



New
Westminster
Schools

School District

No. 40

NEW WESTMINSTER

2016

CARBON NEUTRAL ACTION REPORT

OVERVIEW

School District #40, New Westminster is pleased to submit the 2016 Carbon neutral Action Report. New Westminster School district continues to actively work towards carbon neutrality. The district strives to ensure that every effort is made to conserve energy and natural resources while exercising sound financial management. Each employee, student and school volunteer, is encouraged to actively participate in district sustainability programs to the point that acting in a sustainable manner is second nature. Reducing energy use and greenhouse gas emissions will benefit the district by a reduction in expenses, lessening the environmental impact on the surrounding area, and providing a positive example within the community.

School District #40 is proud of our continued work towards achieving carbon neutrality.

DECLARATION STATEMENT

This Carbon Neutral Action Report for the period January 1, 2016 to December 31, 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.

EMISSIONS REDUCTION ACTIVITIES

We continue to utilize energy management software on computers and to manage default duplex printing on print devices. We have increased scanning access on all photocopiers and our school sites are using re-cycled newsprint. Our employees will be reminded of energy conservation by stickers placed at their site reminding them to turn off the lights. The district has initiated an energy management program district wide.

The District has implemented fuel combustion and electrical reductions on four schools following our five year capital plan. This included electrical upgrades with motion detectors, retrofitted to LED lighting, DDC upgrades, condensing boilers and automated control upgrades.

We are implementing an Energy Management Program and plan to reduce gas emissions by introducing a DDC program and installing HVAC equipment upgrades. We plan to re-commission our mechanical systems at all schools on our five year school renewal plan. The school district is implementing a vehicle replacement program that will replace current vehicles with smaller more efficient models. To reduce paper emissions, the district is encouraging the staff to use electronic messages and to use re-cycled paper.

We continue to support New Westminster students and employees in their efforts to be energy efficient.




School District #40 GHG Emissions and Offset for 2016 (tCO₂e)	
GHG Emissions created in Calendar Year 2016	
Total Emissions (tCO ₂ e)	1658
Total Offsets (tCO ₂ e)	1655
Adjustments to GHG Emissions Reported in Prior Years	
Total Emissions (tCO ₂ e)	7
Total Offsets (tCO ₂ e)	7
Grand Total Offsets for the 2016 Reporting Year	
Grand Total Offsets (tCO ₂ e)	1662

Retirement of Offsets:

In accordance with the requirements of the Greenhouse Gas Reduction Targets Act and Carbon Neutral Government Regulation, School District #40 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:

	April 12 2017
Signature	Date
Kevin Lorenz	A. Secretary Treasurer
Name (please print)	Title



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April 7, 2017

Reporting Unit:

Welcome Mary Luccock

These are the School District 40 - New Westminster GHG Emissions and Offsets (tCO₂e)* for Reporting Year 2016 as of April 7, 2017

On May 1st, 2017 these will be the final numbers for 2016 to be reported in the Carbon Neutral Action Report to the Climate Action Secretariat.

GHG's created in Calendar Year 2016		
Total Emissions	Total Offsets	View Reports
1,658	1,655	

Adjustments to GHG's Reported in Prior Years		
Total Emissions	Total Offsets	View Event Log
7	7	

Grand Total Offset for the 2016 Reporting Year
 This is the total of emissions that require offset purchases for Reporting Year 2016
 Grand Total Offsets
 1,662

*Each greenhouse gas has been converted to a standard measurement (tCO₂e) by multiplying its emissions by its global warming potential (GWP). The Totals for tCO₂e are shown here rounded to the nearest whole metric tonne as only whole tonnes of tCO₂e can be purchased for offsets.

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Greenhouse Gas Emissions

- 2016 Greenhouse Gas (GHG) Emissions: 1655.56 tonnes of CO₂ e

	<u>Emissions Reported in</u> 2015	<u>Emissions Reported in</u> 2016
Total Emissions	1601	1658
Emissions for offsets	1599	1655

The following chart gives a detailed comparison of the Greenhouse Emissions for New Westminster School district's calendar 2015 to 2016.

<i>Emission Source</i>	<i>2015</i> <i>(tCO₂e)</i>	<i>2016</i> <i>(tCO₂e)</i>	<i>2015</i> <i>vs</i> <i>2016</i>
<i>Buildings</i>			
<i>Electricity</i>	<i>38.17</i>	<i>43.9</i>	
<i>Natural Gas & Propane</i>	<i>1394.67</i>	<i>1423.46</i>	<i>+34.52</i>
<i>Fleet -Mobile</i>	<i>74.34</i>	<i>95.6</i>	<i>+21.26</i>
<i>Office Paper</i>	<i>93.74</i>	<i>94.98</i>	<i>+1.24</i>
Total Emissions	1600.92	1657.94	+57.02

SMARTTool Greenhouse Gas Inventory Report

Reporting Entity: School District 40 - New Westminster

Reporting Year: Calendar Year 2016

Greenhouse Gases in Tonnes

Measure	Quantity	Greenhouse Gases in Tonnes				
		CO ₂	CH ₄	N ₂ O	tCO ₂ e ¹	
Scope 1 (Direct) Emissions						
Mobile Combustion (Fleet)	Litres	38,403.30	86.32	0.01	0.02	92.59
Stationary Combustion, Estimated ²	GigaJoules	359.36	17.82	0.00	0.00	17.92
Stationary Combustion, Reported ³	GigaJoules	28,128.53	1,397.05	0.03	0.03	1,405.54
Total Scope 1 Emissions			1,501.19	0.04	0.05	1,516.05
Scope 2 (Indirect) Emissions						
Purchased Energy, Estimated ²	GigaJoules	205.88	0.62	0.00	0.00	0.62
Purchased Energy, Reported ³	GigaJoules	14,425.85	43.28	0.00	0.00	43.28
Total Scope 2 Emissions			43.90	0.00	0.00	43.90
Scope 3 Emissions						
Business Travel and Office Paper						
Office Paper	Packages	14,760.00	94.98	0.00	0.00	94.98
Total Scope 3 Emissions			94.98	0.00	0.00	94.98
Emissions from Biomass						
Total Biomass Emissions			3.01	0.00	0.00	3.01
Total Emissions, Calendar Year 2016			1,643.07	0.04	0.05	1,657.94

1. Global Warming Potential (GWP) has been applied only to the tCO₂e values.

2. Estimated data has been calculated based on the methods described in the Methodology Document.

3. Reported data refers to consumption which has been directly billed to the organization.



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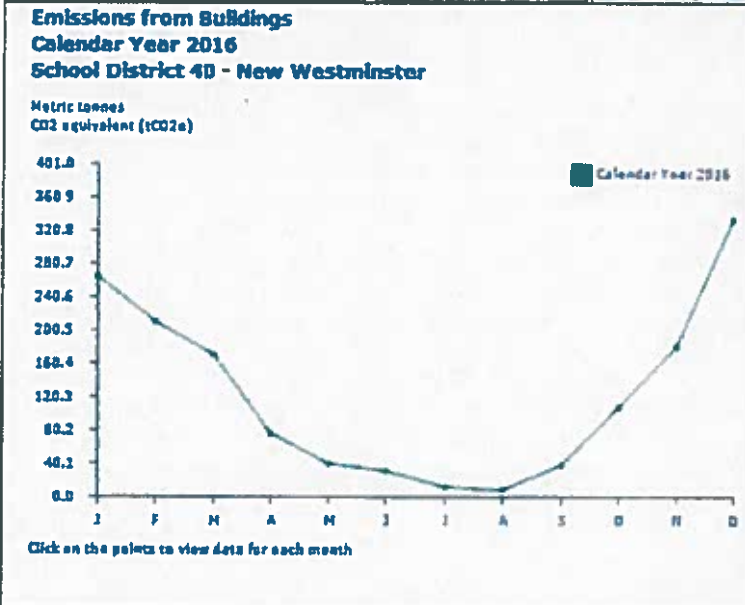
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April 10, 2017

Reporting Unit:

School District 40 - New Westminster Calendar Year 2016 Show Report



Emissions from Buildings Calendar Year 2016, School District 40 - New Westminster

Reporting Unit	Fuel Type	Energy (GJ)	Greenhouse Gases in Tonnes				
			CO ₂	BioCO ₂	CH ₄	N ₂ O	tCO ₂ e ¹
School District 40 - New Westminster	Electricity	14,425.85	43.28	0.00	0.00	0.00	43.28
	Electricity Estimate	205.88	0.82	0.00	0.00	0.00	0.82
	Natural Gas	27,890.97	1,382.83	0.00	0.03	0.03	1,391.01
	Natural Gas Estimate	359.38	17.82	0.00	0.00	0.00	17.82
	Propane Gas	237.57	14.22	0.00	0.00	0.00	14.53
		43,119.62	1,458.76	0.00	0.03	0.03	1,467.36
Total Emissions, Calendar Year 2016		43,119.62	1,458.76	0.00	0.03	0.03	1,467
Carbon Neutral or Offset Exempt			0.00	0.00	0.00	0.00	0
Total for Offsets⁴			1,458.76	0.00	0.03	0.03	1,467

Each greenhouse gas has been converted to a standard measurement (tCO₂e) by multiplying its emissions by its global warming potential (GWP). The GWP of carbon dioxide (CO₂) from both anthropogenic and biogenic sources is 1, methane (CH₄) is 25, and nitrous oxide (N₂O) is 298. The Totals for tCO₂e are shown here rounded to the nearest whole metric tonne as only whole tonnes of tCO₂e can be purchased for offsets.

2. Estimated data has been calculated based on the methods described in the Methodology Document.

3. Reported data refers to consumption which has been directly billed to the organization.

4. The tCO₂e value from the "Total for Offsets" line represents the quantity of offset purchases required to become carbon neutral.

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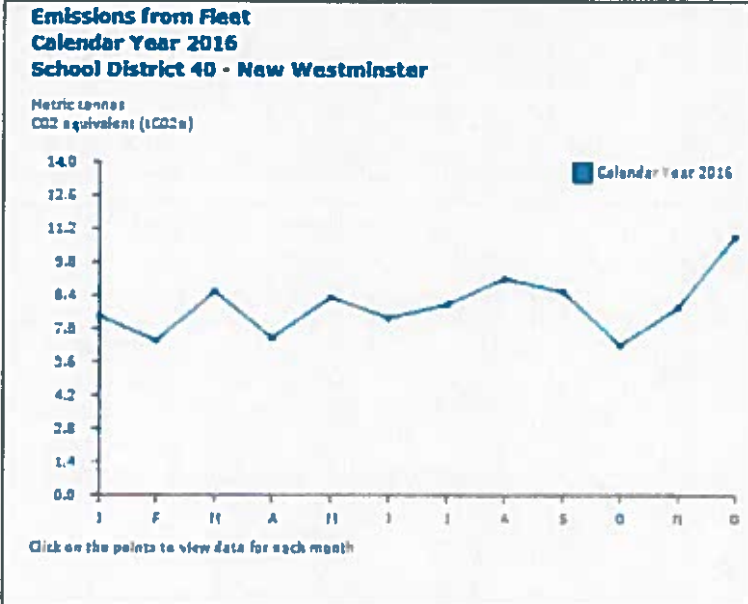
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March 3 2017

Reporting Unit:

School District 40 - New Westminister Calendar Year 2016 Show Report



Mobile Combustion Calendar Year 2016, School District 40 - New Westminister

Reporting Unit	Fuel Type	Volume (L)	Greenhouse Gases in Tonnes				
			CO ₂	BioCO ₂	CH ₄	N ₂ O	tCO ₂ e ¹
School District 40 - New Westminister Light Duty Truck/SUV's, minivans, full-size vans and pickup trucks							
	Diesel	1,488.10	3.84	0.15	0.00	0.00	4.08
	Gasoline	33,808.80	73.94	2.54	0.01	0.02	82.49
		35,094.90	77.78	2.68	0.01	0.02	86.57
Heavy Duty Road vehicles with a gross vehicle weight rating (GVWR) over 3900 Kg (8600 lbs)							
	Diesel	3,308.40	8.54	0.33	0.00	0.00	9.03
		3,308.40	8.54	0.33	0.00	0.00	9.03
		38,403.30	86.32	3.01	0.01	0.02	95.60
Total Emissions, Calendar Year 2016		38,403.30	86.32	3.01	0.01	0.02	96
Carbon Neutral or Offset Exempt			0.00	3.01	0.00	0.00	3
Total for Offsets⁴			86.32	0.00	0.01	0.02	93

Each greenhouse gas has been converted to a standard measurement (tCO₂e) by multiplying its emissions by its global warming potential (GWP). The GWP of carbon dioxide (CO₂) from both anthropogenic and biogenic sources is 1, methane (CH₄) is 25, and nitrous oxide (N₂O) is 298. The Totals for tCO₂e are shown here rounded to the nearest whole metric tonne as only whole tonnes of tCO₂e can be purchased for offsets.

2 Estimated data has been calculated based on the methods described in the Methodology Document.

3 Reported data refers to consumption which has been directly billed to the organization.

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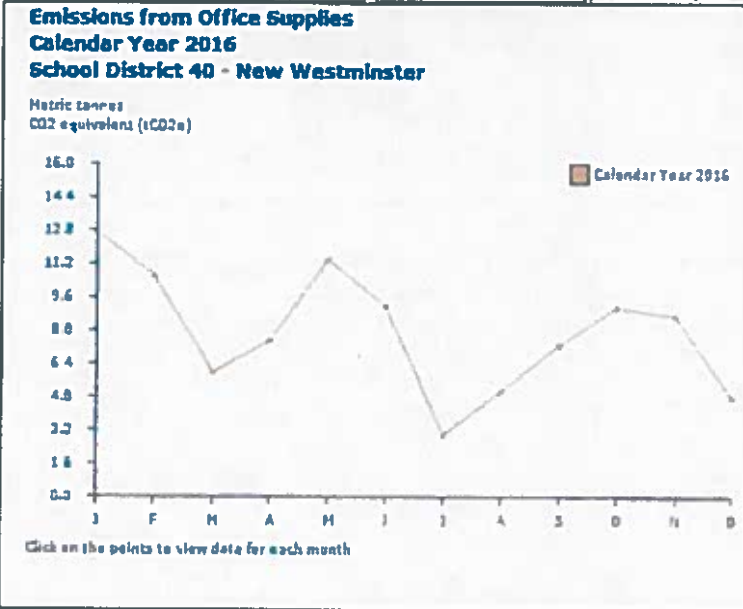
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March 3 2017

Reporting Unit:

School District 40 - New Westminster Calendar Year 2016 Show Report



Office Supplies Calendar Year 2016, School District 40 - New Westminster

Reporting Unit	Supply Type	Quantity (PKG)	Greenhouse Gases in Tonnes				
			CO ₂	BioCO ₂	CH ₄	N ₂ O	tCO ₂ e ¹
School District 40 - New Westminster	8 5 x 11 Paper 8 5 x 11 (letter) 20 lb bond paper All colours		Post-consumer recycled content indicated by percentage				
	0 %	12,950.00	82.33	0.00	0.00	0.00	82.33
	30 %	1,317.00	7.45	0.00	0.00	0.00	7.45
		14,267.00	89.78	0.00	0.00	0.00	89.78
	8 5 x 14 Paper 8 5 x 14 (legal) 20 lb bond paper All colours		Post-consumer recycled content indicated by percentage				
	0 %	118.00	0.84	0.00	0.00	0.00	0.84
	30 %	93.00	0.67	0.00	0.00	0.00	0.67
		209.00	1.61	0.00	0.00	0.00	1.61
	11 x 17 Paper 11 x 17 (ledger) 20 lb bond paper All colours		Post-consumer recycled content indicated by percentage				
	0 %	267.00	3.40	0.00	0.00	0.00	3.40
	30 %	17.00	0.19	0.00	0.00	0.00	0.19
		284.00	3.59	0.00	0.00	0.00	3.59
		14,760.00	94.98	0.00	0.00	0.00	94.98
Total Emissions, Calendar Year 2016		14,760.00	94.98	0.00	0.00	0.00	95
Carbon Neutral or Offset Exempt			0.00	0.00	0.00	0.00	0
Total for Offsets⁴			94.98	0.00	0.00	0.00	95

Each greenhouse gas has been converted to a standard measurement (tCO₂e) by multiplying its emissions by its global warming potential (GWP). The GWP of carbon dioxide (CO₂) from both anthropogenic and biogenic sources is 1, methane (CH₄) is 25, and nitrous oxide (N₂O) is 298. The Totals for tCO₂e are shown here rounded to the nearest whole metric tonne as only whole tonnes of tCO₂e can be purchased for offsets.

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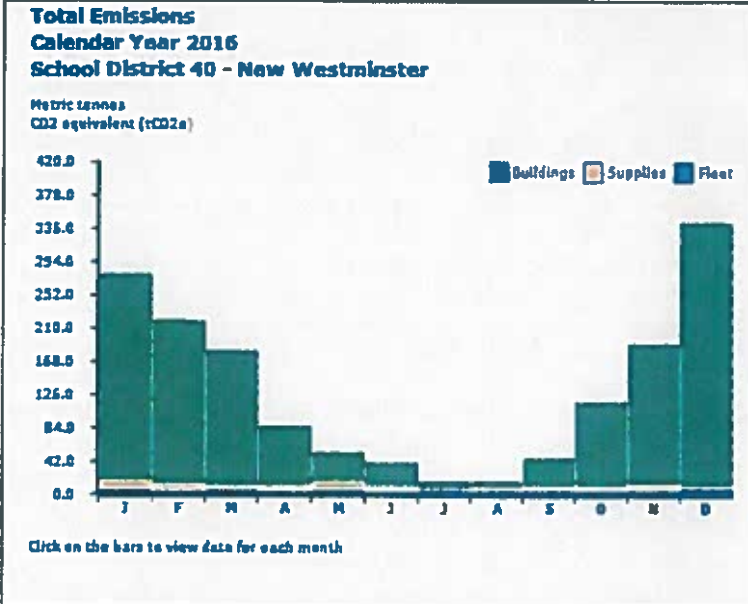
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April 10, 2017

Reporting Unit:

School District 40 - New Westminster Calendar Year 2016 Show Report



Totals Calendar Year 2016, School District 40 - New Westminster

	Measure	Quantity	Greenhouse Gases in Tonnes					
			CO ₂	BioCO ₂	CH ₄	N ₂ O	tCO ₂ e ¹	
Scope 1 (Direct) Emissions								
Mobile Combustion (Fleet)	Litres	38,403	3088	32	3.01	0.01	0.02	95.60
Stationary Combustion, Estimated ²	GigaJoules	359.36	17.82	0.00	0.00	0.00	0.00	17.92
Stationary Combustion, Reported ³	GigaJoules	28,128	531,397	05	0.00	0.03	0.03	1,405.54
Scope 2 (Indirect) Emissions								
Purchased Energy, Estimated ²	GigaJoules	205.88	0.62	0.00	0.00	0.00	0.00	0.62
Purchased Energy, Reported ³	GigaJoules	14,425	6543	26	0.00	0.00	0.00	43.28
Scope 3 (Business Travel and Office Paper) Emissions								
Office Paper	Packages	14,780.00	94	98	0.00	0.00	0.00	94.98
Total Emissions, Calendar Year 2016			1,640.06	3.01	0.04	0.05	1,658	
Carbon Neutral or Offset Exempt			0.00	3.01	0.00	0.00	3	
Total for Offsets⁴			1,640.06	0.00	0.04	0.05	1,655	

Each greenhouse gas has been converted to a standard measurement (tCO₂e) by multiplying its emissions by its global warming potential (GWP). The GWP of carbon dioxide (CO₂) from both anthropogenic and biogenic sources is 1, methane (CH₄) is 25, and nitrous oxide (N₂O) is 298. The Totals for tCO₂e are shown here rounded to the nearest whole metric tonne as only whole tonnes of tCO₂e can be purchased for offsets.

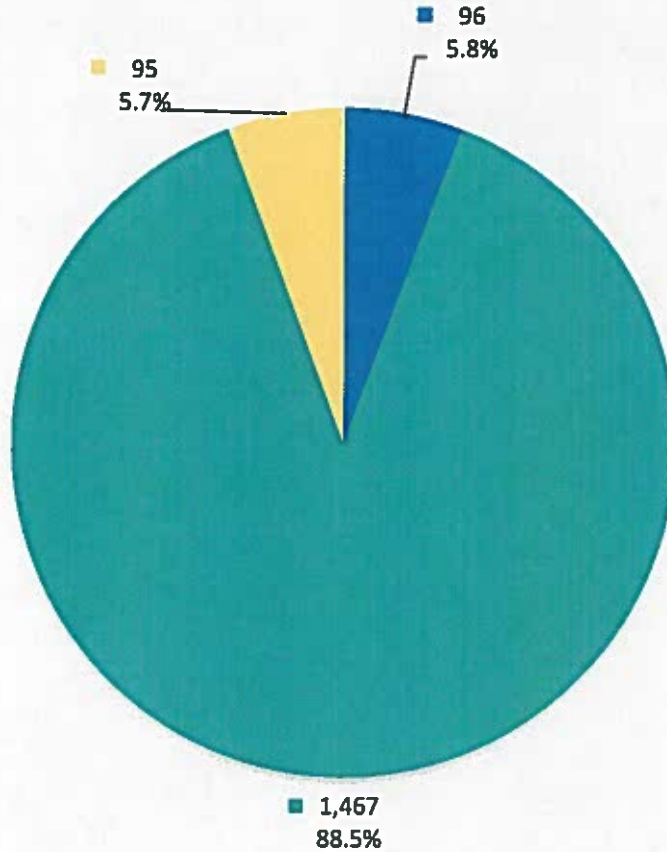
² Estimated data has been calculated based on the methods described in the Methodology Document.

³ Reported data refers to consumption which has been directly billed to the organization.

⁴ The tCO₂e value from the "Total for Offsets" line represents the quantity of offset purchases required to become carbon neutral.

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**School District 40 - New Westminster
Greenhouse Gas Emissions by Source
for the 2016 Calendar Year (tCO₂e*)**



Total Emissions: 1,658

- 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 4:07 PM)
Total offsets required: 1,655. Total offset investment: \$41,375. Emissions which do not require offsets: 3 **

*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

Page 2

Part One (external)

Contact Name(s):

Kevin Lorenz, Secretary Treasurer / Dino Stiglich, Director of Facilities/Maintenance

Organization Name:

School District #40, New Westminster

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

-
- Performed energy retrofits of the organization's buildings.: Lighting retrofit @ Herbert Spencer
 - Built, or are building new LEED Gold or other "Green" buildings.: 2 buldings - QayQayt Elementary / Fraser River Middle
-

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

Mechanical Upgrades and HVAC controls upgrades.

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).: Replaced 2 pick up vehicles with 3 cars.
-

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

Plan to replace vehicles with gas efficient models and will look to purchase electric vehicles.

Page 3

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

-
- Policy requiring the purchase of recycled content paper.: If yes, state % of recycled content (eg 30%, 100%) 30%
-

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

Continue to use double sided option on all district photocopiers. Communicate by e-mail. Purchase and install a work order system to the Maintenance employee's phone devices, this will eliminate printing work orders.

Page 4

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 alternative travel for business (e.g. bicycles, public transit, walking)
-

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

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

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
 - Green procurement standards for goods (e.g., office furniture, etc.)
 - Lifecycle costing of new construction or renovations
-