

## 2020 PSO CLIMATE CHANGE ACCOUNTABILITY REPORT

### Cariboo Chilcotin School District #27

#### Declaration

This Climate Change Accountability Report for the period January 1<sup>st</sup>, 2020 to December 31<sup>st</sup>, 2020 summarizes our emissions profile, the total offsets to reach net-zero emissions, the actions we have taken in 2020 to reduce our greenhouse gas emissions and our plans to continue reducing emissions in 2021 and beyond.

By June 30, 2021 Cariboo Chilcotin School District #27's final Climate Change Accountability Report will be posted to our website at <https://www.sd27.bc.ca/>.

#### 2020 Actions

In 2020, School District 27 took action to reduce GHG emissions through the following initiatives:

Location	Project
Lake City – Williams Lake and Columneetza Campus Alexis Creek Elem./Jr. Horsefly Elem./Jr.	<b>Full Building Automation System Upgrade:</b> This upgrade will enable enhanced district wide scheduling and monitoring. Included in this upgrade is the verification of all equipment for functionality and efficiency.
Naghtaneqed Elementary/Jr. Secondary	<b>Diesel Fueled Electricity Generator Replacement:</b> This upgrade will replace the end-of-life diesel fuel electricity generator with a new unit enabling generation modulation to coincide with the 2019 installed solar PV installation.

## 2021 Planning

School District 27 procures services with energy management service consultant Rede Energy Solutions. Rede is an integral part of the school district's facilities and operations team. Responsible for establishing and implementing SD 27's project based 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. Energy savings and GHG emissions reductions are evaluated annually and new targets are set annually.

The following projects are approved/considered for 2021 and beyond:

Location	Project
Lake City – Williams Lake and Columneetza Campus Mile 108 and 150 Mile Elementary, <b>APPROVED</b>	<b>Led Upgrade:</b> This project is to replace all existing fluorescent T8 tubes with LED panels or TLED tubes including occupancy-based controls.
150 Mile Elementary <b>APPROVED</b>	<b>Air Handling Unit Upgrade:</b> Replace two end of life Air Handling Units. The new equipment will improve occupancy comfort by ensuring adequate airflow to each space. Demand based ventilation will also enable the reduction in energy consumption.
Lake City – Columneetza Campus and Nesika Elementary	<b>District Energy Biomass:</b> It is proposed to install a further biomass fueled boiler, second district energy system, and supply hot water to two facilities due to the proximity of sites. The local production of biomass pellets in Williams Lake makes this a perfect candidate for fuel switching. This project is estimated to reduce natural gas GHG emissions by 530 tCO <sub>2</sub> e.
Mile 108 Elementary	<b>GeoExchange upgrade:</b> Mile 108 is served by a ground source GeoExchange loop for primary heat. Current configuration and water to water heat pump deficiencies have forced the facility to be heated via the secondary natural gas fired boilers. It is recommended to upgrade piping configuration including commissioning re replacing the existing water to water source heat pumps. This retrofit would enable the utilization of the ground source GeoExchange system almost eliminating all-natural gas consumption. This project is estimated to reduce GHG emissions by 53 tCO <sub>2</sub> e annually.
Lac La Hache Elementary and Forest Grove Elementary	<b>Full Building Envelope Upgrade:</b> Building envelope replacement including windows. GHG are estimated to be reduced by 14 tCO <sub>2</sub> e annually.
Peter Skeene Ogden Secondary	<b>Air Handling Unit Upgrade:</b> Replace two inefficient end-of-life dual duct AHU's with updated Variable Air Volume system. Updating the obsolete dual duct technology will increase occupant comfort alongside drastically reducing the energy consumption of conditioning outside air by only supplying ventilation based on actual demand. GHG are estimated to be reduced by 9 tCO <sub>2</sub> e annually.

## Emissions and Offset Summary

SD27 uses the provincial Clean Government Reporting Tool (CGRT) to track and report its emissions as required by legislation for all public sector entities in BC. Emissions Sources Reportable sources of GHG emissions within SD27 are:

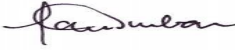
- Natural gas and propane consumption to run heating and hot water systems
- Electricity consumption within facilities
- Vehicle fuel consumption of the SD27 fleet and school buses
- Paper consumption

<b>SD27 2020 GHG Emissions and Offsets</b>	
<b>GHG Emissions created in Calendar Year 2020</b>	
Total Emissions (tCO <sub>2</sub> e)	3,147
Total BioCO <sub>2</sub>	49.1
Total Offsets (tCO <sub>2</sub> e)	2,139
<b>Adjustments to Offset Required GHG Emissions Reported in Prior Years</b>	
Total Offsets Adjustment (tCO <sub>2</sub> e)	58
<b>Grand Total Offsets for the 2020 Reporting Year</b>	
Grand Total Offsets (tCO <sub>2</sub> e) to be Retired for 2020 Reporting Year	2,197
Offset Investment (\$25 per tCO <sub>2</sub> e)	\$54,925

### Retirement of Offsets

In accordance with the requirements of the Greenhouse Gas Reduction Targets Act and Carbon Neutral Government Regulation, **Cariboo-Chilcotin School District #27** is responsible for arranging for the retirement of the offsets obligation reported above for the 2020 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

	June 8, 2021
_____ Signature	_____ Date
Norine Durban	Secretary-Treasurer
_____ Name (Please print)	_____ Title