

## 2023 PSO CLIMATE CHANGE ACCOUNTABILITY REPORT

### School District No. 27 Cariboo Chilcotin

#### Declaration

This Climate Change Accountability Report for the period January 1<sup>st</sup>, 2023 to December 31<sup>st</sup>, 2023, summarizes our emissions profile, the total offsets to reach net-zero emissions, the actions we took in 2023 to reduce our greenhouse gas emissions, and our plans to continue reducing emissions in 2024 and beyond.

By June 30th, 2024, School District No. 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 2023 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 2023, tCO <sub>2</sub> e	1615	1528	63	3206
2023, % change from base year	54%	5%	27%	39%

Figure 1 shows SD27's historic annual GHG emission trends including the 2030 climate action goal. Overall reductions for 2023 with respect to the 2010 baseline are 39%. This reduction spans the categories by 54%, 5%, 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>

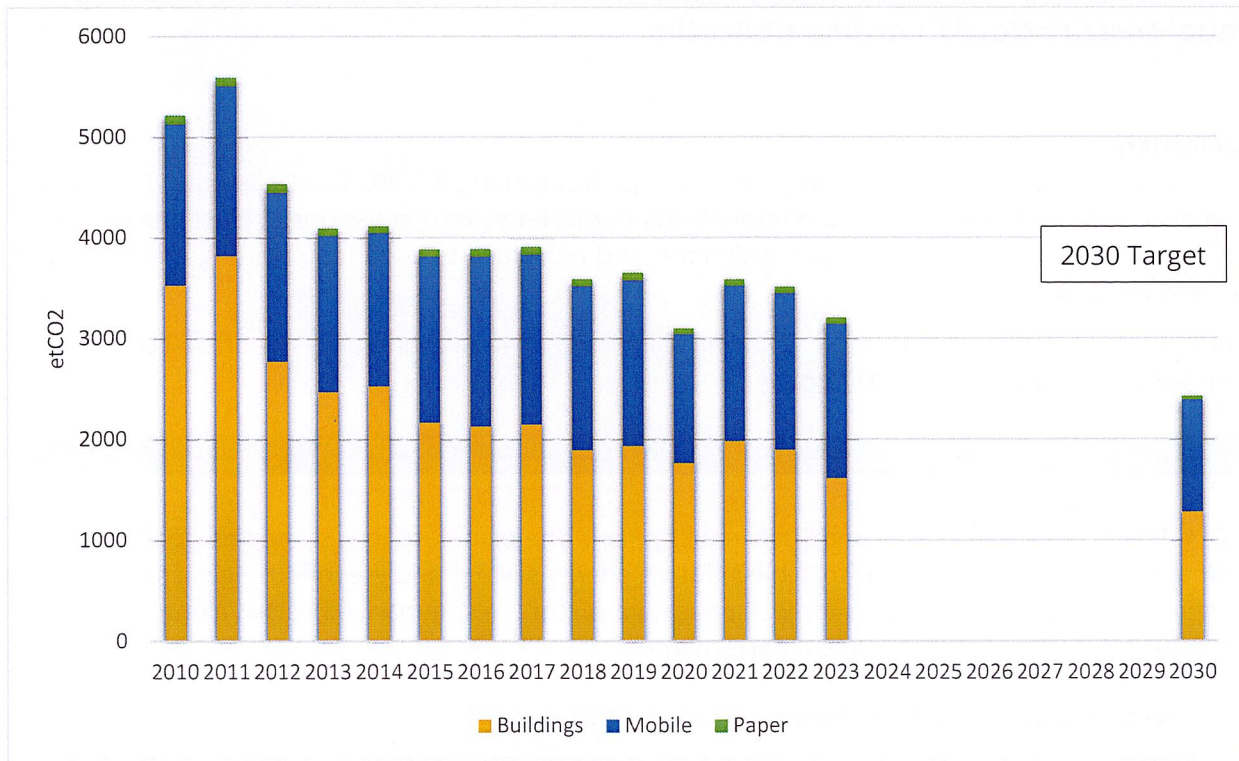


Figure 1 1: Historic GHG emissions including 2030 target.

### 2023 Actions

In 2023, School District 27 took action to reduce GHG emissions through the following initiatives:

Location	Project
Mile 108 Elementary	<b>GeoExchange upgrade was completed:</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 completed:</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 completed:</b> Building envelope replacement including windows.

Dog Creek, Likely, and Horsefly Elementary -	<b>Furnace Upgrade completed</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.
Peter Skeene Ogden Secondary	<b>Air Handling Unit Upgrade completed:</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.

### 2024 Planning

The following projects are approved/in consideration for 2024 and beyond:

Location	Project
Tatla Lake Elem/Junior Sec.	<b>Boiler Replacement</b> – Replace the original boiler with a new high efficient gas boiler. To be completed Fall 2024.
Peter Skeene Ogden Secondary	<b>Boiler Replacement</b> - Replace the original boiler with a new high efficient gas boiler. To be completed Fall 2024.
Likely Elem/Junior Secondary	<b>Furnace Upgrade</b> – Upgrading heating oil furnace with a new high efficient furnace. To be completed Fall 2024
District-wide	<b>District-wide building automation upgrade (DDC)</b> – This will greatly add to the HVAC system efficiently and will enable better access to school user group scheduling. To be completed Summer 2024.
Columneetza Junior Secondary	<b>Furnace Upgrade</b> - Upgrade 2 furnaces in gym section to 2 new high efficient furnaces. To be completed May 2024.
Forest Grove Elementary	<b>Full Building Envelope Upgrade completed:</b> Building envelope replacement including windows and doors. To be completed Fall 2024.

## 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 2023 GHG Emissions and Offsets Summary</b>	
<b>GHG emissions for the period January 1 - December 31, 2023</b>	
Total BioCO <sub>2</sub>	57
Total Emissions (tCO <sub>2</sub> e)	3,207
Total Offsets (tCO <sub>2</sub> e)	1,993
<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 2023 Reporting Year</b>	
Grand Total Offsets to be Retired for 2023 Reporting Year (tCO <sub>2</sub> e)	1,993
Offset Investment (\$25 per tCO <sub>2</sub> e)	\$ 49,825

### Retirement of Offsets

In accordance with the requirements of the Greenhouse Gas Reduction Targets Act and Carbon Neutral Government Regulation, **School District No. 27 Cariboo-Chilcotin** is responsible for arranging for the retirement of the offsets obligation reported above for the 2023 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

  
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 Signature

Marc Loewen  
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 Name (Please print)

May 31 / 2024  
 \_\_\_\_\_  
 Date

Manager of Operations  
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 Title