

# **2014 Carbon Neutral Action Report**

## **School District 68 (Nanaimo-Ladysmith Public Schools)**

### **Declaration Statement**

This Carbon Neutral Action Report for the period January 1<sup>st</sup> to December 31<sup>st</sup>, 2014 summarizes our emissions profile, the amount of offsets purchased to reach net zero emissions, the actions we have taken in 2014 to reduce our greenhouse gas emissions and our plans to continue reducing emissions in 2015 and beyond.

By June 30, 2015, School District 68 (Nanaimo-Ladysmith Public Schools) final Carbon Neutral Action Report will be posted to our website at [www.sd68.bc.ca](http://www.sd68.bc.ca).

### **Overview**

In 2014, School District 68 (Nanaimo-Ladysmith Public Schools) continued with its strategic plan to minimize energy consumption and reduce its carbon foot print. Through incentives and a strong partnership with BC Hydro, the district was able to continue another busy year replacing outdoor lighting and adding interior occupancy sensors.

Facilities strategic planning also placed two high schools in BC Hydro's Continuous Optimization Program (COP). The study's findings and recommendations were fully implemented, including: air and water rebalancing, installing variable speed drives and updating DDC programming for efficiency. Fleet renewal continued by replacing aging vehicles, including: 1 bus, and 4 mid-size vehicles. This renewal process is providing us with lower fuel consumption, carbon emissions, initial maintenance, and associated repair costs.

**Emissions and Offsets Summary Table:**

<i>School District 68 (Nanaimo-Ladysmith Public Schools)</i>	
<b>GHG Emissions and Offsets for 2014 (TCO2E)</b>	
<b>GHG Emissions created in Calendar Year 2014</b>	
Total Emissions (TCO2E)	3,808
Total Offsets (TCO2E)	3,339
<b>Adjustments to GHG Emissions Reported in Prior Years</b>	
Total Emissions (TCO2E)	6
Total Offsets (TCO2E)	10
<b>Total Emissions for Offset for the 2014 Reporting Year</b>	
Total Offsets (TCO2E)	3,349

## **Emission Reduction Activities**

Four high schools received lighting upgrades which included occupancy sensors and exterior LED lighting upgrades. This program is ongoing and will continue as new feasible opportunities are discovered.

Student behavioral programs provided a strong awareness of energy reduction and sustainability. Energy reduction programs included: Lights-off programs, computer shutdown sequences, and sweater days. Sustainability programs included walk and bike to school days, school gardens, a green wall, recycling, online newsletters and community clean ups.

Secondary school student groups who engaged in BC Hydro's Energy Ambassador Program received grants to create a positive change in their schools. One of the schools installed motion sensors in often neglected areas that they felt would improve energy usage.

The Facilities Department initiated a fridge/freezer replacement program, removing older inefficient models and replacing them with new, energy efficient units. In all, 36 new refrigerators, fridge-freezers, and freezers were purchased to supplant the old models. This program not only supported the District's Energy Conservation Policy, but also ensured the District's food programs could better operate and support the learning environment of our students.

## Plans for 2015-2016 For Continued Green House Gas Reduction

School behavioral programs will remain a priority as they engage students and provide a sense of ownership to the school and its sustainability programs.

Dover Bay High School will be receiving a boiler plant upgrade - replacing the existing boiler plant and domestic hot water tanks with condensing boilers. Additionally, all of the major air handling unit heating coils will be upgraded to maximize the new boilers condensing capabilities, and the domestic hot water storage tanks have been right sized. The new pumps will be controlled via speed drive, or have built-in variable speed capability for efficiency.

District wide operational strategies of mechanical and lighting systems will be continually reviewed to ensure the latest and most efficient means are employed in our institutions. The addition of the Environmental Systems Technician and FortisBC funded Energy Specialist will assist the Energy Manager to seek out feasible means to continually reduce consumption.

### Executive sign-off:



Signature

JOHN BLAIN

Name (please print)

May 29/15

Date

SUPERINTENDENT / CEO

Title

# 2014 Carbon Neutral Action Report (CNAR) - Part 2 ACTIONS

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## Organization Name

Nanaimo-Ladysmith School District 68

## Actions Taken to Reduce Emissions

### 1) Stationary Fuel Combustion, Electricity (Buildings): Indicate which actions were taken in 2014:

Performed energy retrofits on existing buildings

Yes

Built or are building new LEED Gold or other "Green" buildings.

No

Undertook an evaluation of overall building energy use.

Yes

Please list any other actions taken to reduce emissions from Buildings:

(No response)

### 2) Mobile Fleet Combustion (Fleet and other vehicles): Indicate which actions were taken in 2014:

Do you have a fleet?

Yes

Replaced existing vehicles with more fuel efficient vehicles (gas/diesel)

No

Replaced existing vehicles with hybrid or electric vehicles

No

Reduced the overall number of fleet vehicles

No

Took steps to drive less than last year

Yes

Please list any other actions taken to reduce emission from fleet:

Creating meeting room spaces to reduce required off site travel.

**3) Supplies (Paper):Indicate which actions were taken in 2014:**

Used less paper than previous year

No

Used only 100% recycled paper

No

Used some recycled paper

Yes

Used alternate source paper (Bamboo, hemp, etc.)

No

Please list any other actions taken to reduce emissions from paper use:

(No response)

### Page 3

#### **Actions Taken to Reduce Emissions - continued**

Explain how you plan to continue minimizing emissions in 2015 and future years:

Replacing natural gas equipment with higher efficiency models

Reprogramming DDC

Vehicle replacements using right sizing

If you wish to list any other "sustainability actions" outside of buildings, fleet, paper and travel check "yes". This reporting is optional.

Yes

### Page 4

**Actions to Promote Sustainability and Conservation - Optional**The following are actions that fall outside the scope of the Carbon Neutral Government Regulation, but which many organizations still undertake and may wish to report on. This section is optional for reporting.

**Business Travel**Created a low-carbon travel policy or travel reduction goal (Low-carbon: Lowest emission of greenhouse gases per kilometre per passenger)

No

**Virtual Meeting Technology** Installed web-conferencing software (e.g., Live Meeting, Elluminate, etc.)

Yes

**Made desktop web-cameras available to staff**

No

**Encourage alternative travel to meetings (e.g., bicycles, public transit, walking)**

Yes

**Encourage carpooling to meetings**

Yes

**Education and Awareness** Have created Green, Sustainability, Energy Conservation, or Climate Action Teams.

Yes

**Provided resources and/or dedicated staff to support these teams**

Yes

**Provided behaviour change education/training for these teams (e.g., community-based social marketing)**

Yes

**Established a sustainability/green awards or recognition program**

No

**Support green professional development (e.g., workshops, conferences, training)**

Yes



**Planning for Climate Change** Have assessed whether extreme weather events and/or long term changes in climate will affect our organization's business areas

No

**Long term changes in climate have been incorporated into our organization's decision making.**

No

Page 5

**Actions to Promote Sustainability and Conservation - Optional (continued)**

**Staff Awareness and Education** Provided education to staff about the science of climate change

No

**Provided education to staff about the conservation of water, energy, and raw materials**

No

**Provided green tips on staff website or in newsletters**

Yes

**Alternate Work/Commuting Options** Allow for telework/working from home

Yes

**Staff have the option of a compressed work week**

No

**Commuting by foot, bicycle, carpool or public transit is encouraged**

Yes

**Shower or locker facilities are provided for staff/students who commute by foot or by bicycle**

Yes

**Secure bicycle storage is provided**

No

**Other Sustainability Actions Establish a water conservation strategy which includes a plan or policy for replacing water fixtures with efficient models**

No

**Put in place a potable water management strategy to reduce potable water demand of building-level uses such as cooling tower equipment, toilet fixtures, etc. and landscape features**

No

**Have put in place an operations policy to facilitate the reduction and diversion of building occupant waste from landfills or incineration facilities**

Yes

**Have implemented a hazardous waste reduction and disposal strategy (Hazardous Waste: E.g., electronics including computer parts and monitors, batteries, paints, fluorescent bulbs)**

Yes

**Have incorporated minimum recycled content standards into procurement policy for consumable, non-paper supplies (e.g., writing instruments, binders, toner cartridges, etc.)**

Yes

**Established green standards for goods that are replaced infrequently and/or may require capital funds to purchase (e.g., office furniture, carpeting, etc.)**

No

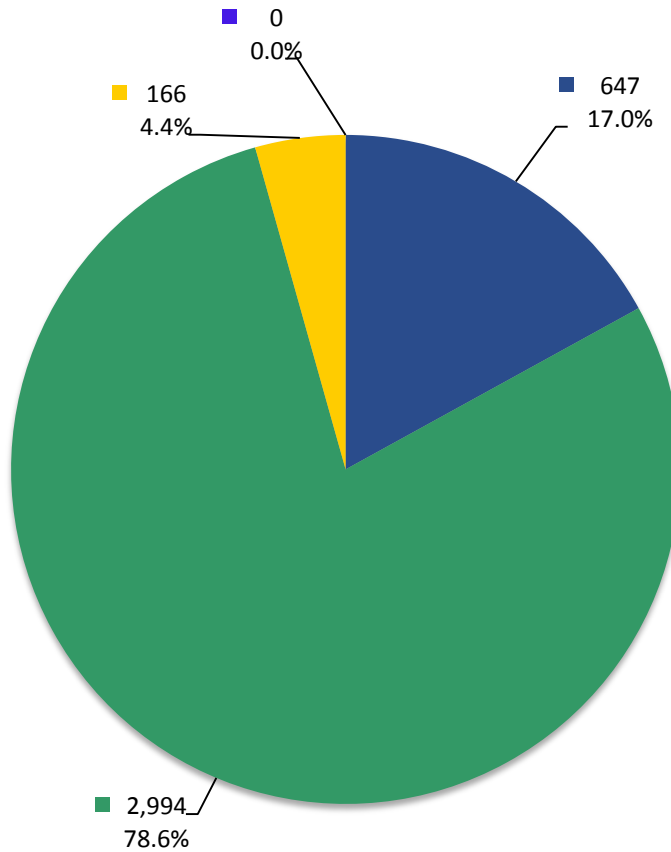
**Incorporated lifecycle costing into new construction or renovations**

Yes

**Please list and other sustainability actions you wish to report not included in the previous list.**

(No response)

**School District 68 - Nanaimo-Ladysmith  
Greenhouse Gas Emissions by Source  
for the 2014 Calendar Year (tCO<sub>2</sub>e\*)**



**Total Emissions: 3,808**

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

**Offsets Applied to Become Carbon Neutral in 2014 (Generated June 23, 2015 3:18 PM)**

Total offsets required: **3,339**. Total offset investment: **\$83,475**. Emissions which do not require offsets: **469** \*\*

\*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.