

## 2022 PSO CLIMATE CHANGE ACCOUNTABILITY REPORT

### Cariboo Chilcotin School District #27

#### Declaration

This Climate Change Accountability Report for the period January 1<sup>st</sup>, 2022 to December 31<sup>st</sup>, 2022 summarizes our emissions profile, the total offsets to reach net-zero emissions, the actions we have taken in 2022 to reduce our greenhouse gas emissions and our plans to continue reducing emissions in 2023 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/>.

## EMISSION REDUCTIONS: ACTIONS & PLANS

In 2014, SD27 created an Energy and Sustainability Plan. The plan describes strategies, goals, roadmaps, and recommendations to achieve future energy savings and greenhouse gas emission reductions. GHG reduction targets for BC's education sector are summarized below, along with SD27's 2010 Baseline and 2022 current performance.

Table 1: SD27 sectoral GHG targets. 2030 milestone with respect to 2010 baseline. <sup>1</sup>

Milestone	Facilities	Fleet (Mobile)	Paper	Total
Target Reduction by 2030	59 - 64%	27 - 32%	59 - 64%	
Target GHGs by 2030, tCO <sub>2</sub> e	1123 - 1,279	1036 - 1113	32 - 36	2191 - 2428
SD27 2010 Baseline, tCO <sub>2</sub> e	3525	1608	86	5,218
SD27 2022, tCO <sub>2</sub> e	1885	1555	63	3503
2022, % change from base year	47%	3%	27%	26%

**Error! Reference source not found.** shows SD27's historic annual GHG emission trends including the 2030 climate action goal. Overall reductions for 2022 with respect to the 2010 baseline are 26%. This reduction spans the categories by 47%, 3%, and 27% for buildings, mobile (fleet), and paper respectively. The illustration shows that SD27 continues to reduce their carbon footprint.

<sup>1</sup> <https://news.gov.bc.ca/releases/2021ENV0022-000561>

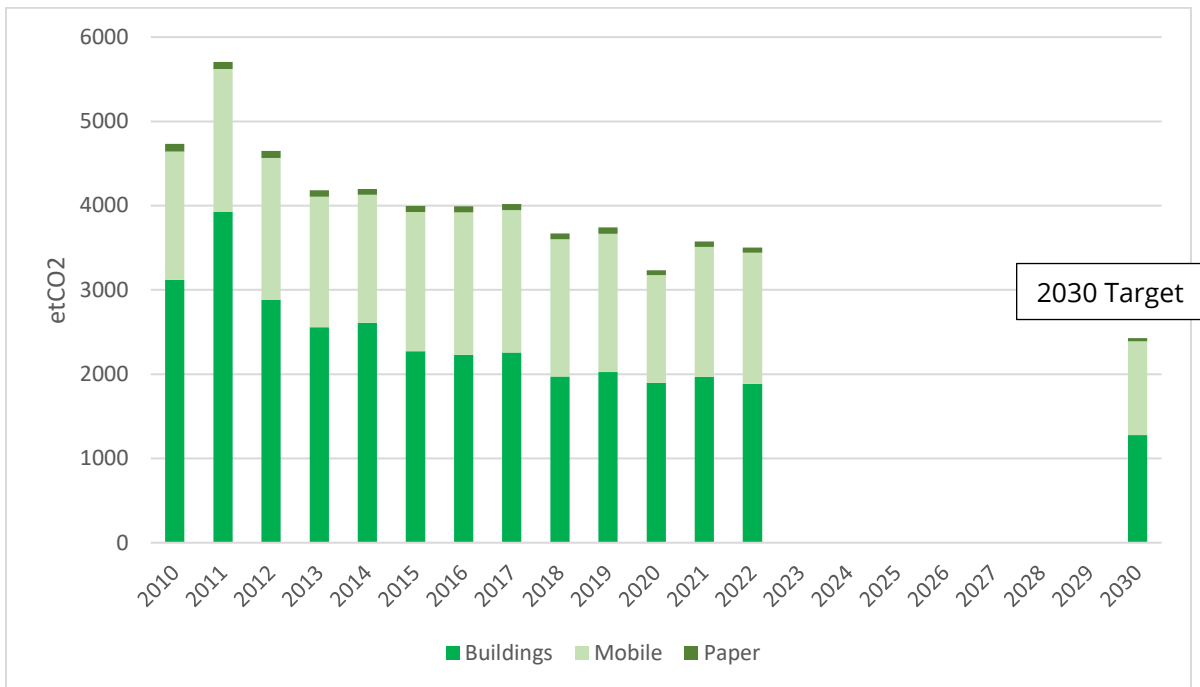


Figure 1: Historic GHG emissions including 2030 target.

## 2022 Actions

In 2022, School District 27 took action to reduce GHG emissions through the following initiatives:

Location	Project
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 was 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 <b>53 tCO<sub>2</sub>e</b> annually.
Big Lake Elementary	<b>Boiler Replacement:</b> End of life natural gas boiler replacement with condensing units. Reduce GHG by <b>5 tCO<sub>2</sub>e</b> .
School Board Office	<b>Full Building Envelope Upgrade:</b> Building envelope replacement including windows.

Dog Creek, Likely, and Horsefly Elementary -	<b>Furnace Upgrade</b> - 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.
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### 2023 Planning

The following projects are approved/in consideration for 2023 and beyond:

Location	Project
Peter Skeene Ogden Secondary	<p><b>Approved - construction summer 2023.</b></p> <p><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 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 <b>9 tCO<sub>2</sub>e</b> annually.</p>

## 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

<b>SD27 2022 GHG Emissions and Offsets Summary</b>	
<b>GHG emissions for the period January 1 - December 31, 2022</b>	
Total BioCO <sub>2</sub>	58
Total Emissions (tCO <sub>2</sub> e)	3,503
Total Offsets (tCO <sub>2</sub> e)	2,273
<b>Adjustments to Offset Required GHG Emissions Reported in Prior Years</b>	
Total Offsets Adjustment (tCO <sub>2</sub> e)	0
<b>Grand Total Offsets for the 2022 Reporting Year</b>	
Grand Total Offsets to be Retired for 2022 Reporting Year (tCO <sub>2</sub> e)	2,273
Offset Investment (\$25 per tCO <sub>2</sub> e)	\$ 56,823

### 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 2022 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

<i>Patrick McCarron</i>	6/5/2023
_____ Signature	_____ Date
Patrick McCarorn	- Director of Operations
_____ Name (Please print)	_____ Title