



## **Chilliwack School District 2014 Carbon Neutral Action Report**

### **Executive Summary**

2014 proved to be a challenging year for our district, partially due to continued job action and budget cuts and restraints. However, we were still able to continue moving forward with our Energy Management team, including facilities, on a number of projects designed to lower energy consumption, along with greenhouse gas emissions. Our district's "Green Teams" have enjoyed continued success at the student level, helping provide awareness, utilizing the Reduce, Reuse and Recycle theme, in our schools. With continued support from Fortis and BC Hydro with their programs and incentives, along with Administrative backing, we will continue to push forward toward meeting our reduction goals.

### **Overviews**

#### **Actions Taken to Reduce Greenhouse Gas Emissions in 2014**

- Continuing project of replacing metal halide perimeter and parking lot lighting with higher efficient LED models.
- Replacement of older, non-efficient domestic hot water boilers and tanks with high efficient tankless, on-demand models.
- Replacement of older, low efficient boiler plants, nearing the end of their work cycle, with new high efficient condensing models.
- Replacement of older, constant volume hot water circulating pumps, with higher efficiency, variable speed drive models.
- Encourage carpooling to meetings
- Working with Destination/Conservation student based Green Teams on behavioural changes to encourage energy, water and waste reductions. Our Green Teams won several awards from the Science World Green competition.
- Expand on existing sustainability/green awards and recognition program.
- Provide green tips to staff, students and parents, as well as members of the public, in websites, Superintendent's Memo and site based student Green Teams.

- Continue with a water conservation strategy which includes a plan or policy for replacing water fixtures and equipment with efficient models to reduce water use.
- Continue to monitor irregularities in utility invoices, to find any possible problems and reduce preventable waste of energy and water.
- Continue the practice of reusing materials wherever possible and diverting construction and demolition debris from landfills and incineration facilities.
- Eliminating creation of paper documents wherever possible and replacing with electronic documents at the district level.
- Continue working with City of Chilliwack and disposal companies to encourage and increase the use of recycle bins at all sites.
- A new contract with a different waste disposal company, aimed at reducing waste at all district levels.
- Replacement of old single pane windows with new energy efficient models.
- Electrical upgrades at several sites, including replacement of fluorescent lamps with low wattage type. Also, installation of room occupancy sensors to turn off lights, when rooms are unoccupied.
- Provided a Fortis sponsored Energy Specialist to assist with implementation of energy projects to lower Greenhouse gas emissions.

#### **Plans to Continue Reducing Greenhouse Gas Emissions 2015-16**

- Work with Transportation Manager to establish a low carbon travel policy and travel reduction goal.
- Continue to encourage staff to consider virtual attendance/presentations at events where possible.
- With the support of senior school district staff; continue to support green, sustainability, energy conservation and climate action teams.
- Provide education to staff, students and parents about the science of climate change whenever possible.
- Continue to provide education to staff and students about the conservation of water, energy and raw materials.
- Continue with lighting, boiler and DDC upgrades throughout the district, including the use of heat pump technology to replace existing roof top units in order to reduce Greenhouse Gas emissions.
- Explore possibility of LED replacements of certain lighting fixtures, including replacing T8's with new LED technology.

- Utilizing CNCP monies to replace older inefficient boiler plant with new condensing model, along with replacement of pumps and DDC upgrade at middle school site. .
- Fine-tuning of control systems in three new buildings to take full advantage of geo thermal and new higher technology based systems to reduce energy use.
- Try to increase use of recycled paper where possible in the district.
- Replacement of older inefficient domestic hot water systems with new high efficiency models.

### **2014 Greenhouse Gas Emissions**

Chilliwack School District #33's total emissions for 2014 include 29.2% Mobile Fuel Combustion from our fleet and other mobile equipment totalling 1002 tons of CO<sub>2</sub>, 65.5% from Stationary Fuel Combustion and Electricity (2247 tons of CO<sub>2</sub>) and 5.3% or 183 tons from paper supplies. Total emissions for 2014 are 3431 tons of CO<sub>2</sub>.

Total offsets purchased for 2014 are 2670. 603 from 2013 are carried over for a total of 3273.

Total offsets purchased will be 3273, with a total offset investment of \$81,825.00 plus GST.

Emissions that do not require offsets are 762, which when added to 2670, brings the number to 3431.

X Evelyn Novak

**Evelyn Novak**  
Superintendent of Schools

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

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## Organization Name

School District 33 Chilliwack

## 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:

Replacement of boilers, DHW heaters, furnaces and replaced with high efficient models.

Replaced older single pane windows with higher efficient type.

Lighting upgrades to reduce electrical consumption.

### 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:

Encouraged car-pooling, walking and bicycling to work.

**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:

Getting away from some printed forms and implementing electronic copies in their place.

### Page 3

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

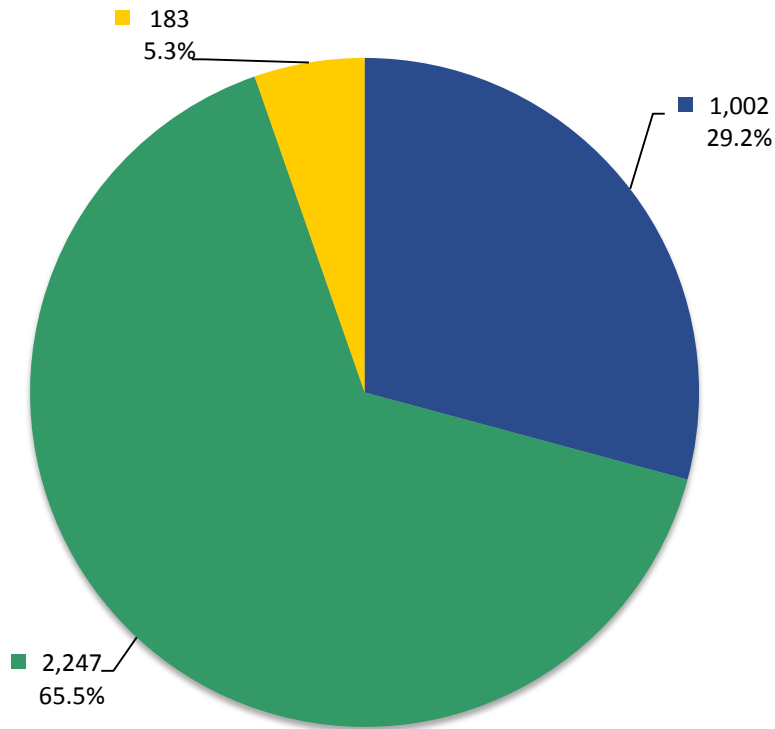
Explain how you plan to continue minimizing emissions in 2015 and future years:

Continue replacing inefficient boilers, furnaces, DHW heaters with high efficient models. Replace older heating pumps with modern variable speed drive models. Continue to install higher efficient lamps and fixtures, along with motion sensors in classrooms.

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 33 - Chilliwack  
Greenhouse Gas Emissions by Source  
for the 2014 Calendar Year (tCO<sub>2</sub>e\*)**



**Total Emissions: 3,431**

- 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 2014 (Generated June 23, 2015 12:13 PM)**

Total offsets required: **2,670**. Total offset investment: **\$66,750**. Emissions which do not require offsets: **762** \*\*

\*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.