

2015 Carbon Neutral Action Report

Burnaby School District #41

This *Carbon Neutral Action Report* for the period January to December 31st, 2015 summarizes our emissions profile, the amount of offsets purchased to reach net zero emissions, the actions we have taken in 2015 to reduce our greenhouse gas emissions and our plans to continue reducing emissions in 2016 and beyond.

Executive Summary

This year we have continued to reap the benefits of our comprehensive, multi-year energy conservation program. Highlights for 2015 included two elementary schools and one secondary school gym receiving major upgrades to their heating systems, and the successful completion of phases two and three of an LED upgrade to our exterior lighting systems around the district.

Student engagement has been higher than ever, with most sites participating in school shut down programs before all holiday breaks. Themed "turn it off before you take off" staff and students are helping to save energy by making sure all equipment is off and unplugged before Christmas, Spring, and Summer holidays.

With regards to emissions, we are proud to announce substantial reductions, down 2,087 tons CO² equivalent this year compared to 2011. This is partially due to a mild winters which meant less heating than normal. Our overall energy consumption, which includes all electricity and fuel, is down 17.9% in the same period, far outpacing our target of 2% per year, and allowing for considerable cost savings.

The carbon neutral program is the result of legislation that states all public sector organisations in BC must pay \$25/ton of CO² emissions towards an offset fund. By improving our efficiency here at SD41, we both save on the price of energy, as well as the reduced cost to offset the carbon associated with using that energy.

Historical Emissions

	tCO ² e	@ \$25/ton
2011	6,941	\$173,525
2012	6,196	\$154,900
2013	5,977	\$149,425
2014	5,040	\$126,000
2015	4,854	\$121,350

Looking ahead

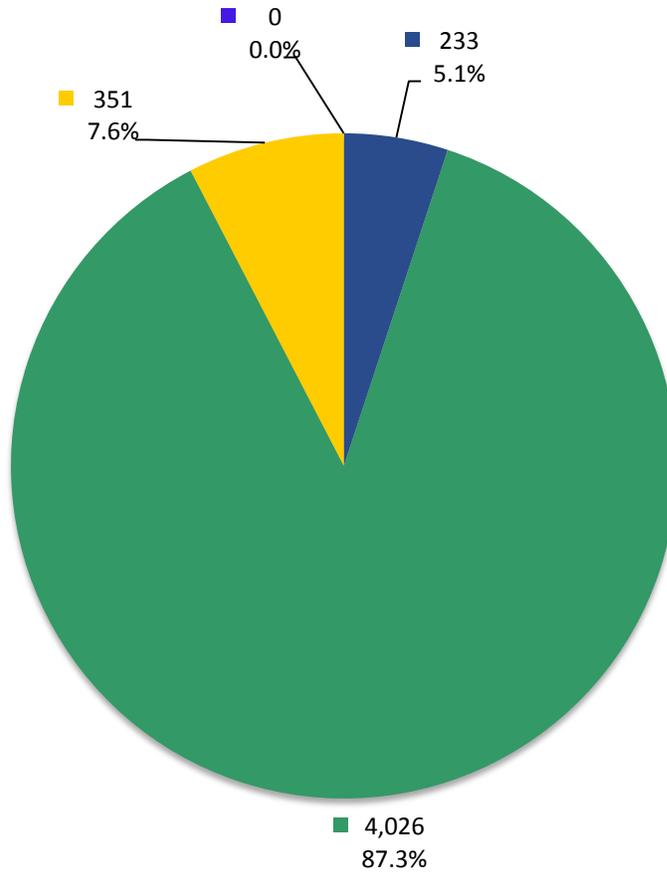
The Burnaby School Districts is dedicated to the pursuit of emission reductions and energy efficiency. Our dedicated energy management team continues to work towards the greenest possible future, with 2016 already seeing many more energy efficiency projects underway.

Emission and Offset summary table:

Burnaby School District GHG Emissions and Offsets for 2015 (TC02E)	
GHG Emissions created in Calendar Year 2015	
Total Emissions (TC02E)	4610
Total Offsets (TC02E)	4602
Adjustments to GHG Emissions Reported in Prior Years :	
Total Emissions (TC02E)	252
Total Offsets (TC02E)	252
Total Emissions for Offset for the 2015 Reporting Year	
Total Offsets (TC02E)	4854

Signature	<i>G. Niccoli - Maen</i>	Date	<i>May 25, 2016</i>
Name (please print)	<i>G. Niccoli - Maen</i>	Title	<i>Superintendent</i>

**School District 41 - Burnaby
Greenhouse Gas Emissions by Source
for the 2015 Calendar Year (tCO₂e*)**



Total Emissions: 4,610

- 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 2015 (Generated May 25, 2016 10:01 AM)

Total offsets required: **4,602**. Total offset investment: **\$115,050**. 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.

2015 Carbon Neutral Action Report Survey

Organization Name:

School District 41 (Burnaby)

Please select your sector:

- School District

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

Please indicate which actions your PSO took in 2015:

Have developed an overall strategy/plan to reduce energy use in your organization's buildings inventory:

Yes

If Yes, please describe:

We have a Strategic Energy Management Plan which includes boiler upgrades, and changing out interior and exterior lighting to LED.

Three sites have received new boiler plant retrofits this year. 14 sites have undergone exterior LED retrofits. Numerous control upgrades and other mechanical system projects have taken place as part of the comprehensive energy conservation program.

Undertook evaluations of building energy use:

Yes

Performed energy retrofits on existing buildings:

Yes

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

No

Please list any other actions, programs or initiatives that your organization has introduced that support emissions reductions from buildings:

As part of the BC Hydro WCA Program, we are working with teachers, custodians, and students to change behaviours that will help reduce energy consumption and reduce emissions.

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

Indicate which actions your PSO took in 2015:

Have put in place an operations policy/program to support systematic reductions in fleet related emissions:

(e.g., program to convert fleet to renewable fuels)

No

If Yes, please describe:

(No response)

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

No

Replaced existing vehicles with hybrid or electric vehicles:

No

Took steps to drive less than previous years:

No

Please list any other actions, programs or initiatives that your organization has introduced that support emissions reductions from fleet combustion:

One smaller work vehicle is on order and we will continue with this practice in the future.

3) Supplies (Paper):

Indicate which actions your PSO took in 2015:

Have put in place an operations policy/program to facilitate a systematic reduction in paper-related emissions:

(e.g., policy to purchase 100% Recycled Content; default to double-sided printing)

Yes

If yes, please describe:

Orders for paper from schools and sites are restricted to purchasing only paper with 30% or 100% recycled content.

Have put in place an operations policy/program to facilitate behavioural changes from paper use:

(e.g. awareness campaign to reduce paper use):

No

If yes, please describe:

(No response)

Used only 100% recycled paper:

No

Used some recycled paper:

Yes

Used alternate source paper:

(e.g., bamboo, hemp, wheat etc.)

Yes

Please list any other actions, programs or initiatives that your organization has introduced that support emissions reductions from paper supplies:

(No response)

4) Other Sustainability Actions:

Please note that this section is optional

Business Travel

Created a low-carbon travel policy or travel reduction goal:

(low-carbon = lowest emission of greenhouse gas per kilometer per passenger)

No

Encouraged alternative travel for business:

(e.g. bicycles, public transit, walking)

No

Encouraged or allow telework/working from home:

No

Other:

(No response)

Education Awareness

Have a Green/Sustainability/Climate Action Team:

Yes

Supported green professional development:

(e.g. workshops, conferences, training)

Yes

Supported or provided education to staff about the science of climate change, conservation of water, energy and/or raw materials:

No

Other:

(No response)

Adaptation Planning for Climate Risks

Have assessed whether increased frequency of extreme weather events and/or long term changes in climate will affect your organization's infrastructure, its employees and/or its clients:

Yes

Have incorporated these anticipated changes in climate into your organization's planning and decision making:

Yes

Other:

Climate change will effect our heating/cooling of the buildings in the district as well as snow removal and water use for our sports fields.

Other Sustainability Actions

Established a water conservation strategy which includes a plan or policy for replacing water fixtures with efficient models:

Yes

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

(e.g., composting, collection of plastics, batteries)

Yes

Established green standards for goods that are replaced infrequently and/or may require capital funds to purchase:

(e.g., office furniture, carpeting, etc.)

Yes

Incorporated lifecycle costing into new construction or renovations:

Yes

Please list any other sustainability actions your organization has taken not listed above:

All schools in our district participate in the organic waste diversion. It has been a large and challenging project for the district. Each school has taken its own unique steps to implement and it has taken a true grass roots approach.