



Langley
Schools

School District No.35
(Langley)

2016 Carbon Neutral Action Report

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Declaration Statement

This Carbon Neutral Action Report (CNAR) for the period from January 1 to December 31, 2016 summarizes our emissions profile, the amount of offsets purchased to achieve net zero emissions, the action we have taken in 2016 to reduce our greenhouse gas (GHG) emissions and our plans to continue reducing emissions in 2017 and into the future.

Overview

On behalf of School District No. 35 (Langley), we are pleased to submit our CNAR for 2016. The purpose of the CNAR is to demonstrate our District's ongoing commitment to the reduction of our greenhouse gas emissions. Our Board continues to work diligently to improve the learning environment for students and staff by demonstrating leadership in the reduction of our carbon footprint.

Energy savings and subsequent GHG emission reductions continue to be a priority in our ongoing commitment towards carbon neutrality. This is shown through the revision to our sustainability policy which assigns accountability and emphasizes energy and resource conservation.

In addition, ongoing upgrades of both our mechanical and electrical systems reduce our carbon footprint by providing increased efficiency and greater operational control. With the support of BC Hydro we have completed eleven lighting upgrades in 2016 resulting in over 370,000 kWh savings. In addition, with the support of the School Enhancement Program, we have performed DDC upgrades at three elementary schools which will improve operational control of mechanical equipment and create opportunities to reduce carbon emissions.

In 2017, we are planning to upgrade a boiler plant at one of our secondary schools and to purchase materials to upgrade the HVAC system at one of our elementary schools. In addition, we will be completing exterior and gym lighting projects at 14 schools. We are also committed to building a sustainable digital future by reducing printed paper by 35% within five years.

Our District is committed to GHG emission reduction and carbon neutrality through energy efficiencies and reduction of waste. This is reflected in our Sustainable Energy Management Plan which shows a 3-year rolling investment in these efficiencies. We invest what we can and with the support of our external stakeholders are able to accomplish our goals.

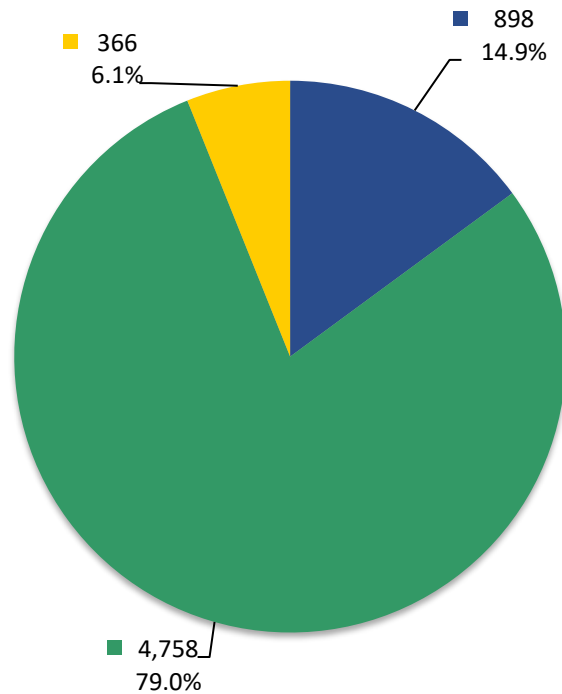


Gordon Stewart

Acting Superintendent

Greenhouse Gas Emissions

School District 35 - Langley Greenhouse Gas Emissions by Source for the 2016 Calendar Year (tCO₂e*)



Total Emissions: 6,022

- 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 19, 2017 1:31 PM)

Total offsets required: **5,475**. Total offset investment: **\$136,875**. Emissions which do not require offsets: **547 ****

*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.

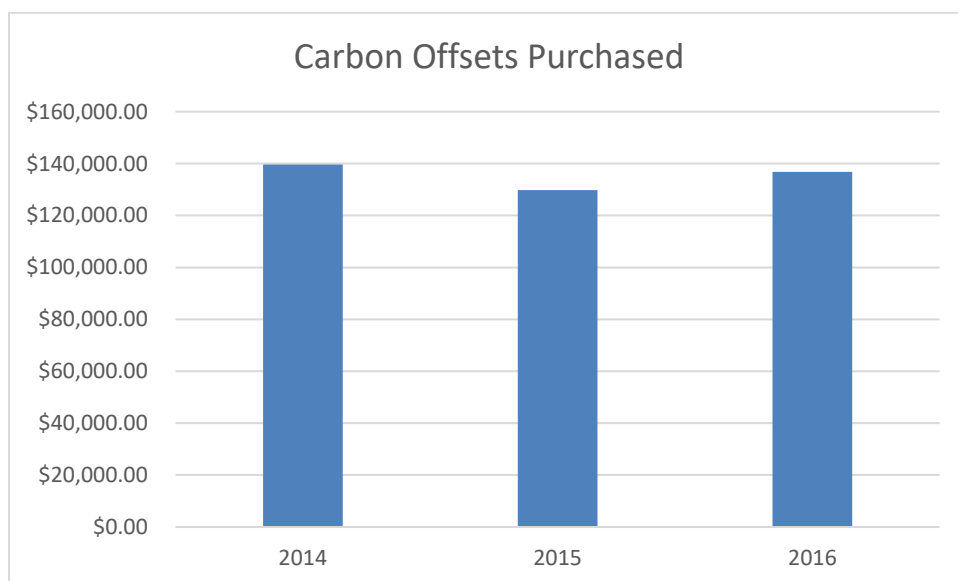
** Under the *Carbon Neutral Government Regulation of the Greenhouse Gas Reduction Targets Act*, all emissions from the sources listed above must be reported. As outlined in the regulation, some emissions do not require offsets.

Emissions and Offsets Summary Table

School District #35 (Langley) GHG Emissions and Offsets for 2016 (tCO ₂ e)	
GHG Emissions created in Calendar Year 2016	
Total Emissions (tCO ₂ e)	6,022
Total Offsets (tCO ₂ e)	5,475
Adjustments to GHG Emissions Reported in Prior Years	
Total Emissions (tCO ₂ e)	112
Total Offsets (tCO ₂ e)	112
Total Emissions for Offset for the 2016 Reporting	
Total Offsets (tCO ₂ e)	5,587

Greenhouse Gas Emissions and Offsets for Previous 3 Years

Year	Total GHG Emissions (tCO ₂ e)	Exempt GHG Emissions (tCO ₂ e)	Offsets Purchased (\$)
2014	6,035	451	\$139,600.00
2015	5,707	516	\$129,775.00
2016	6,022	547	\$136,875.00



The School District of Langley is proud that even with the addition three new schools since 2012 we are still maintaining relatively stable levels of emissions. The 2016 carbon emissions were higher than 2015 due to colder weather experienced.

Actions Taken to Reduce Greenhouse Gas Emissions

- Six exterior lighting upgrades completed
 - Brookwood Secondary
 - DW Poppy Secondary
 - RE Mountain Secondary
 - HD Stafford Middle
 - Maintenance Facility
 - Betty Gilbert Elementary
- Five Interior lighting upgrades completed
 - RC Garnett Elementary
 - Dorothy Peacock Elementary
 - James Hill Elementary
 - Fundamental Elementary
 - Maintenance Facility - Bus Garage
- Mechanical Studies performed for Langley Meadows and Walnut Grove Secondary
- Heat pump technology used at several sites
- Building a Sustainable Digital Transformation to reduce printed by 35% within five years
- Behavioral programs to reduce energy consumption across the district
- Paperless attendance sheets at the maintenance facility
- Feasibility study for retrofitting external lighting to LEDs
- Green teams to promote sustainability
- Organic waste redirection

Link to Other Publicly-Available Sustainability Information from Your Organization

BC Hydro has worked with the Langley School District for many years now with partial funding of our Energy Manager position and incenting many of our energy initiatives. They have assisted us in the creation of our Sustainable Energy Management Plan and work closely with us in achievement of our goals. To find out more about Sustainability at the Langley School District visit our website at www.sd35.bc.ca -> Administrative Departments -> Energy and Environment.

2016 Carbon Neutral Action Report Survey

Part One (external)

Contact Name(s):

Ronald Lam

Organization Name:

School District No.35 (Langley)

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.: 11
- Other actions? Please describe briefly.: Behavioral change campaigns for energy conservation

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

*Continue to perform audits and retrofits for both electrical and mechanical systems.
Explore heat pump feasibility for portables*

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

Yes

If yes, please describe briefly:

SD35 has a BC Hydro funded energy manager. With it we perform periodic strategic energy management plans and energy management assessments. Furthermore there is a continual yearly plan for projects to reduce electrical consumption through capital projects.

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): 1
-

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

In the future there are plans to ensure the work order process can be completed on mobile devices thus reducing the amount of driving

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.

*Sustainable Digital Transformation aims to reduce printed paper by 35% within 5 years.
Digital work flows will reduce paper consumption.*

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

-
- Encouraged or allowed teleworking or working from home
-

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
 - Support for professional development on sustainability (e.g. workshops, conferences, training)
 - 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

-
- A water conservation strategy which may include a plan or policy for replacing water fixtures with efficient models
 - 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
 - Lifecycle costing of new construction or renovations
-