. One fleet vehicle was also replaced with a smaller more economical model.

Hydro is used in the School District for both lighting and heating purposes. The total electricity purchased from BC Hydro went from 3,272,850.05 kWh in 2015 to 3,234,242 kWh in 2016, an overall decrease of 38,608.05 kWh.

Eight of School District 85's properties are heated by propane. 2016 saw an overall decrease of 18,739 litres, from 226,537 litres in 2015 to 207,798 litres in 2016.

### **Plans to Continue Reducing Greenhouse Gas Emissions in 2016-2017**

In 2017, the plan is to continue upgrading heating and hot water systems with more energy efficient modes. Phase 3 of the heating and ventilation upgrades at Port Hardy Secondary School has begun with completion expected in the fall of 2017.

Lighting fixtures are being upgraded to LED rather than fluorescent, which should see a long term cost savings.

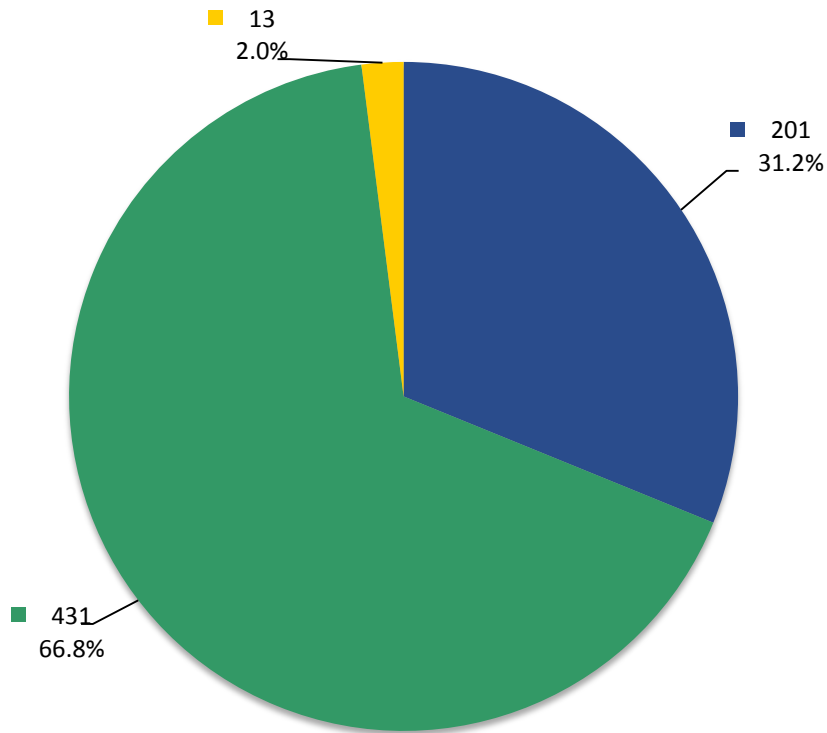
Education is an ongoing commitment amongst staff and students in the district as to how we can all do our parts to reduce our environmental footprint. Purchasing recycled content products is encouraged and endorsed whenever possible.

All School District properties remain idle free, this is enforced through signage and verbal communications. Buses and maintenance vehicles are turned off when not being immediately used and ride sharing is encouraged whenever possible.

Our transportation department participates in an oil filter recycling program to minimize their environmental impact and regular maintenance on all fleet vehicles ensures they are running as efficiently as possible.



**School District 85 - Vancouver Island North  
Greenhouse Gas Emissions by Source  
for the 2016 Calendar Year (tCO<sub>2</sub>e\*)**



**Total Emissions: 644**

- Mobile Fuel Combustion (Fleet and other mobile equipment)
- Stationary Fuel Combustion (Building Heating and Generators) and Electricity
- Supplies (Paper)

**Offsets Applied to Become Carbon Neutral in 2016 (Generated May 15, 2017 3:41 PM)**

Total offsets required: **501**. Total offset investment: **\$12,525**. Emissions which do not require offsets: **143** \*\*

\*Tonnes of carbon dioxide equivalent (tCO<sub>2</sub>e) is a standard unit of measure in which all types of greenhouse gases are expressed based on their global warming potential relative to carbon dioxide.

\*\* Under the *Carbon Neutral Government Regulation of the Greenhouse Gas Reduction Targets Act*, all emissions from the sources listed above must be reported. As outlined in the regulation, some emissions do not require offsets.

# 2016 Carbon Neutral Action Report Survey

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Part One (external)

Contact Name(s):

*Jennifer Cattermole*

Organization Name:

*School District No. 85*

Please select your sector:

- School District

1) Stationary Sources (Buildings, Power Generators): Fuel Combustion, Electricity use, Fugitive Emissions.

During 2016, did your organization take any of the following actions to support emissions reductions from buildings?

Select all that apply

- Performed energy retrofits of the organization's buildings.: two

Briefly describe your organization's plans to continue reducing emissions from its stationary sources in future years.

*Continued upgrading to more efficient HVAC and lighting systems.*

During 2016, did your organization participate in utility-sponsored energy demand management program(s) (e.g. BC Hydro's Energy Management (Manager))?

*No*

If yes, please describe briefly:

*(No response)*

2) Mobile Sources (Vehicles, Off-road/Portable Equipment): Fuel Combustion.

During 2016, did your organization take any of the following actions to support emission reductions from its mobile sources?

Select all that apply

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- Replaced existing vehicles with more fuel efficient vehicles (gas/diesel).: 4
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Briefly describe your organization's plans to continue reducing emissions from its mobile sources in future years.

*Continued fleet replacement as vehicles age and become less efficient*

3) Supplies (Paper):

During 2016, did your organization take any of the following actions to support emissions reductions from paper supplies?

Select all that apply

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- Awareness campaign focused on reducing office paper use.
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Briefly describe your organization's plans to continue reducing emissions associated with its office paper use in future years.

*All newsletters are being sent electronically whenever possible. Items are stored on a server rather than being printed each time.*

4) Other Sustainability Actions:

Business Travel:

During 2016, did your organization take any of the following actions to support emissions reductions from business travel?

Select all that apply

*(No response)*

Education Awareness:

During 2016, did your organization have any of the following programs or initiatives to support sustainability education and awareness?

Select all that apply

*(No response)*

Other Sustainability Actions:

During 2016, did your organization have any of the following programs or initiatives to support sustainability?

Select all that apply

- 
- Other, please describe briefly: Fountains being replaced with bottle refill stations to reduce water waste
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