



School District No. 46 (Sunshine Coast) 2015 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 2016 with ongoing continuation into the future:

1. Discussion of district-wide activities towards carbon neutrality and overall energy reduction strategies is a regular item on the agendas of Administrative 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

2015 Greenhouse Gas Emissions

| | |
|---|-----------------------------------|
| • Mobile Fuel Combustion (Fleet and other mobile equipment) = | 113.34 tonnes CO ₂ e |
| • Stationary Fuel Combustion and Electricity (Building) = | 673.13 tonnes CO ₂ e |
| • Supplies (Paper) = | 28.19 tonnes CO ₂ e |
| • Fugitive Emissions = | 35.42 tonnes CO ₂ e |
| <u>Total 2015 Greenhouse Gas Emission</u> | <u>850 tonnes CO₂e</u> |

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 2015

| | | |
|---|-----------------|--------------------|
| • Total 2015 Greenhouse Gas Emissions = | 850 | tonnes CO2e |
| • Emission Which Do Not Require Offsets = | 4 | tonnes CO2e |
| <u>Total Offset Purchased</u> | <u>846</u> | <u>tonnes CO2e</u> |
| <u>Adjustments to GHG's Reported in Prior years</u> | <u>+40</u> | <u>tonnes CO2e</u> |
| <u>Grand Total Offset for the 2015 Reporting Year</u> | <u>886</u> | <u>tonnes CO2e</u> |
| <u>Total Offset Investment (before taxes)</u> | <u>\$22,150</u> | <u>cdn</u> |

As required by section 5 of the Carbon Neutral Government Regulation, 4 tonnes CO2e of emissions resulting from the operation of school buses were reported as part of our greenhouse gas emissions profile 2014. 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 2015

Some specific initiatives that School District No. 46 (Sunshine Coast) undertaken in 2015 with regard to reducing greenhouse gas (GHG) emissions towards carbon neutrality from operations.

Ongoing Initiatives Prior Years Continued in 2015

- Replacing single pane glazing with double pane glazing.
- Replacing exterior doors and Improving weather stripping.
- Began upgrading DDC controls in all facilities and installed live energy and water metering that is accessible to all staff for teaching and learning.
- Upgrade of multifunction devices (fax, copier, scan) in all worksites and schools to latest energy efficiency and technology.
- Purchasing Energy Star rated model computer and appliance renewals.
- Use of 30% post consumer recycled paper for printers and photocopiers.
- Reducing vehicle emissions through carpooling and downsizing vehicles.
- Use of electronic document library for filing documents.
- Regular maintenance of fleet vehicles.
- Anti idling/efficient driving program.
- Evaluating mechanical systems and prioritizing systems to upgrade.
- Raising the level of awareness for carbon reduction through staff and student education to encourage sustainable practices and support behaviour change.
- Encourage the use of electronic documents rather than printed-paper documents.
- Encourage the utilization of web conferencing.
- Improved maintenance of existing mechanical systems.
- Installed condensing domestic hot water heaters
- Replaced a propane hot water generation plant with an air source heat pump for generating hot water for heating

Plans to Continue Reducing Greenhouse Gas Emissions 2016 – 2017

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 solar feasibilities.
- Continuous optimization of HVAC controls and systems in partnership with Fortis BC and BC Hydro.
- Continue with district Sustainability Committee and Student Energy Ambassadors to support district activities and to support sustainable practices.
- Continue to replace district vehicles with more fuel-efficient vehicles.
- Replace single-glazed windows with low emissivity double-glazing.
- Addition of HVAC controls and re-commissioning of existing HVAC systems.
- Roof replacements for better insulation.
- Boiler replacement projects.

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.

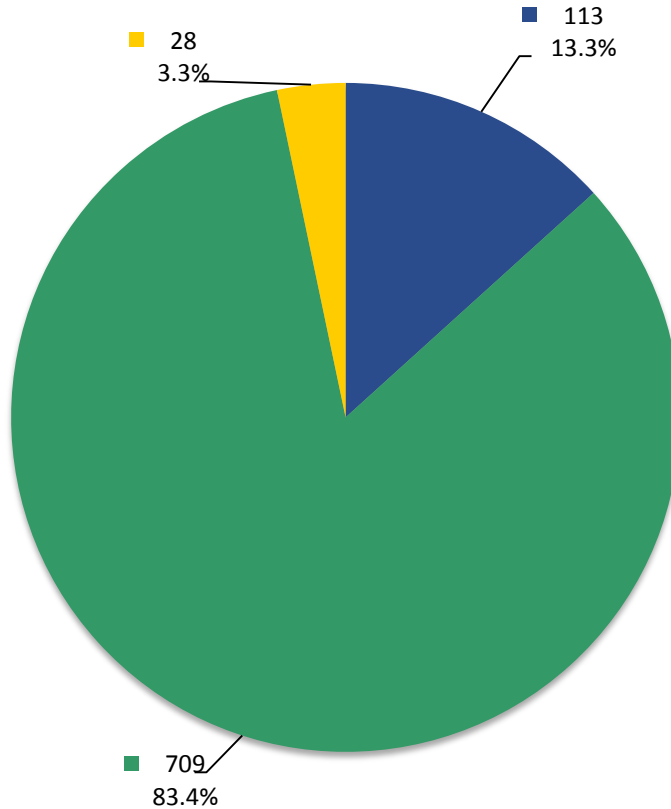


Patrick Bocking
Superintendent of Schools



Nicholas Weswick
Secretary-Treasurer

School District 46 - Sunshine Coast Greenhouse Gas Emissions by Source for the 2015 Calendar Year (tCO₂e*)



Total Emissions: 850

- 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 2015 (Generated May 25, 2016 10:04 AM)

Total offsets required: **846**. Total offset investment: **\$21,150**. 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.

2015 Carbon Neutral Action Report Survey

Organization Name:

School District 46 (Sunshine Coast)

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:

Began a district wide, student led energy reduction campaign.

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:

(No response)

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):

Yes

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:

(No response)

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)

No

If yes, please describe:

(No response)

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.)

No

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:

Yes

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:

No

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

Yes

Other:

(No response)

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.)

No

Incorporated lifecycle costing into new construction or renovations:

Yes

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

(No response)