

Burnaby School District #41

Carbon Neutral Action Report 2013

Executive Summary:

The Burnaby School District has been pursuing a wide range of sustainability initiatives for well over a decade, and we continue to strive towards an ever-greener future for our schools. 2013 has seen a continuation of our commitment to reduce emissions through energy conservation and to implement sustainability initiatives across a wide range of programs.

This past year has also brought us to a point of reflection, following five years with a dedicated energy management program, we have achieved a district wide energy intensity average of 144ekWh/m², far exceeding the national average.

Emissions Overview:

As with most organisations, the lion's share of our emissions (89.7%) come from our buildings through the burning of natural gas for heat as well as electrical consumption, with the remaining portion coming from paper supplies (6.8%) and fleet vehicles (3.5%).

Emission Offsets

Emissions for calendar year 2013 totalled 5,984 tCO²e, which is a decrease compared to the 6,196 tCO²e from last year, and a 957 tCO²e reduction over 2011 levels.

As determined by provincial legislation, the portion of emissions that requires offsetting is 5,977 tCO²e, with the addition of 201 tCO²e retroactively added to last years total as a result of billing adjustments, bringing our final purchased offsets for 2013 to 6,178 tCO²e.

These emissions were offset according to B.C's Carbon Neutral Government mandate, through the purchase of off-set credits with Pacific Carbon Trust.

	tCO ² e	@ \$25/ton
2011	6,941*	\$173,525
2012	6,196**	\$154,900
2013	5,977	\$149,425

*6,638 + 303 tonnes (retroactively adjusted)

**5,996 + 201 tonnes (retroactively adjusted)

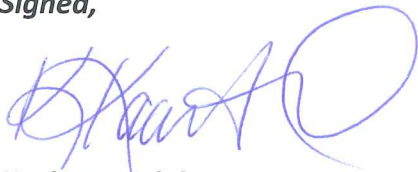
Highlights from 2013

- Continued reduction of CO² emission over previous years
- Achieved district wide combined energy intensity of 144ekWh/m² a considerable improvement compared to 2007 baseline of 166ekWh/m²
- Completion of Carbon Neutral Capital Projects to replace three high school boiler plants, while also awarded funding for two more projects to be completed in 2014.
- Completion of year two Workplace Conservation Awareness
- LED exterior lighting retrofits completed at five sites

Coming in 2014

- Continue to address our largest CO² source by upgrading to high efficiency heating systems at more sites
- Pursue electrical savings through exterior lighting retrofits and mechanical upgrades
- Continue strategic partnerships with BC Hydro and Fortis BC for our energy management programs
- Continue to pursue behavioural change programs and promote a culture of conservation across the entire district
- Address food waste disposal and roll out revised district wide plan
- Continue to support student initiatives through the Burnaby Youth Sustainability Network and other student lead environmental groups

Signed,



Kevin Kaardal

Superintendent of Schools

Burnaby School District #41



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

Created Friday, May 30, 2014

<http://fluidsurveys.com/surveys/cas-z/2013-cnar-form-bps-actions/ce0dac59d937517cb5e8e73c/>

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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

Burnaby School District #41

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:

Five sites received boiler upgrades to high efficiency condensing boilers. Multit-year program to retrofit all interior buildings to high efficiency fluorescent is complete. Three schools have had all exterior lighting retrofit to LED, 16 more schools are planned to undergo LED exterior replacement this year.

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)

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

No

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

(No response)

3) Supplies (Paper):

Indicate which actions were taken in 2013:

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)

Actions Taken to Reduce Emissions - continued

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

SD41 has a five year Energy Management plan, which consists of building upgrades as well as behavioural change programs. We have identified and prioritised schools which need boiler upgrades, lighting retrofits, automation control systems and other capital intensive enhancements. We constantly monitor energy use and prioritise projects based on an energy intensity calculation. We also employ a tool which flags any utility consumption anomalies on a monthly basis, we can then investigate and address the problem before any more energy is wasted.

External funding is key to the continued success of our Energy Management Program. Grants from the Carbon Neutral Capital Program, BC Hydro, and Fortis BC allow SD41 to pursue energy conservation in an aggressive manner, and their continued support will help us meet our long term sustainability goals.

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

Yes

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.)

No

Made desktop web-cameras available to staff

No

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

No

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

Yes

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

No

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

Actions to Promote Sustainability and Conservation - Optional (continued)

Staff Awareness and Education

Provided education to staff about the science of climate change

Yes

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

Yes

Provided green tips on staff website or in newsletters

Yes

Alternate Work/Commuting Options

Allow for telework/working from home

No

Staff have the option of a compressed work week

No

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

No

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

No

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.)

No

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

No

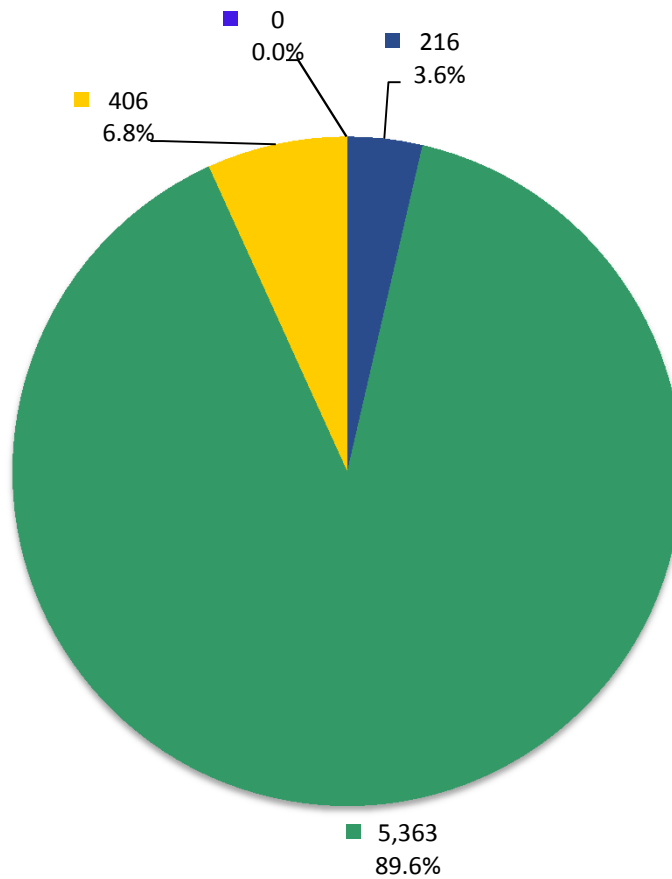
Incorporated lifecycle costing into new construction or renovations

No

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

*Support has been expanded for the Burnaby Youth Sustainability Network, a group made up of SD41 students which create and implement district wide educational programs for fellow students and staff. This year they focused on the responsible disposal and recycling of electronic waste, setting up collection centres at all high schools.
We have also been rolling out the Food Scraps collection program at all sites, to meet the 2015 dead line set out by Metro Van*

School District 41 - Burnaby Greenhouse Gas Emissions by Source for the 2013 Calendar Year (tCO₂e*)



Total Emissions: 5,984

- 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 3:41 PM)

Total offsets required: **5,977**. Total offset investment: **\$149,425**. Emissions which do not require offsets: **8** **

*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.