



**ABBOTSFORD**  
SCHOOL DISTRICT  
RESPECT OPPORTUNITY INNOVATION

**SD34 (Abbotsford)**

**2013 Carbon Neutral Action Report**

**Executive Summary**

Abbotsford School District has been diligently working for many years to conserve energy, reduce consumption, and improve the working environment for our staff and students. We are recognized as energy reduction leaders by BC Hydro and FortisBC, and as such, we get a lot of encouragement and support in the work we do.

We have retrofitted our properties to reflect the latest technologies in lighting, heating and building control systems. In late 2012, we were fortunate enough to obtain an "Energy Specialist" through a new association with FortisBC. The "Specialist" will be a tremendous help to the Energy Manager on the sustainable energy behavioural side of her work, as well as the preparation of programs that will reduce natural gas consumption.

We are committed to maintaining our position as one of the most energy efficient School Districts in BC, and will ensure that every reasonable effort is made to conserve energy and resources in order to reduce the School District's Carbon footprint and move towards Carbon neutrality.

Our Carbon Neutral Plan includes a Sustainable Energy Management Plan (SEMP) for electrical initiatives, and we are working on writing one for natural gas use as well. In 2013, our facilities upgrade plans moved fully ahead thanks to the continuation of our Annual Facilities Grant (AFG) by the Provincial Government in April, as well as support from a grant under the CNCP program.

Integration of environmentally sustainable solutions into the School District's business decisions are related to: Lighting, HVAC, new and renovation construction, and recycling programs.

We commenced with the Green Team program in early 2013, and along with the other initiatives we implemented, our electrical consumption *decreased* by 1%, *and* our gas consumption also *decreased* by almost 13%.

**2013 Greenhouse Gas (GHG) Emissions**

Our total GHG Emissions for calendar 2013 was 4,998 tCO<sub>2</sub>e. Part of this was for fuel for the bus fleet, which we don't need to purchase offsets for, so our total purchasable offset emissions were 3,953 tCO<sub>2</sub>e.

## **Offsets Applied to become Carbon Neutral in 2013**

The amount of offsets applied in 2013 was \$ 103,766.25.

## **Actions Taken to Reduce Greenhouse Gas Emissions in 2013**

As described above, this year's 'Green Team' program was reestablished with the assistance of our new Energy Specialist.

We continued to troubleshoot the anomalies we experienced at our brand new LEED Gold school, Abbotsford Senior Secondary, resulting in the discovery of some technical issues that prevented some of the systems from working as designed. This reflected in a reduction of gas consumption from 2,500 GJ in the Winter of 12/13 compared to 1,900 GJ so far this Winter.

We were very fortunate in receiving funding under the CNCP program, which enable us to move ahead with the boiler and domestic hot water heater retrofits at 6 of our elementary schools. When we compare the data from September to February for these schools between 2012 and 2013, we see a total reduction of 1,000 GJ, from 4,288 GJ in 2012 to 3,232 GJ in 2013.


## **Operational Changes in 2013**

We have commenced with retrofitting the second group of 4 schools under the BC Hydro Continuous Optimization (C.Op) program, after the completion of the work (Summer 2014) we are told that we will reduce our electrical consumption by 160,400 kWh and gas by 1,000 GJ, with resulting GHG savings. We are taking the knowledge gained in this program, and applying it to as many other schools (not in the C.Op program) as funding allows.

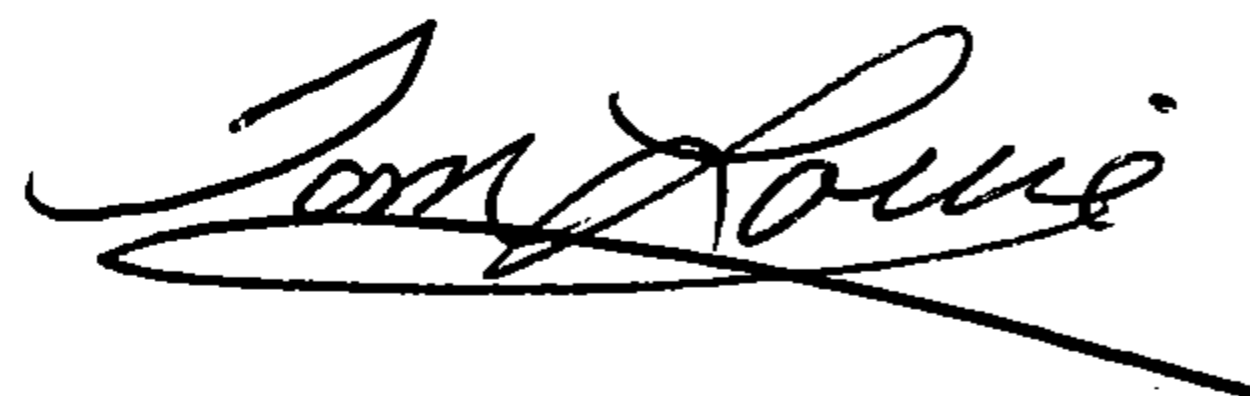
## **Plans to Continue Reducing Greenhouse Gas Emissions 2014 - 2015**

Our 2014-15 AFG year will include for 4 (four) schools (which is ten boilers) and domestic hot water conversions to high efficiency condensing type, costing close to a half million dollars. We will also be completely cleaning the ductwork/coils in 7 (seven) schools, DDC conversions for 2 (two) schools and a new C.Op school added to the list.

Signed:



**Ray Velestuk, Secretary/Treasurer**



**Tom Louie, Director of Facilities and Transportation**

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

Created Monday, March 24, 2014

Updated Wednesday, May 28, 2014

<https://fluidsurveys.com/surveys/cas-z/2013-cnar-form-bps-actions/32daa75681a7601d93e34cc97197a499/>

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## Page 1

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](mailto:climateactionsecretariat@gov.bc.ca).

Organization Name

*SD34 (Abbotsford)*

**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:

- 1. Continuing with Continuous Optimization program*
- 2. Reestablish school "Green Team" program*
- 3. Working with Destination Conversation program at selected schools.*
- 4. Designed and installed an "Energy Dashboard" at our Abby Senior group of schools*

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

Yes

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

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:

*Trying to implement double sided printing and replace several printers with a more centralized system where feasible.*

Actions Taken to Reduce Emissions - continued

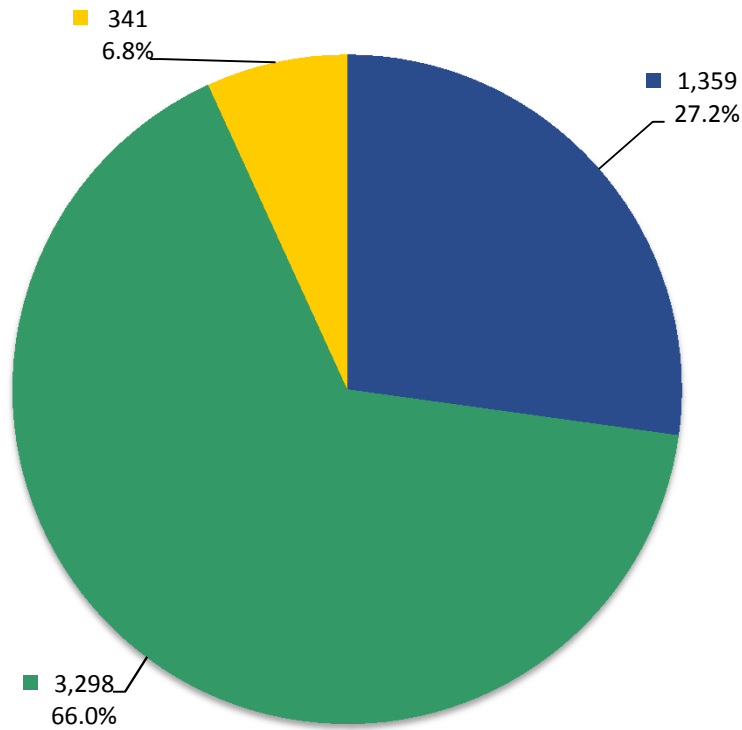
Explain how you plan to continue minimizing emissions in 2014 and future years:

*Our biggest GHG load is due to gas and electricity usage in our buildings, so we will continue to reduce consumption by Continuous Optimization, DDC controls methods. Our boiler replacement program will continue as funds dictate. For 2014, we are able to retrofit an additional 4 schools.*

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 34 - Abbotsford  
Greenhouse Gas Emissions by Source  
for the 2013 Calendar Year (tCO<sub>2</sub>e\*)**



**Total Emissions: 4,998**

- 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 2013 (Generated May 21, 2014 3:31 PM)**

Total offsets required: **3,953**. Total offset investment: **\$98,825**. Emissions which do not require offsets: **1,045** \*\*

\*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.