

2021 PSO CLIMATE CHANGE ACCOUNTABILITY REPORT

Cariboo Chilcotin School District #27

Declaration

This Climate Change Accountability Report for the period January 1st, 2021 to December 31st, 2021 summarizes our emissions profile, the total offsets to reach net-zero emissions, the actions we have taken in 2021 to reduce our greenhouse gas emissions and our plans to continue reducing emissions in 2022 and beyond.

By June 30, 2022 Cariboo Chilcotin School District #27's final Climate Change Accountability Report will be posted to our website at <https://www.sd27.bc.ca/>.

2021 Actions

In 2021, School District 27 took action to reduce GHG emissions through the following initiatives:

Location	Project
Lake City – Williams Lake Lake City – Columneetza Mile 108 Elementary Mile 150 Mile Elementary	Led Upgrade: This project replaced all existing fluorescent T8 tubes with LED panels or TLED tubes. Increased illumination on a per fixture basis enabled de-lamping of many spaces further decreasing energy consumption.
150 Mile Elementary	Roofing Upgrade: A full roof replacement including insulation was completed for the entire facility. Aside from the obvious increase on facility longevity, improved roof insulation will also decrease the consumption of natural gas for heating.
Lake City – Williams Lake	Mechanical Upgrade: Replaced five end of life roof top units with high efficient equipment.

2022 Planning

The following projects are approved/in consideration for 2022 and beyond:

Location	Project
Mile 108 Elementary - Approved	GeoExchange upgrade: 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, commissioning, and replacing the existing water to water source heat pumps. This retrofit will 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 tCO₂e annually.

Location	Project
Peter Skeene Ogden Secondary - Approved	Air Handling Unit Upgrade: 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 and 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 tCO₂e annually.
School Board Office - Approved	Full Building Envelope Upgrade: Building envelope replacement including windows.
Dog Creek, Likely, and Horsefly Elementary - Approved	Furnace Upgrade – Upgrading the end-of life furnaces with highly efficient condensing units. Beyond a reduction in energy, the addition of outside air ventilation capability has been added to all units.
150 Mile Elementary	Air Handling Unit Upgrade: 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	District Energy Biomass: It is proposed to install a biomass fueled boiler, the 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 tCO₂e .
Lake City – Columneetza Campus	Air Handling Upgrade – Replacement of one of the primary 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.
Marie Sharp Elementary	Full facility modernization. Planning of a full facility upgrade including the mechanical system is underway. The retrofit would include a new heating plant and terminal ventilation units. Besides conserving energy, this upgrade will dramatically increase occupancy comfort and room ventilation. This project is estimated to reduce natural gas GHG emissions by 25 tCO₂e .
Lac La Hache Elementary and Forest Grove Elementary	Full Building Envelope Upgrade: Building envelope replacement including windows. GHG are estimated to be reduced by 14 tCO₂e 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. Reportable sources of GHG emissions within SD27 are:

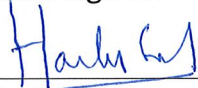
- Natural gas and propane consumption to run heating and hot water systems
- Electricity consumption within facilities
- Vehicle fuel consumption of the SD27 fleet and school buses
- Paper consumption

SD27 2021 GHG Emissions and Offsets	
GHG Emissions created in Calendar Year 2021	
Total Emissions (tCO ₂ e)	3,655
Total BioCO ₂	59.1
Total Offsets (tCO ₂ e)	2,373
Adjustments to Offset Required GHG Emissions Reported in Prior Years	
Total Offsets Adjustment (tCO ₂ e)	0
Grand Total Offsets for the 2021 Reporting Year	
Grand Total Offsets (tCO ₂ e) to be Retired for 2021 Reporting Year	2,373
Offset Investment (\$25 per tCO ₂ e)	\$ 59,325

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 2021 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


Signature

HARINDER SINGH
Name (Please print)

May 31, 2022
Date

SECRETARY TREASURER
Title