

## CNAR OVERVIEW

**Title:** 2018 Carbon Neutral Action Report

**Organization name:** School District #28 (Quesnel)

**Declaration statement:** This Carbon Neutral Action Report for the period January 1<sup>st</sup>, 2018 to December 31<sup>st</sup>, 2018 summarizes our emissions profile, the total offsets to reach net-zero emissions, the actions we have taken in 2018 to reduce our greenhouse gas emissions and our plans to continue reducing emissions in 2019 and beyond.

By June 30, 2019 School District #28 (Quesnel) final *Carbon Neutral Action Report* will be posted to our website at [www.sd28.bc.ca](http://www.sd28.bc.ca)

### Overview:

In 2018, the District installed high efficiency hot water tanks at Riverview Elementary which was 30-35% more efficient than the previous system. We also replaced the full roof at Riverview Elementary and installed R-14 insulation above and beyond the insulation already there which also improves energy efficiency. The District has been approved to receive 3 buses for the year which will release fewer emissions than the buses they are replacing. Furthermore, the District has committed to a maintenance vehicle replacement program which will replace trucks with higher emissions with newer and more efficient vehicles.

In 2019, the District has been approved for a school enhancement program to replace the entire roof at Correlieu Secondary School which will increase the R-value, creating better energy efficiencies for our largest site in the District. Furthermore, the District has also been approved for 2 LED lighting upgrades at both Correlieu Secondary and Red Bluff Elementary which will also increase the energy efficiency. They will also have Direct Digital Control (DDC) for better energy optimization. Furthermore, the District will be installing 2-stage higher efficiency tube heaters at the transportation department which will be replacing a 30+ year old system which was high on energy consumption. Finally, the district is installing 2 high efficiency boilers at the district administration office which we anticipate to reduce gas consumption by 15 – 20%.

### Emissions and Offset Summary Table:

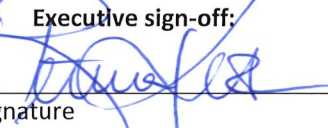
School District #28 (Quesnel) GHG Emissions and Offset for 2018 (tCO <sub>2</sub> e)	
<b>GHG Emissions created in Calendar Year 2018</b>	
Total Emissions (tCO <sub>2</sub> e)	1,762
Total BioCO <sub>2</sub>	26.09
Total Offsets (tCO <sub>2</sub> e)	1,156
<b>Adjustments to GHG Emissions Reported in Prior Years</b>	
Total Emissions (tCO <sub>2</sub> e)	0

Total Offsets (tCO <sub>2</sub> e)	0
<b>Grand Total Offsets for the 2018 Reporting Year</b>	
Grand Total Offsets Required (tCO <sub>2</sub> e)	1,156
Total Offset Investment	\$28,900

**Retirement of Offsets:**

In accordance with the requirements of the Greenhouse Gas Reduction Targets Act and Carbon Neutral Government Regulation, School District #28 (Quesnel) (**the Organization**) is responsible for arranging for the retirement of the offsets obligation reported above for the 2018 calendar year, together with any adjustments reported for past calendar years. The Organization hereby agrees that, in exchange for the Ministry of Environment and Climate Change Strategy 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:**

  
 Signature \_\_\_\_\_ Date MAY 31, 2019

BETINA DECATAN  
 Name (please print) \_\_\_\_\_ Title SECRETARY - TREASURER

# Part 1: CNAR Survey

## 1. General Information

**Name:** Bettina Ketcham

**Contact Email:** bettinaketcham@sd28.bc.ca

**Organization Name:** School District 28

**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: Yes

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?: Reduce electricity use and gas consumption.

#### 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)

Replace to LED lighting in minimum 1 school a year, replace old gas appliances with high efficiency condensing boilers, furnaces and Hot water heaters in one site a year. As well as upgraded electrical motors to more efficient with VFD drives. Also improve roof R value when a roof membrane is completed.

The District has put in a school replacement request for a new middle school. The middle school would be constructed with LEED gold standard. If awarded the project, 2 existing sites which have a large footprint will be demolished. These sites were build in the 1954 and 1974 respectively and produce a lot of emissions as their systems are not efficient.

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

In 10 years have all schools LED lights, no heating equipment under 90% efficient.

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

None.

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

Apply every year for grants that are targeted at reducing Carbon foot print. Apply for new buildings to replace old high energy consumption buildings.

I. What % on average of your building portfolio is retrofitted each year in the following categories (if any) - click [here](#) for further information:

Minor retrofits (e.g., low cost, easy to implement measures including caulking, lighting, adding roof insulation, etc.) (%): 5

Major retrofits (e.g., replacing windows and doors, equipment replacement such as boilers, etc.) (%): 5

Deep retrofits (e.g., replacing roof, replacing the heating, ventilation and air-conditioning system with a renewable technology like a ground-source heat pump, etc.) (%): 2

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

The District is capped to what the Ministry of Education provides in terms of capital funding for major and deep retro-fits. Each year, the District puts in for significant capital projects, some of which reduce our carbon footprint. Each year, we make a request for CNCP projects such as lighting upgrades at all sites.

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

II. What, if any, mitigation approaches have been considered? Please describe.

None.

**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.

We have not had any new buildings for around 20 years.

**h) Other actions? Please describe briefly.**

The District has applied for a new school for which LEED gold certification will be considered.

**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?

Replace 1 old maintenance vehicle a year with a newer model with better emissions controls and fuel consumption. Replace old buses as per Ministry guidelines (based on KM and age) with new buses which have better emissions controls.

**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)**

Replace a maintenance vehicle a year. Replace buses that are high in KM and age as per Ministry of Education guidelines for replacement.

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

In 10 years we hope to not have a maintenance fleet vehicle that is older than 10 years. Continue to replace aging buses with those that have better technology which are more energy efficient.

**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: 2

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

It is the only option for a service vehicle to haul what we need. The district does not yet have charging stations.

**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: 3

## 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: 5

## 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: 38

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

How much do you budget per LDV?: 20000

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

How much do you budget per LDT?: 45000

How many LDTs do you plan to replace annually over the next 5 years?: 1

How much do you plan to spend per HDV?: 60000

## 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?

The District photocopies and prints paper on both sides. We have an education strategy that asks people to think before printing and we are utilizing laptops and shared screens as opposed to printing booklets. The District also uses recycled paper when purchasing at office sites or schools. Over the next few years the district is implementing a program called "paper cut" which tracks usage by individual so we can monitor use and better educate staff.

**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)

Introduce "paper cut" which is a device which tracks and monitors paper use. It does not prevent people from using it once a quota is reached but simply allows administrators to track the use of paper for purposes of education of the school community.

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

The District, like many others, is investigating a bring your own device strategy for students. Students could follow along on their device reducing the need for paper print outs for student material. Students can save their work digitally rather than printing out their work for submission.

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

Yes

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

No

**e) Other actions, please specify.**

None