

CNAR OVERVIEW

Title: "2015 Carbon Neutral Action Report"

Organization name: School District No. 48 (Sea to Sky)

Declaration statement: This Carbon Neutral Action Report for the period January 1st, 2015 to December 31st, 2015 summarizes our emissions profile, the total offsets to reach net-zero emissions, the actions we have taken in 2015 to reduce our greenhouse gas emissions and our plans to continue reducing emissions in 2016 and beyond.

By June 30, 2016 School District 48's final *Carbon Neutral Action Report* will be posted to our website at <http://www.sd48.org/>.

Overview: In 2015, School District 48 took action to reduce GHG emissions through the following initiatives:

Unit ventilators installed 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.

Boiler plant optimization at Myrtle Philip Community School in Whistler (spanning 2014-2015): the school realized a reduction of 28 tCO₂e as a result of the boiler optimization efforts.

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 Nov 2015 to Jan 2016. The savings of this initiative will be evaluated and reported on in next year's reporting cycle.

Pellet Boiler Plant in Squamish: a new pellet boiler plant has been purchased by the school district from the 2015/16 School Enhancement Program funding, and will be installed next year, subject to obtaining funding for phase 2 of this project. The pellet boiler will be the primary heat source for Howe Sound Secondary and Squamish Elementary schools with the existing gas fired boilers to be used as backup. Estimated GHG reduction is 257.6 tCO₂e annually, to be verified post installation and reported on in next year's reporting cycle.

Student engagement (2015-2016): students in a leadership program at Don Ross Middle School and Howe Sound Senior Secondary participated in BC Hydro's Energy Ambassador Program. The student leadership teams at each school developed a week-long program for promoting energy conservation awareness amongst the student body and school staff. Each team presented their projects to the school district's board of directors, and were well received. As a result of participating in the program, the students received a \$2,000 stipend that the schools used to install occupancy sensors for lighting control. Pleased with the program's success, participation has been renewed for the current school year and expanded to include participants for Whistler Senior Secondary and Pemberton Senior Secondary.

School District 48 has an **ongoing contract for energy management services** with Rede Energy Solutions Ltd. ("Rede") since May 2014. 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 2016 and beyond.

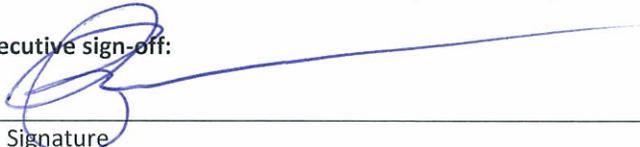
Emissions and Offset Summary Table:

School District 48 GHG Emissions and Offset for 2015 (TCO2E)	
GHG Emissions created in Calendar Year 2015:	
Total Emissions (tCO ₂ e)	1,707
Total Offsets (tCO ₂ e)	1,316
Adjustments to GHG Emissions Reported in Prior Years:	
Total Emissions (tCO ₂ e)	1
Total Offsets (tCO ₂ e)	1
Grand Total Offsets for the 2015 Reporting Year:	
Grand Total Offsets (tCO ₂ e)	1,317

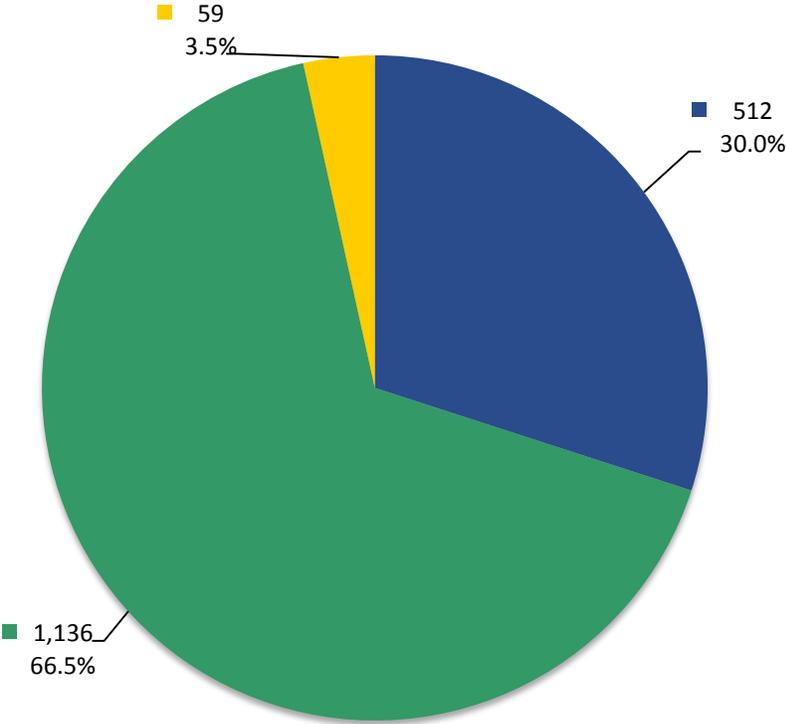
Retirement of Offsets:

In accordance with the requirements of the Greenhouse Gas Reduction Targets Act and Carbon Neutral Government Regulation, School District 48 (**the Organization**) is responsible for arranging for the retirement of the offsets obligation reported above for the 2015 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 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:


 Signature _____ Date May 26, 2016
LISA MCCULLOUGH _____ SUPERINTENDENT
 Name (please print) _____ Title

**School District 48 - Sea to Sky
Greenhouse Gas Emissions by Source
for the 2015 Calendar Year (tCO₂e*)**



Total Emissions: 1,707

- 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 10:06 AM)
Total offsets required: **1,316**. Total offset investment: **\$32,900**. Emissions which do not require offsets: **391** **

*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 48 (Sea to Sky)

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:

Have contracted Energy Management services from REDE Energy Solutions to develop our SEMP. We are currently monitoring and tracking our energy use in key facilities.

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:

Please see CNAR overview. Projects are listed there.

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)

Yes

If Yes, please describe:

Have an anti idling policy. Use biodiesel in our bus fleet.

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

Yes

Replaced existing vehicles with hybrid or electric vehicles:

Yes

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)

Yes

If yes, please describe:

Purchase recycled paper.

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)

Yes

Encouraged or allow telework/working from home:

No

Other:

(No response)

Education Awareness

Have a Green/Sustainability/Climate Action Team:

No

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:

No

Other:

(No response)

Other Sustainability Actions

Established a water conservation strategy which includes a plan or policy for replacing water fixtures with efficient models:

No

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)