



School District No. 6 (Rocky Mountain)

2018 Carbon Neutral Action Report

Executive Summary

Rocky Mountain School District continues to focus on greenhouse gas emission reduction. The main source of the energy and greenhouse gas savings throughout the School District is the result of implementing building energy retrofit projects, and changes to the operation of buildings and vehicles. The School District's focus on environmental stewardship has been a key driver for success in reducing greenhouse gas emissions. This focus has led to the prioritization of staffing resources, and capital projects, as well as education programs focussing on energy reduction and environmental stewardship.

On-going benchmarking of energy performance of buildings, vehicles, and other energy consumption continues. Our Operations Department continually monitors energy consumption and focuses on energy reduction initiatives which ultimately reduce carbon emissions.

Paul Carriere
Superintendent of Schools



2018 Greenhouse Gas Emissions

A total of 1506 tonnes of greenhouse gas emissions were emitted by the School District during the 2018 calendar year, from all sources covered by the Greenhouse Gas Reduction Targets Act.

SD6 GHG Emissions and Offsets for 2018 (TCO2E)	
GHG Emissions created in calendar year 2018 (from SMARTTool Homepage)	
Total Emissions	2047
Total Emissions for Offsets	1506
Adjustments to GHG Emissions Reported in Previous Years (from SMARTTool Homepage)	
Total Emissions	0
Total Emissions for Offsets	0
Credit owing from PCT at end of 2015 reporting year:	
Credit Owing	0
Total Emissions for Offsets for the 2017 Reporting Year (from Offset Invoice):	1506



Emissions Reduction Activities

Actions Taken by the Rocky Mountain School District to Reduce Greenhouse Gas Emissions in 2018

Projects to reduce energy consumption and greenhouse gas emissions implemented in 2018 included:

- District Administration Building lighting was upgraded with LED high efficient light fixtures complete with dimming controls.
- JA Laird Elementary School was upgraded with LED high efficient light fixtures complete with dimming controls.
- Windermere Elementary School received a building envelope upgrade which included installation of new high efficient windows, new exterior doors, new continuous exterior thermal insulation, new air barrier and siding.

Plans to Continue Reducing Greenhouse Gas Emissions 2019 – 2024

Reducing energy consumption and greenhouse gas emissions will continue to be an important focus for the Rocky Mountain School District. Projects planned for the next five years show the potential for the School District to save energy costs, while significantly reducing greenhouse gas emissions and contributing to becoming carbon neutral. Some projects planned for the five years include:

- Summer 2019 upgrade interior lighting at two High Schools with LED high efficient light fixtures complete with dimming and occupancy controls.
- Summer/Fall 2019 replace building envelope and upgrade thermal exterior insulation at a Elementary School
- Installation of new heat pump and high efficient furnace at an Alternate Education School.
- Design at 3 schools for additional building envelope upgrades to improve thermal efficiency.
- Designs for boiler replacements at (2) Elementary Schools.
- Design to install heat pump for the main heating loop at a High School.
- DDC control upgrades and installations on various buildings.
- Gymnasium occupancy control of ventilation systems.
- Increased roofing insulation and wall insulation with cladding and roof upgrades at a number of buildings.
- Investigation into the viability of fuel switching from propane fired heating plants to electricity.
- Student and employee behavioural change education projects.

Part 1: CNAR Survey

1. General Information

Name: Steve Jackson

Contact Email: steve.jackson@sd6.bc.ca

Organization Name: School District No. 6 (Rocky Mountain)

Sector: School District

Role - Please select your role(s) below.

If more than one individual completed the survey, multiple categories may be selected:

Energy Manager: No

Sustainability Coordinator: No

Administrative Assistant: No

Facilities/Operations Manager/Coordinator: Yes

CEO/President/Exec Director: No

Treasurer/Accounting: No

Superintendent: No

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

1. Actions taken by your organization in 2018 to support emissions reductions from buildings.

a) Do you have a strategy to reduce emissions from stationary sources?

Yes

If yes above, what are the main goals?: Monitor building energy intensity and continually maintain systems to operate as efficiently as possible. Upgrade building envelopes, heating and lighting systems when funding is available.

b) Whether you have a strategy or not (1.a), briefly describe your organization's plans to continue reducing emissions from stationary sources:

I. Over the medium-term term (1-5 years)

1. We are upgrading lighting fixtures in two High Schools to new LED lighting work is scheduled to be completed summer 2019.
2. We undergoing a building envelope upgrade at an Elementary school this year. It will receive new thermally efficient windows, new exterior insulation c/w new exterior finish.
- 3.

II. Over the long term (6-10 years)

We will continue to upgrade schools to LED lighting and will also continue to upgrade old inefficient boilers with new high efficient condensing boilers. Further building envelope projects are also planned. We hope to hire an energy/project manager to improve our ability to focus on energy monitoring and related projects.

c) Please describe your strategy's goals (if any) related to [energy audits](#).

We utilize a robust energy tracking software that assists us with energy monitoring. We have energy audits that were done a few years ago, we are still working recommendations. No new audits are planned at this time.

I. What % on average of your building portfolio has an energy audit completed each year (if any)? : 0

d) Please describe your strategy's goals (if any) related to building retrofits.

There are many outstanding life cycle requirements in our facility portfolio, we determine highest need and fund life cycle projects annually with our annual facilities grant. We also include high priority projects in our capital plan. When funding is received we retrofit our facilities. When ever possible we upgrade building envelope, heating and lighting systems.

e) Please describe your strategy's [re/retro-commissioning](#) goals (if any)?

We have an annual and monthly preventative maintenance practice of servicing our HVAC systems.

I. What % on average of your building portfolio do you recommission each year?: 0

f) Do you keep records of Refrigerant gases category and refilling volumes?

No

g) How many newly constructed buildings received at least LEED Gold certification in 2018 : 0

I. How many newly constructed buildings did not receive LEED Gold certification?: 0

II. Please explain why LEED Gold certification was not obtained.

No new buildings

B. Mobile Sources (Vehicles, Off-road/portable Equipment): Fuel Combustion:

3. Actions taken by your organization in 2018 to support emissions reductions from mobile sources.

a) Do you have a strategy to reduce emissions from mobile sources?

Yes

I. If yes, what are its goals?

Minimize travel whenever possible.

b) Whether you have a strategy or not (3.a), briefly describe your organization's plans to continue reducing emissions from mobile sources:

I. Over the medium-term term (1-5 years)

We continue support video and telephone conference meetings to reduce the need for travel. We have implemented Microsoft TEAMS throughout our organization to support these initiatives.

II. Over the long term (6-10 years)

Continue to utilize new technologies to minimize the need to travel.

c) How many fleet vehicles did you purchase from the following categories:

Electric Vehicle – EV - (e.g., Nissan Leaf, Chevy Bolt): 0

“Plug In” Electric Vehicle – PHEV (e.g., plug-in Prius, Chevy Volt): 0

Hybrid vehicle – HEV – non “Plug In”- (e.g., Toyota Highlander Hybrid): 0

Hydrogen fuel cell vehicle : 0

Natural gas/propane: 0

Gas/diesel vehicle: 3

I. If you purchased new gas/diesel vehicles, can you briefly explain why vehicles from the other categories were not chosen?

We purchased a school bus and maintenance vehicles.

d) How many existing EV charging stations does your organization have in each category:

level 2: 0

level 3: 0

How many level 2 stations (if any) are specifically for your fleet vehicles: 0

How many level 3 stations (if any) are specifically for your fleet vehicles: 0

e) How many EV charging station(s) did you install in 2018 in each category:

level 2: 0

level 3: 0

How many level 2 stations (if any) were installed specifically for your fleet vehicles: 0

How many level 3 stations (if any) were installed specifically for your fleet vehicles: 0

4. Please indicate the number of the vehicles in the following vehicle classes that are in your current fleet (including any purchased in 2018):

Definitions:

- Light duty vehicles (LDVs) are designated primarily for transport of passengers <13 and GVWR<3900kg
- Light duty trucks (LDTs) are designated primarily for transport of light-weight cargo or that are equipped with special features such as four-wheel drive for off-road operation (include SUVs, vans, trucks with a GVWR<3,900kg)
- Heavy duty vehicles (HDV) includes vehicles with a GVWR>3,900 kg (e.g. ¾ tonne pick-up truck, transport trucks)

a) Light duty vehicles (LDVs)

Electric Vehicles – EV - (e.g., Nissan Leaf, Chevy Bolt): 0

“Plug In” Electric Vehicle – PHEV -- (e.g., plug-in Prius, Chevy Volt) : 0

Hybrid vehicles – HEV – (e.g., non “Plug In”- older Toyota Prius, Toyota Camry hybrid): 0

Hydrogen fuel cell vehicles: 0

Natural gas/propane: 0

Gas/diesel: 0

b) Light duty trucks (LDTs)

Electric Vehicles – EV : 0

“Plug In” Electric Vehicle – PHEV: 0

Hybrid vehicles – HEV – (e.g., non “Plug In”- older Ford Escape Hybrid, older Chevrolet Silverado pickup hybrid etc): 0

Hydrogen fuel cell vehicles: 0

Natural Gas/propane: 0

Gas/diesel: 31

c) Heavy duty vehicles (HDV)

Electric Vehicles – EV : 0

“Plug In” Electric Vehicle – PHEV : 0

Hybrid vehicles – HEV – (e.g., non “Plug In”): 0

Hydrogen fuel cell vehicles: 0

Natural Gas/propane: 0

Gas/diesel: 28

5. Please indicate the number of the vehicles you plan to replace in your fleet:

How much do you budget per LDV?: 0

How many LDVs do you plan to procure annually over the next 5 years?: 0

How much do you budget per LDT?: 40000

How many LDTs do you plan to replace annually over the next 5 years?: 10

How much do you plan to spend per HDV?: 130000

How many HDVs do you plan to replace annually over the next 5 years?: 5

C. Office Paper: Indicate which actions your PSO took in 2018:

6. Actions taken by your organization in 2018 to support emissions reductions from paper supplies.

a) Do you have an Office Paper strategy?

Yes

I. If yes, what are its goals?

Reduce printing when ever possible and save documents electronically. Print two sided if there is a need to print.

b) Whether you have a strategy or not (6.a), briefly describe your organization’s plans to continue reducing emissions from paper use:

I. Over the medium-term (1-5 years)

Our School District has implemented a share point portal and Microsoft TEAMS to enable and influence the use of shared documents. We promote the use electronic documents when ever possible.

II. Over the long term (6-10 years)

Continue to use new technology to minimizing the need to print documents.

c) Have an awareness campaign focused on reducing office paper use

No

d) Purchased alternate source paper (bamboo, hemp, wheat, etc.)

No