



School District No. 46 (Sunshine Coast)

2013 Carbon Neutral Action Report

Executive Summary

The Board of Education of School District No. 46 (Sunshine Coast) supports and encourages sustainable practices and actions towards carbon neutrality. The school district's values state that; "Environmental sustainability is key to both responsible citizenship and a healthy future, and we play a fundamental role in advancing it through education, from our schools on out to our local and global communities."

A key objective for School District No.46 (Sunshine Coast) with its stated value is educating employees and students to become socially responsible community leaders by promoting behavioural changes for environmental sustainability for today and into the future. By introducing environmental educational programs, we hope to enable all learners to use critical thinking to solve problems, make informed decisions, and understand the potential consequences of decisions and to take actions to ensure the sustainability of the environment. These programs should allow all students and employees to understand personal, local and global environmental issues, develop respect for self and all living species, and develop skills necessary for learning about and understanding the environment so they feel empowered to take personal actions, and continue learning throughout their lives.

Planning for reducing greenhouse gas (GHG) emissions from operations occurred at a number of levels and resulted in the following four key actions in preparation for carbon neutrality continuing in 2013 with ongoing continuation into the future:

1. Discussion of district-wide activities towards carbon neutrality became a standing item on the agendas of Administrative and Principals' meetings.
2. Requirement that all contracts and agreements that the district enters into must adhere to sustainable practices (bus contracts in particular).
3. Change to electronic communication to reduce paper for meeting agendas and presentations for both staff and the Board of Education.
4. Evaluations by trade persons to assess all options with respect to finding the most sustainable, green and cost effective systems to reduce energy consumption.

Overviews

2013 Greenhouse Gas Emissions

• Mobile Fuel Combustion (Fleet and other mobile equipment) =	122.64	tonnes CO ₂ e
• Stationary Fuel Combustion and Electricity (Building) =	894.6	tonnes CO ₂ e
• Supplies (Paper) =	27.15	tonnes CO ₂ e
• Fugitive Emissions =	44.95	tonnes CO ₂ e
Total 2013 Greenhouse Gas Emission	1089	tonnes CO₂e

It was estimated that stationary fugitive emissions from cooling do not comprise more than 0.01% of School District No. 46 (Sunshine Coast) total emissions and an ongoing effort to collect or estimate emissions from this source would be disproportionately onerous. For this reason, emissions from this source have been deemed out-of-scope and have not been included in School District No. 46 (Sunshine Coast) total greenhouse gas emissions profile.

Offsets Applied to Become Carbon Neutral in 2013

• Total 2013 Greenhouse Gas Emissions =	1089	tonnes CO2e
• Emission Which Do Not Require Offsets =	4	tonnes CO2e
<u>Total Offset Purchased</u>	<u>1085</u>	<u>tonnes CO2e</u>
<u>Total Offset Investment (before taxes)</u>	<u>27125</u>	<u>cdn</u>

As required by section 5 of the Carbon Neutral Government Regulation, 4 CO2e of emissions resulting from the operation of school buses were reported as part of our greenhouse gas emissions profile 2013. However, they were not offset as they are out-of-scope under section 4 (2) (c) of the Carbon Neutral Government Regulation.

Actions Taken to Reduce Greenhouse Gas Emissions in 2013

Some specific initiatives that School District No. 46 (Sunshine Coast) undertaken in 2013 with regard to reducing greenhouse gas (GHG) emissions towards carbon neutrality from operations.

Ongoing Initiatives Prior Years Continued in 2013

Continued with:

- Lighting upgrades in schools.
- Replacing single pane glazing with double pane glazing.
- Upgrades and additions to DDC controls in schools.
- Installation of multifunction devices (fax, copier, scan) in all worksites and schools.
- Installation of default auto sleep functions on computers, monitors and CPUs.
- Required Energy Star rated model computer and appliance renewals.
- Use of 30% post consumer recycled paper for printers and photocopiers.
- Reduced vehicle emissions through carpooling.
- Use of electronic document library for filing documents.
- Regular maintenance of fleet vehicles.
- Evaluate mechanical systems and develop a program to upgrade where necessary.
- Raise the level of awareness for carbon sustainability through staff and student education and dialogue to inform and encourage sustainable practices and support behaviour change.
- Ensure that all new school and renovations of existing schools will be LEED NC Gold certificate compliance.
- Ensure shutdown of computers outside of regular business hours.
- Encourage the use of electronic documents rather than printed-paper documents.
- Encourage the utilization of web conferencing.
- Re-commissioning of existing mechanical systems.
- Began replacing boilers and pumping systems with variable speed motors and condensing boilers.
- Reduced fleet size by 5 vehicles and replaced 4 large cargo vans with 4 new, compact 4-cylinder vans.
- Replaced school exterior lighting with LED fixtures across district.

- Tightened HVAC schedules to reflect actual school usage hours.
- Lowered night setback temperatures district wide

Plans to Continue Reducing Greenhouse Gas Emissions 2013 – 2014

Going forward, over the next three years, School District No. 46 (Sunshine Coast) will develop protocols, policy and regulations to support key areas of greenhouse gas reduction. Examples include:


- Further explore geothermal and solar feasibilities.
- Continuous optimization of HVAC controls and systems.
- Establish district Sustainability Committee to support district activities and to support sustainable practices.
- Continue to replace district vehicles with more fuel-efficient vehicles.
- Retrofit mechanical systems with VFD motors and condensing boilers.
- Additional lighting controls.

Becoming carbon neutral is an important goal towards School District No. 46 (Sunshine Coast) sustainability plans in the following ways:


- It encourages all members of the organization to work on this together to be more successful and unified in our efforts towards carbon neutrality.
- Carbon sustainability practices provide good modeling for students and the wider community.
- Carbon sustainability demonstrates fiscal responsibility by using recycled materials, monitoring and reducing consumables and analyzing and reducing utilization of vehicles.

Some anticipated financial, environmental, and social benefits related to reducing GHG emissions include:

- Social - bringing together various employees and employee groups with students for a common purpose.
- Financial – working toward energy efficiency will result in savings.
- Environmental – expanding school recycling programs, reducing fuel and gas consumption, and monitoring travel will support the initiatives of the activities Sunshine Coast local governments.



Greg Kitchen
Assistant Superintendent of Schools



Nicholas Weswick
Secretary-Treasurer

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

Filled Friday, March 07, 2014

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 46

Actions Taken to Reduce Emissions

1) Stationary Fuel Combustion, Electricity (Buildings): Indicate which actions were taken in 2013:

Performed miscellaneous lighting upgrades. Re-commissioned HVAC control systems.

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

We are in the process of building a new LEED Gold elementary school and demolishing the old school.

Undertook an evaluation of overall building energy use.

(No response)

Please list any other actions taken to reduce emissions from Buildings:

Reduced HVAC occupancy schedules and added proper night setback temperatures.

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)

Replaced 6 gas vehicles with more efficient ones.

Replaced existing vehicles with hybrid or electric vehicles

(No response)

Reduced the overall number of fleet vehicles

Reduced overall fleet by 4.

Took steps to drive less than last year

(No response)

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 response)

Used only 100% recycled paper

(No response)

Used some recycled paper

Yes

Used alternate source paper (Bamboo, hemp, etc.)

(No response)

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:

We plan to continue to convert old boiler systems to new, condensing systems. We will continue to add occupancy sensors to all of our buildings to shut down heat, ventilation and lighting when rooms are vacant.

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

(No response)

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 response)

Virtual Meeting Technology Installed web-conferencing software (e.g., Live Meeting, Elluminate, etc.)

We are using virtual meeting software when possible.

Made desktop web-cameras available to staff

Yes

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

Yes

Encourage carpooling to meetings

Yes

Education and AwarenessHave 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

No

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

No

Planning for Climate ChangeHave 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

No

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

No

Provided green tips on staff website or in newsletters

No

Alternate Work/Commuting Options Allow for telework/working from home

No

Staff have the option of a compressed work week

Yes, some do.

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

Yes

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

In most locations.

Secure bicycle storage is provided

At some locations.

Other Sustainability Actions Establish a water conservation strategy which includes a plan or policy for replacing water fixtures with efficient models

We plan to begin the installation of waterless urinals when renovating washroom facilities.

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

Yes.

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

No

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.)

Yes, we have a regulation.

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

Yes.

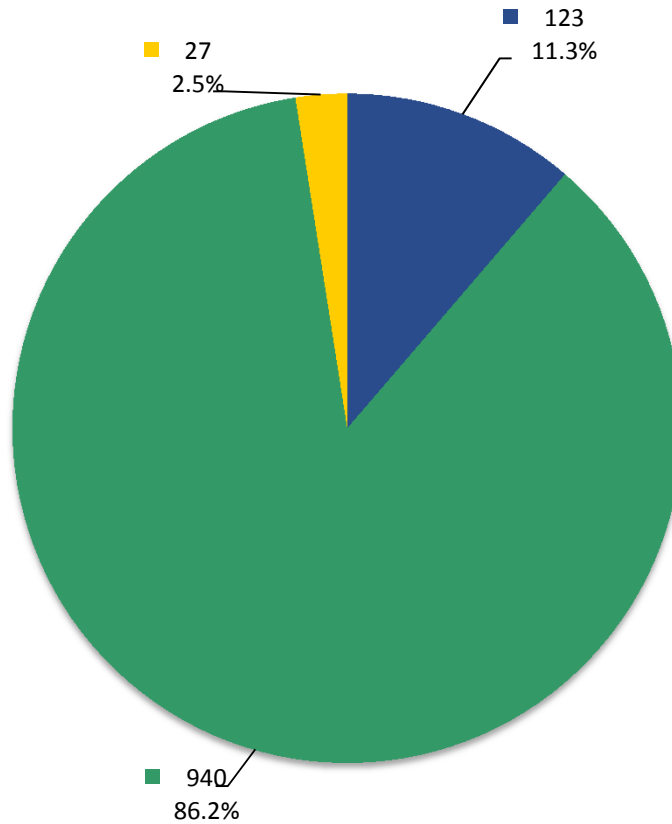
Please list and other sustainability actions you wish to report not included in the previous list.

(No response)

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Thank you for completing the 2013 Carbon Neutral Action Report. If this form is now complete please use the submit button below to forward it to the Climate Action Secretariat, otherwise you can save it to continue at a later time. Only use the submit button once the form is 100% complete. You can also save your own copy as a WORD or PDF file. Once you click the submit button, the Climate Action Secretariat will create a PDF summary of these actions to append to your final CNAR Overview when it is submitted. Together, these will be posted on the Ministry of Environment website by June 30, 2014 as your final report for 2013.

School District 46 - Sunshine Coast Greenhouse Gas Emissions by Source for the 2013 Calendar Year (tCO₂e*)



Total Emissions: 1,089

- 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 3:46 PM)

Total offsets required: **1,085**. Total offset investment: **\$27,125**. Emissions which do not require offsets: **4** **

*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.