

School District 68 (Nanaimo Ladysmith Public Schools)

2013 Carbon Neutral Action Report

Executive Summary

In 2013, School District 68 (Nanaimo Ladysmith Public Schools) continued with its strategic plan to minimize energy consumption and reduce its carbon footprint. Through incentives and a strong partnership with BC Hydro, the district was able to continue another busy year replacing lighting hardware with energy efficient models in several schools and administration buildings. Facilities strategic planning also ensured two schools received condensing boiler upgrades that were paired with the most current building automation system to interface with the existing controls infrastructure. Fleet renewal continued by replacing aging vehicles including 4 buses and 4 mid-size vehicles including 1 electric vehicle. We also replaced 2 diesel powered grounds vehicles with 1 pull behind mower. This renewal is providing us with lower fuel consumption, carbon emissions, initial maintenance and associated repair costs.

2013 Greenhouse Gas Emissions

The Districts total Green House Gas Emissions under the scope of the Greenhouse Gas Reduction Targets Act in 2013 was 4,583 tCO_{2e}.

Offsets Applied To Become Carbon Neutral in 2013

The total emissions offsets supplied to become carbon neutral is 4,039 tCO_{2e} plus 8 tCO_{2e} offset for an adjustment to the 2012 reporting year.

Emissions of 544 tCO_{2e} resulting from the operation of school busses were not offset as they were out of the scope under section 4(2)(c) of the Carbon Neutral Government regulation but were reported as part of the greenhouse gas emissions profile of 2013 as required by section 5 of the regulation.

Greenhouse Gas Emissions in calendar year 2013:	
Total Emissions	4,583
Total Emissions for Offsets	4,039
Adjustments to GHG Emissions Reported in Previous Years:	
Total Emissions	8
Total Emissions for Offsets	8
Credit owing from PCT at end of 2012 reporting year:	
Credit Owing (column B of invoice)	2,800
Total Emissions for Offsets for the 2013 Reporting Year: (column D of Invoice)	
	1,247

Emission Reduction Activities

Fourteen district sites received lighting upgrades this year replacing aged and inefficient lamps with units up to current standards. This program is ongoing and will continue as new feasible opportunities are discovered.

Three condensing boilers were installed at Pleasant Valley Elementary under Annual Facilities Grant (AFG) funding and four condensing boilers were installed at McGirr Elementary using Carbon Neutral Capital (CNCP) funding to replace the aging heating plants. These boilers will offer a much more efficient heating source paired with the new building controls program based on the buildings demand instead of outside air temperatures. This upgrade will also make remote troubleshooting easier and allow Facilities to audit performance with greater ease.

Student behavioral programs provided a strong awareness of energy reduction and sustainability. Energy reduction programs included: lights off programs, turning off monitors and sweater days. Sustainability programs included walk and bike to school days, school gardens and 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.

Plans for 2014-2015 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.

A review of two large facilities that were being monitored with real time web enabled meters has now been completed under the Continuous Optimization Program(COP). Once the findings and recommendations are approved by B.C. Hydro we will move forward with changes that may include, but are not limited to altering the sequence of operation through the building automation system to maximize the potential of the mechanical equipment.

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 Fortis funded Energy Specialist will assist the Energy Manager to seek out feasible means to continually reduce consumption.



Phil Turin, Secretary-Treasurer



Turin 13/14

2013 Carbon Neutral Action Report (CNAR) - Part 2 ACTIONS

Created Thursday, March 06, 2014

Updated Tuesday, May 13, 2014

<https://fluidsurveys.com/surveys/cas-z/2013-cnar-form-bps-actions/2afef2cf778d7ba4893b8496165db207/>

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Please complete the following sections of the 2013 Carbon Neutral Action Report form. Save your work frequently to prevent it from being lost. You can also save a copy for your own use as either a WORD or PDF file using the buttons at the bottom of each page.

This is Part 2 of the Carbon Neutral Action Report form. This section reports on actions taken to reduce emissions during the 2013 calendar year. This information will be included in your final Carbon Neutral Action Report posted on the Ministry of Environment website.

When the form is complete press the submit button on the last page to automatically submit the information to the Climate Action Secretariat (CAS). Do not press submit before you are ready – this may result in a loss of work.

In addition to completing this survey (Part 1 2), you are required to submit your completed Overview (Executive Summary) and Self-Certification Checklist. The 2013 Overview template was included in the email sent and can also be found on the LiveSmart leaders Community.

Please ensure you meet the following reporting deadlines:

A DRAFT 2013 CNAR is due to CAS by March 31, 2014. The draft is comprised of the Overview ONLY (no executive sign-off required).

The FINAL 2013 CNAR is due to CAS by May 30, 2014. The final 2013 CNAR includes Part 1 Part 2 survey form and Overview.

The Self-Certification Checklist is due to CAS by May 15, 2014.

For more information about the Carbon Neutral Government process, please refer to *Becoming Carbon Neutral 2013*, or should you have any questions please contact climateactionsecretariat@gov.bc.ca.

Organization Name

School District 68: Nanaimo - Ladysmith

Actions Taken to Reduce Emissions

1) Stationary Fuel Combustion, Electricity (Buildings):

Indicate which actions were taken in 2013:

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:

In 2013 our District was able to replace: Two boiler plants with high efficiency condensing boilers, a complete controls upgrade at one school which included more efficient programming, energy efficient appliance replacements, efficient indoor lighting, computer replacements and provided support for behavioural programs.

2) Mobile Fleet Combustion (Fleet and other vehicles):

Indicate which actions were taken in 2013:

Do you have a fleet?

Yes

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

Yes

Replaced existing vehicles with hybrid or electric vehicles

Yes

Reduced the overall number of fleet vehicles

Yes

Took steps to drive less than last year

Yes

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

Our Facilities Department used vehicle right-sizing when selecting new replacement vehicles and car pooled when possible.

3) Supplies (Paper):

Indicate which actions were taken in 2013:

Used less paper than previous year

Yes

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:

We discourage the printing of unnecessary documents and encourage online newsletters and communications when possible.

Actions Taken to Reduce Emissions - continued

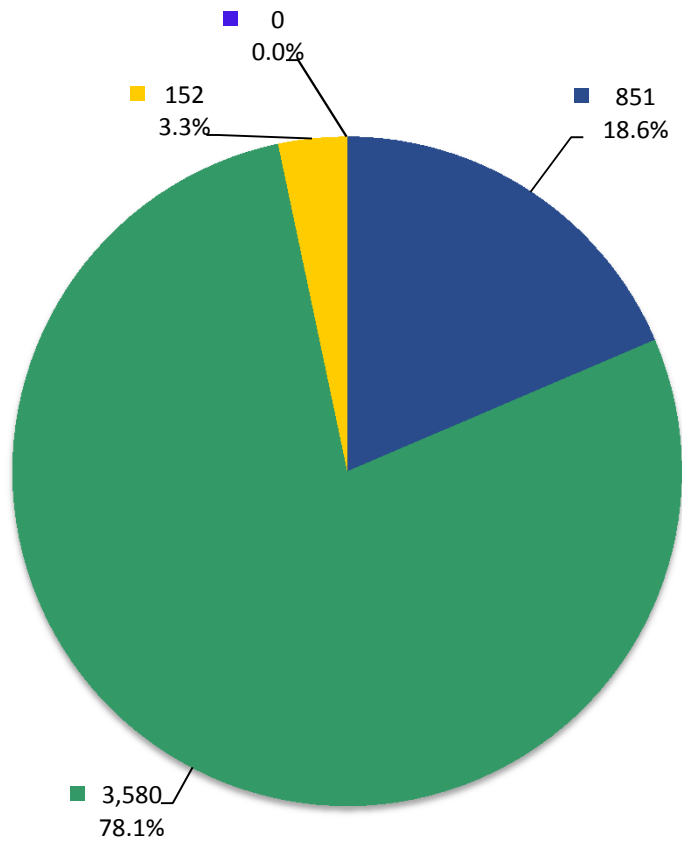
Explain how you plan to continue minimizing emissions in 2014 and future years:

In 2014 we plan to continue replacing boiler plants and vehicles with higher efficiency and properly sized models as funding allows. We will also continue to support various behavioural programs and projects.

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

No

School District 68 - Nanaimo-Ladysmith Greenhouse Gas Emissions by Source for the 2013 Calendar Year (tCO₂e*)



Total Emissions: 4,583

- 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 2013 (Generated May 21, 2014 4:04 PM)

Total offsets required: **4,039**. Total offset investment: **\$100,975**. Emissions which do not require offsets: **544** **

*Tonnes of carbon dioxide equivalent (tCO₂e) 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.