

CNAR OVERVIEW

Title: “2016 Carbon Neutral Action Report”

Organization name: *Sea to Sky School District #48*

Declaration statement: This Carbon Neutral Action Report for the period January 1st, 2016 to December 31st, 2016 summarizes our emissions profile, the total offsets to reach net-zero emissions, the actions we have taken in 2016 to reduce our greenhouse gas emissions and our plans to continue reducing emissions in 2017 and beyond.

By June 30, 2017 *Sea to Sky School District #48's* final *Carbon Neutral Action Report* will be posted to our website at <http://www.sd48.org/>.

Overview: In 2016, School District 48 took action to reduce GHG emissions through the following initiatives:

Howe Sound Senior Secondary Retro-commissioning through BC Hydro Continuous Optimization Program: this school underwent an energy study to identify performance optimization opportunities. The study findings were implemented in the period of Dec 2015 to Jan 2016. The work focused on demand based ventilation reducing unnecessary heating loads during unoccupied times. The savings of this initiative have been verified and were submitted as a CNG Success Story.

Don Ross Middle School Retro-commissioning through BC Hydro Continuous Optimization Program: this school underwent an energy study to identify performance optimization opportunities. The study findings were implemented in the period of Jul 2016 to Sep 2017. The work focused on demand based ventilation reducing unnecessary heating loads during unoccupied times. The savings of this initiative will be evaluated and reported on in next year's reporting cycle.

Whistler Senior Secondary and Pemberton Senior Secondary Retro-commissioning through BC Hydro Continuous Optimization Program: this school underwent an energy study to identify performance optimization opportunities. The study findings were implemented in the period of Nov 2016 to Feb 2017. Work was based on implementing variable air flow to match space demand. The savings of this initiative will be evaluated and reported on in next year's reporting cycle.

Unit ventilator and window retrofit in older wing of Howe Sound Senior Secondary in Squamish (phase 1 of 2): the unit ventilators allow for better controllability of heating and ventilation in classrooms, in direct response to occupancy demands. Optimized controllability results in less energy use overall.

Student engagement (2016-2017): students in a leadership program at Don Ross Middle School and Pemberton Senior Secondary. The student leadership teams at each school developed a week-long program for promoting energy conservation awareness amongst the student body and school staff.

School District 48 has an **ongoing contract for energy management services** with Rede Energy Solutions Ltd. (“Rede”). Rede is an integral part of the school district's facilities and operations team. Responsible for establishing and implementing the overall energy management strategy for the school district, Rede works with facilities leadership and staff to set energy and GHG emissions reduction targets, identify improvement opportunities, conduct building energy studies, secure grants and incentive funding, and oversee the implementation of

improvement projects. Rede also participates in the student engagement initiative in facilitative and technical advisory roles. Energy savings and GHG emissions reductions are evaluated annually and new targets are set annually, as part of the strategic energy management plan to continue reducing emissions in 2017 and beyond.

Emissions and Offset Summary Table:

<i>Sea to Sky School District #48</i> GHG Emissions and Offset for 2016 (tCO ₂ e)	
GHG Emissions created in Calendar Year 2016:	
Total Emissions (tCO ₂ e)	1,828
Total Offsets (tCO ₂ e)	1,363
Adjustments to GHG Emissions Reported in Prior 2015:	
Total Emissions (tCO ₂ e)	26
Total Offsets (tCO ₂ e)	26
Grand Total Offsets for the 2016 Reporting Year:	
Grand Total Offsets (tCO ₂ e)	1,389

Retirement of Offsets:

In accordance with the requirements of the Greenhouse Gas Reduction Targets Act and Carbon Neutral Government Regulation, *Sea to Sky School District #48 (the Organization)* is responsible for arranging for the retirement of the offsets obligation reported above for the 2016 calendar year, together with any adjustments reported for past calendar years. The Organization hereby agrees that, in exchange for the Ministry of Environment ensuring that these offsets are retired on the Organization’s behalf, the Organization will pay within 30 days, the associated invoice to be issued by the Ministry in an amount equal to \$25 per tonne of offsets retired on its behalf plus GST.

Executive sign-off:



05/16/17

Signature

Date

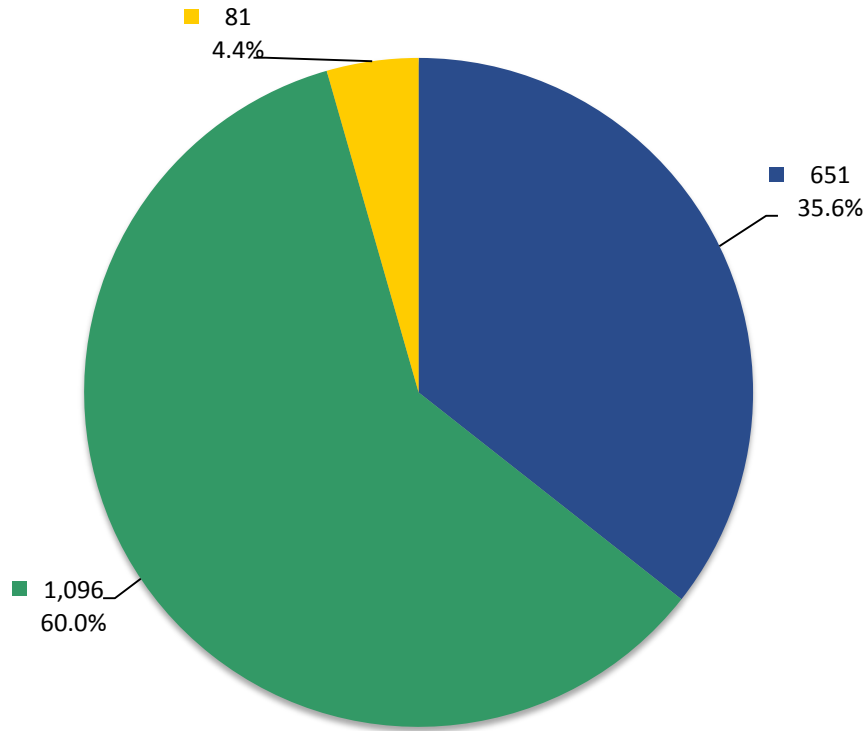
Lisa McCullough

Superintendent of Schools

Name (please print)

Title

**School District 48 - Sea to Sky
Greenhouse Gas Emissions by Source
for the 2016 Calendar Year (tCO₂e*)**



Total Emissions: 1,828

- 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 2016 (Generated May 15, 2017 4:04 PM)

Total offsets required: **1,363**. Total offset investment: **\$34,075**. Emissions which do not require offsets: **465** **

*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.

2016 Carbon Neutral Action Report Survey

Part One (external)

Contact Name(s):

Ian Currie

Organization Name:

School District 48 (Sea to Sky)

Please select your sector:

- School District

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

During 2016, did your organization take any of the following actions to support emissions reductions from buildings?

Select all that apply

- Conducted an energy audit/study of building(s) in the organization's portfolio
- Performed energy retrofits of the organization's buildings.: seven

Briefly describe your organization's plans to continue reducing emissions from its stationary sources in future years.

*-Boiler Retrofits
-Foster and support student sustainable schools initiatives
-window, insulation and building envelope upgrades
-major lighting retrofits
-further continuous optimisation projects
-continue to provide professional development to staff on latest energy savings opportunities
-continue ongoing contracted Energy Management services
-Development of Strategic Energy Management Plan*

During 2016, did your organization participate in utility-sponsored energy demand management program(s) (e.g. BC Hydro's Energy Management (Manager))?

No

If yes, please describe briefly:

(No response)

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

During 2016, did your organization take any of the following actions to support emission reductions from its mobile sources?

Select all that apply

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

Briefly describe your organization's plans to continue reducing emissions from its mobile sources in future years.

Purchase more energy efficient vehicles and gas powered equipment for ongoing fleet replacement

3) Supplies (Paper):

During 2016, did your organization take any of the following actions to support emissions reductions from paper supplies?

Select all that apply

- Awareness campaign focused on reducing office paper use.
-

Briefly describe your organization's plans to continue reducing emissions associated with its office paper use in future years.

-continue to encourage paperless meetings and presentations
-continue to expand the use of collaborative software
-continue to utilise electronic document libraries
-continue to encourage double-sided document printing

4) Other Sustainability Actions:

Business Travel:

During 2016, did your organization take any of the following actions to support emissions reductions from business travel?

Select all that apply

(No response)

Education Awareness:

During 2016, did your organization have any of the following programs or initiatives to support sustainability education and awareness?

Select all that apply

-
- Green, Sustainability or Climate Action Team
 - Supported or provided education to staff about the science of climate change, conservation of water, energy and/or raw materials

Other Sustainability Actions:

During 2016, did your organization have any of the following programs or initiatives to support sustainability?

Select all that apply

-
- An operations policy or program to facilitate the reduction and diversion of building occupant waste (e.g., composting, collection of plastics, batteries) from landfills or incineration facilities
-