PSO Climate Change Accountability Report | 2025

ABBOTSFORD
SCHOOL DISTRICT
RESPECT OPPORTUNITY INNOVATION

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Declaration statement

This PSO Climate Change Accountability Report for the period January 1, 2025, to December 31, 2025, summarizes our greenhouse gas (GHG) emissions profile, the total offsets to reach net-zero emissions, the actions we have taken in 2025 to minimize our GHG emissions, and our plans to continue reducing emissions in 2026 and beyond.

Executive Summary

Abbotsford School District #34 ("the District") began its GHG emissions reduction efforts back in 2001 and had reduced its natural gas and electrical consumption by over 30% each by 2010 when GHG emission reporting began. Since 2010 the District has further reduced its GHG emissions in three focus areas (paper, buildings, and fleet) and currently ranks as one of the fifteen lowest producers of GHG emissions in the province compared to other school districts on a tonne of carbon dioxide equivalents per student basis. These initiatives have also benefited the District by reducing operating expenses and gradually reducing the amount of carbon offsets that the District needs to invest in to maintain carbon neutrality each year.

In 2025, the District undertook several GHG emissions reduction projects including:

- Boiler upgrades at two sites
- Ventilation upgrades at two sites
- Heat pump installations at five sites
- LED lighting, electrical panel, lighting control upgrades, and back-up power system upgrades at four sites

The District's square footage grew in 2025 as school additions at Margaret Stenersen Elementary and Auguston Traditional Elementary were completed. This added 2,353 square meters to the District's total floor area and contributed to an increase in total energy consumption and absolute annual GHG emissions. However, both additions are designed to be less energy and emissions intensive on a per square meter basis than older facilities due to improvements in the BC building code and heating equipment efficiency ratings in recent years. Therefore, over the long term these additions should improve the District's average building energy and emissions intensities.

The District's emissions came from four categories: stationary sources, including natural gas and electricity consumption, mobile sources, paper consumption, and fugitive refrigerant emissions. Stationary sources accounted for 2,900 tCO_2e or approximately 66% of the District's total 4,361 tCO_2e in 2025. The second highest source of GHG emissions in the District is mobile sources, which accounted for 1225 tCO_2e or 28% of the District's total emissions in 2025 followed by paper at 74 tCO_2e (2%) and fugitive refrigerant emissions at 162 tCO_2e (4%).

Each year the District must pay the province an offset value of $25 per tonne for all eligible emissions (biogenic and school bus emissions are omitted). For the 2025 reporting year, the District's offset retirement costs equal $84,735.

Looking towards the future, the District has several projects planned for 2026 to help further reduce GHG emissions and improve climate resilience. These include:

- An electrical service upgrade to 3-phase power at Semá:th Elementary
- Mid-efficiency boiler replacements to high-efficiency boilers at Harry Sayers and South Poplar Elementary schools
- Ventilation upgrades at Semá:th and King Traditional Elementary schools
- Dual fuel heat pump installations at École Centennial Park
- Boiler upgrades at Bradner and South Poplar Elementary schools

2025 Greenhouse Gas Emissions Overview

This section provides an overview of the District's current and historical total GHG emissions (including biogenic emissions), as well as a breakdown of emissions by source and on a per student basis to allow for more granular comparison of the District's 2024 results compared to other school districts in BC. This is followed by a summary of the District's historic and planned GHG emissions reduction initiatives and the impact this has on annual carbon offset costs. The section concludes with the emissions and offset summary table and retirement of offsets statement as required by regulation.

Current State of the Inventory

As of 2025, the Abbotsford School District had reduced its GHG emissions by 9%[1] in terms of absolute emissions when compared to their 2010 baseline. This falls 41% short of the Province's target of a 50% reduction in absolute emissions below 2010 levels by 2030. A contributing factor is the inclusion of fugitive refrigerant emissions in this year's reporting, for the second year. This is a category of emissions that the District has not been required to report on in previous years. Further, the school additions at Margaret Stenersen and Auguston Traditional Elementary schools added 2,353 square meters to the District's floor area, leading to a rise in total energy and greenhouse gas emissions.

The projects undertaken in 2025 and those planned for 2026 and beyond are geared towards continuing to reduce GHG emissions every year while upholding the District's strategic focus on 4 key pillars - Student Success, Optimized Resources, Engaging Opportunities and Progressive Workforce.

Figure 1 illustrates the District's total annual GHG emissions trend from 2010–2025 in comparison to annual heating degree days (HDDs). Energy consumption and HDDs increased in 2011, followed by a steady decline until 2016. HDD's are a gauge of heating demand. Thus, the increase in HDDs in 2017 can be linked to the increase in GHG emissions that year. By early 2020, the COVID-19 pandemic struck, reducing onsite activity and associated stationary, mobile, and paper emissions. The resumption of activities, along with increased HDDs in 2021 and 2022, led to higher emissions during those years. Emissions and HDDs declined in 2023, then rose again in 2024. 2024 is the first reporting year to include fugitive refrigerant emissions, contributing to the increase in emissions compared to 2023. In 2025, there was a slight decrease in emissions, in line with the reduced HDDs in the same year. This decline can also be attributed to a 123 tCO_2e decline in reported paper consumption in 2025 compared to 2024 and the installation of dual fuel heat pumps at Margeret Stenersen Elementary school which improved energy efficiency at that site. Further, a historical error in the Emission Factors Catalogue for fugitive refrigerant emissions means the emissions reported in 2024 were 74.62 tCO_2e higher than reality. A prior year adjustment (PYA) has been added to the Emissions and Offset Summary Table to account for that overage last year.

[1] Please note this data includes biogenic emissions.

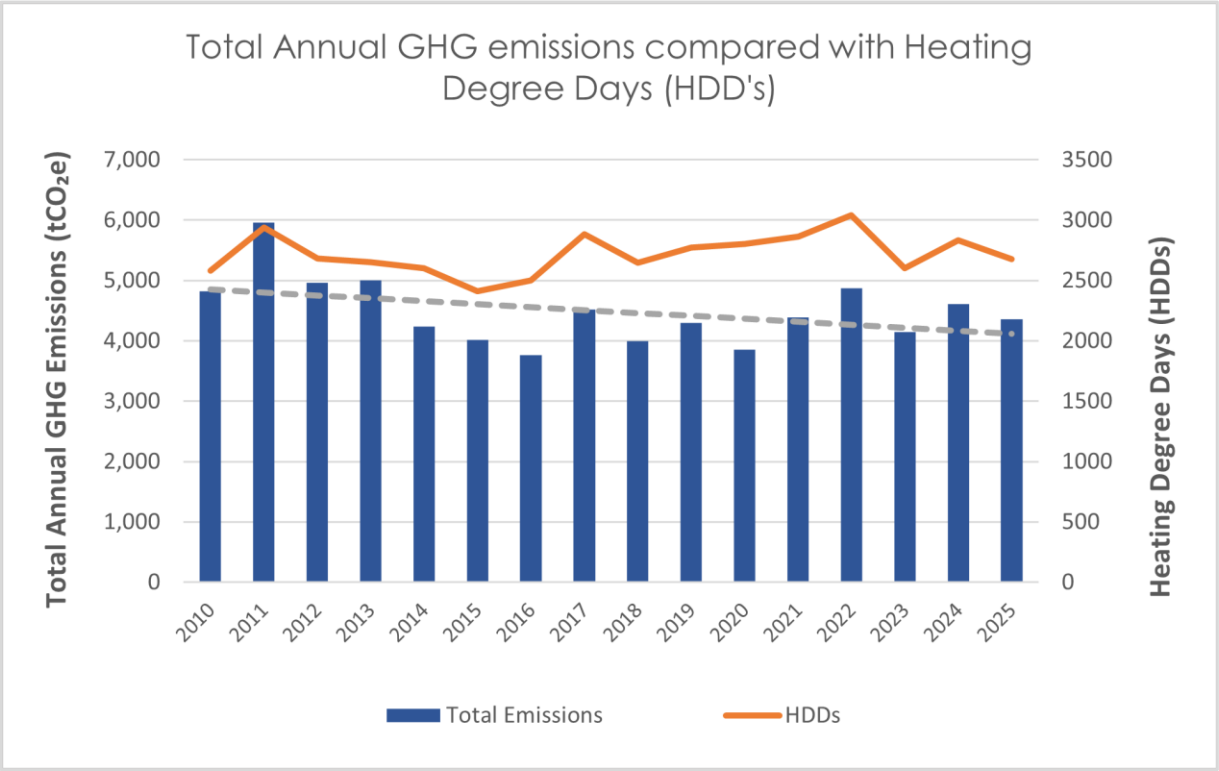

Figure 1. Total Annual GHG emissions compared with Heating Degree Days (HDDs) 2010 - 2025

When the impact of HDD's is removed through weather normalization, Figure 2 shows that the District's emissions have been slowly increasing since 2021. While 2025 emissions are still 13% below 2010 levels, they are 1% higher than they were in 2021 and well above the province's 2030 emissions targets for public sector organizations.

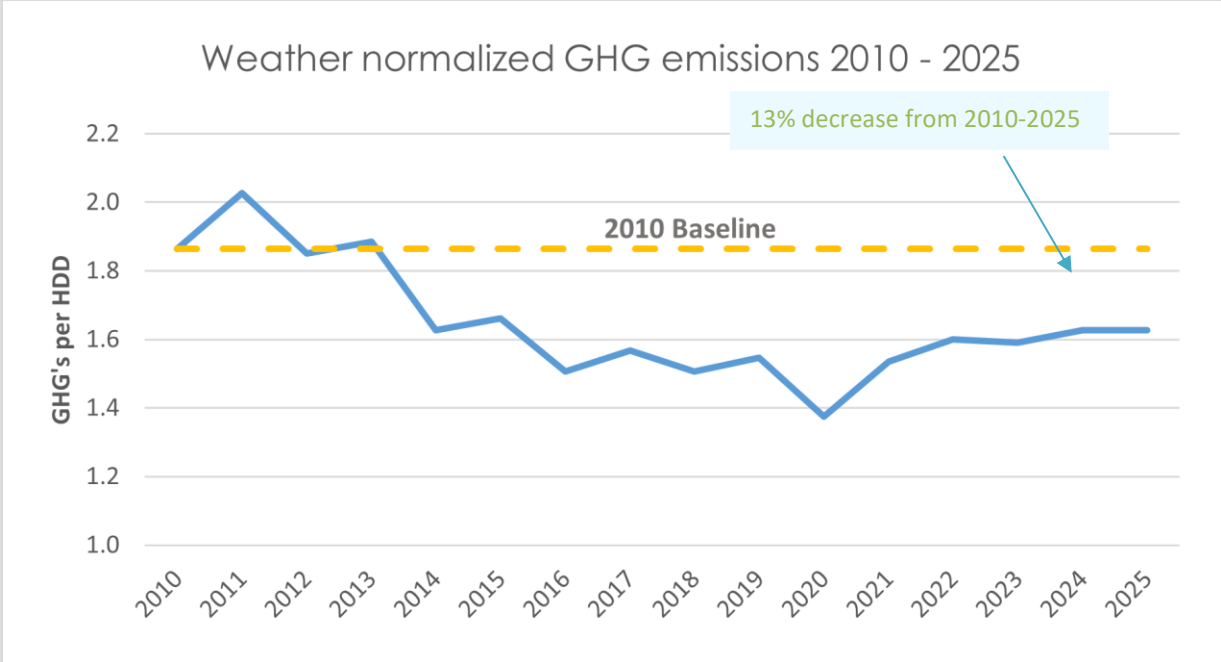

Figure 2. Weather normalized GHG emissions 2010-2025

GHG Emissions by Source

Stationary Sources

Stationary sources accounted for 2,900 tCO_2e [2] or approximately 66% of the District's total 4,362 tCO_2e in 2025. This represents the biggest source of GHG emissions in the District. Emissions come from the use of natural gas and electricity for building heating and cooling (Figure 3). Electricity is also used for ventilation and lighting as well as for the electronics, appliances and computers needed to operate schools and other District facilities.

Mobile Sources

The second highest source of GHG emissions in the District is vehicles, which accounted for 1225 tCO_2e [3]or about 28% of the District's total emissions in 2025. Mobile emissions come from the fleet of buses the District owns and operates for student transportation as well as from the fleet of service and administrative vehicles.

Paper

GHG emissions from paper in the District accounted for only 74 tCO_2e or about 2% of the District's total emissions in 2025. This is the smallest source of emissions in the District. Schools are the largest consumer of paper products in the District with the remainder being used by District administration and support services.

Fugitive Refrigerant Emissions

Fugitive refrigerant emissions are the second smallest source of emissions accounting for 162 tCO_2e or about 4% of the District's total emissions in 2025. These emissions come from the District's HVAC equipment, such as air conditioners, as well as other refrigeration systems, such as small refrigerators and freezers. 2025 is only the second year that the District was required to report on fugitive refrigerant emissions and the methodology used to collect refrigerant emissions improved significantly this year compared to last year's reporting helping increase the overall accuracy of these results.

[2] Please note, this data includes biogenic emissions.
[3] Please note, this data includes biogenic emissions.

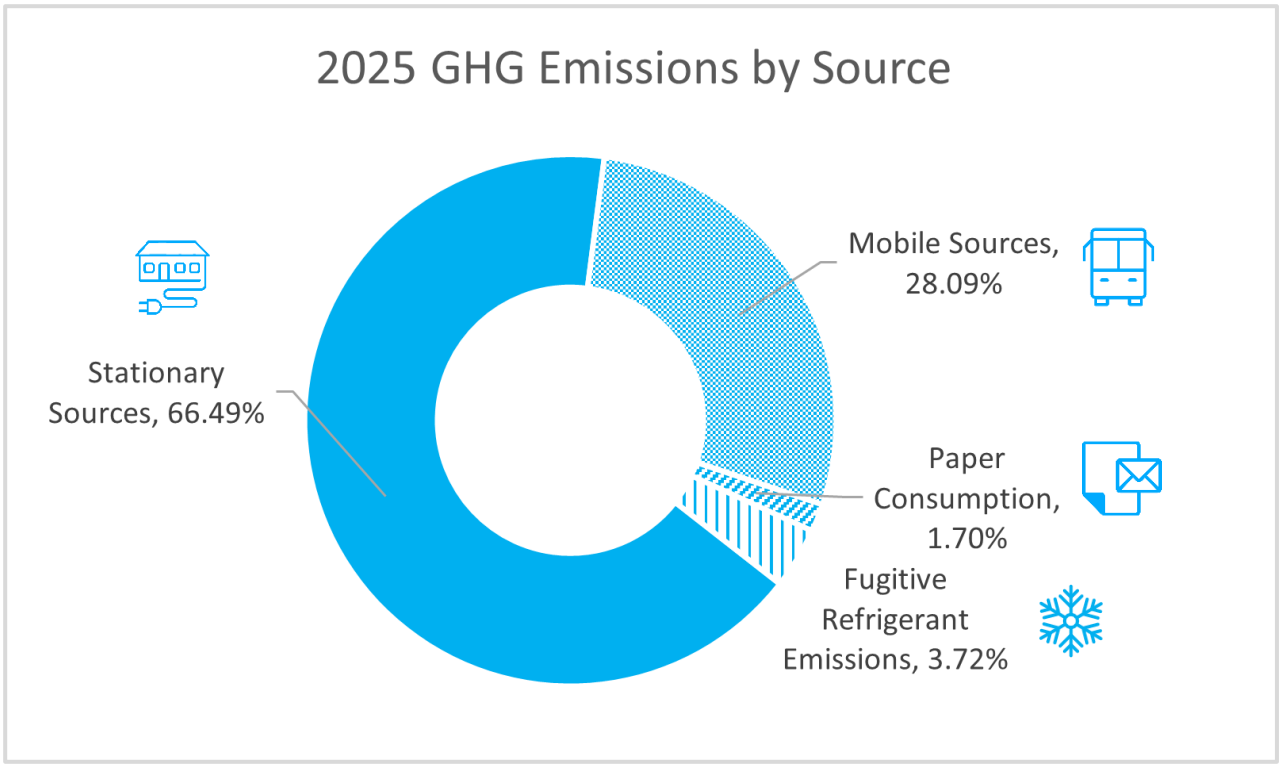

Figure 3. Breakdown of GHG emissions by source in 2025

How Do We Compare?

As of 2024, the Abbotsford School District was one of the fifteen lowest emitters in the province in terms of GHG emissions per Full Time Equivalent (FTE) student (Figure 4). Its GHG emissions were less than half the provincial average and at the Fraser Valley (FVRD) and Great Vancouver Regional District (GVRD) average, of 0.23 tCO_2e/student. Between 2010 – 2024, the District's weather normalized emissions fell by 13% compared to the provincial average reduction of 22% and the Fraser Valley and Great Vancouver Regional District average reduction of 18% (Figure 5). **Note 2025 data for all districts will not be available until July 2026.*

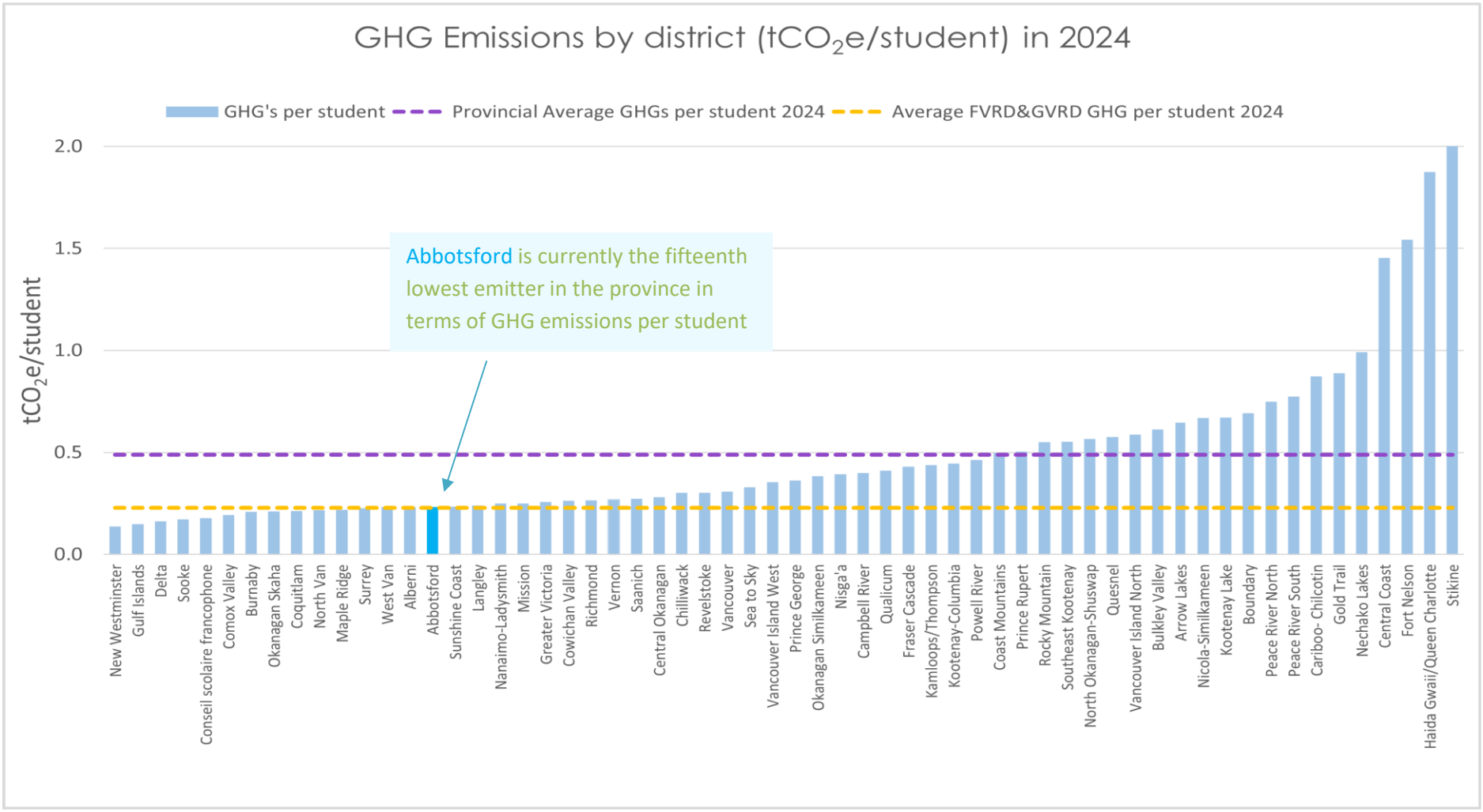

Figure 4. 2024 GHG emissions in tCO_2e per student

Data Sources: This graph was generated using data from CleanBC's *2024 Carbon Neutral Government Year in Review Summary and BC Schools - Student Enrolment and FTEs Report*

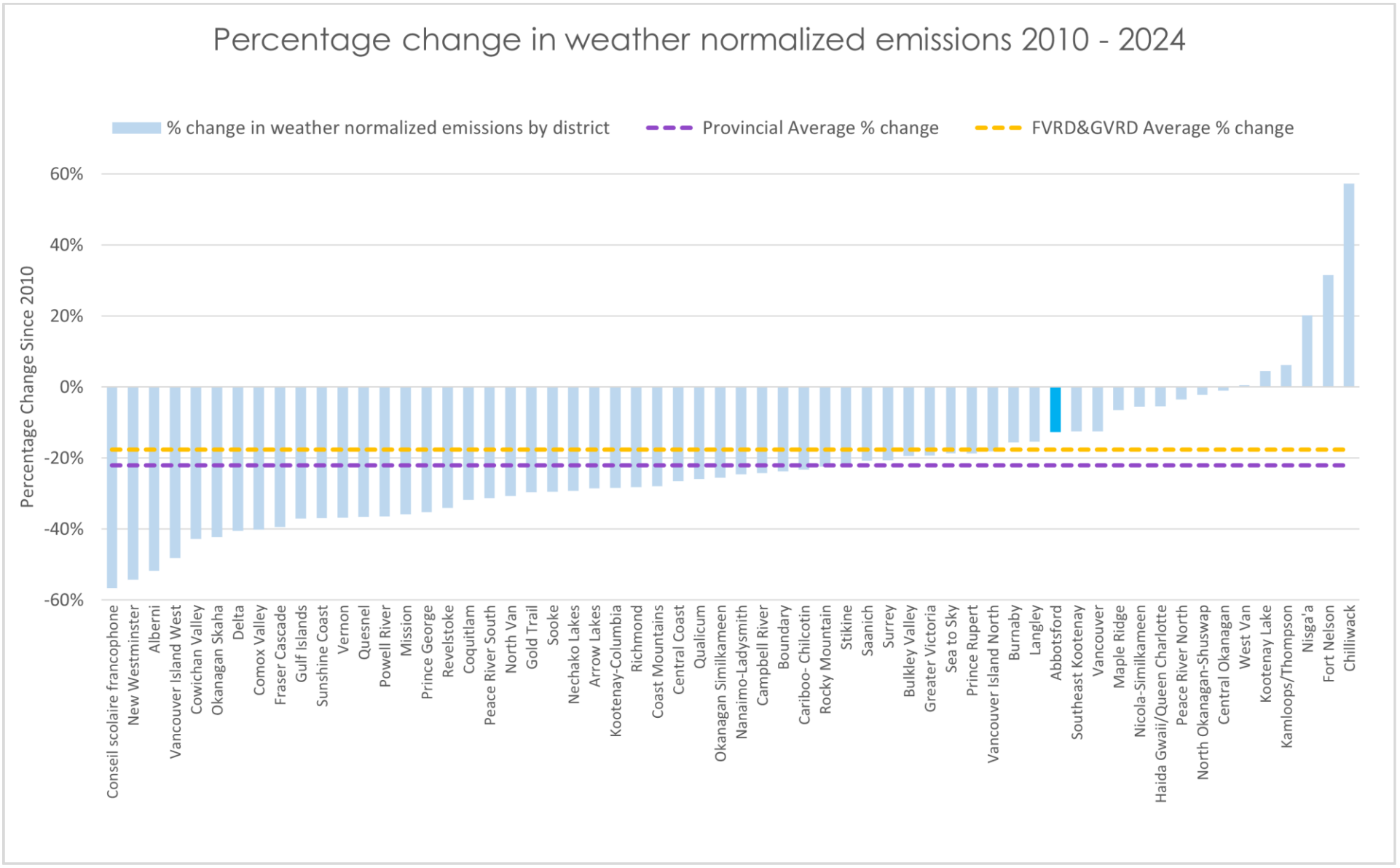

Figure 5. 2024 GHG percentage change in weather normalized GHG emissions per FTE student

Data Sources: This graph was generated using data from CleanBC's *2024 Carbon Neutral Government Year in Review: Summary,* and an in-house weather database.

Historic Actions Taken to Reduce Greenhouse Gas Emissions

Electricity and Natural Gas Consumption

Abbotsford School District's journey to reduce greenhouse gas emissions began in 2001 when the first energy conservation program was implemented. The District achieved significant reductions in both electricity and natural gas consumption between 2001 and 2010 (Figure 6) although GHG emissions were not being tracked at that time. Through a combination of behavior change programs, equipment upgrades and building system optimization, the District reduced electricity consumption by 36% and natural gas consumption by 31% between 2001 and 2010.

Since GHG reporting began in 2010, the District has continued to decrease its building energy use, reducing electricity consumption by an additional 10% and natural gas consumption by an additional 20% as of 2025 compared to 2010 levels. This results in a total electricity reduction of 42% and a total natural gas reduction of 44% since energy conservation efforts began in 2001.

While Figure 6 shows an increase in natural gas consumption compared to 2015 and 2020, as well as an increase in electricity consumption compared to 2020, these fluctuations are predominantly influenced by external factors. As illustrated in Figure 1, heating degree days (HDDs) were higher in 2020 and 2025 compared to 2015, contributing to increased heating demand and corresponding natural gas use. HDDs were slightly lower in 2025 compared to 2020; however, emissions were slightly higher in 2025 compared to 2020. This is likely due to the onset of the COVID-19 pandemic in early 2020 which temporarily reduced onsite activity, leading to lower energy consumption across district facilities. The overall trend since 2010 initially demonstrated a decrease in both electricity and natural gas use. However, from 2020 onwards, both electricity and natural gas use have increased.

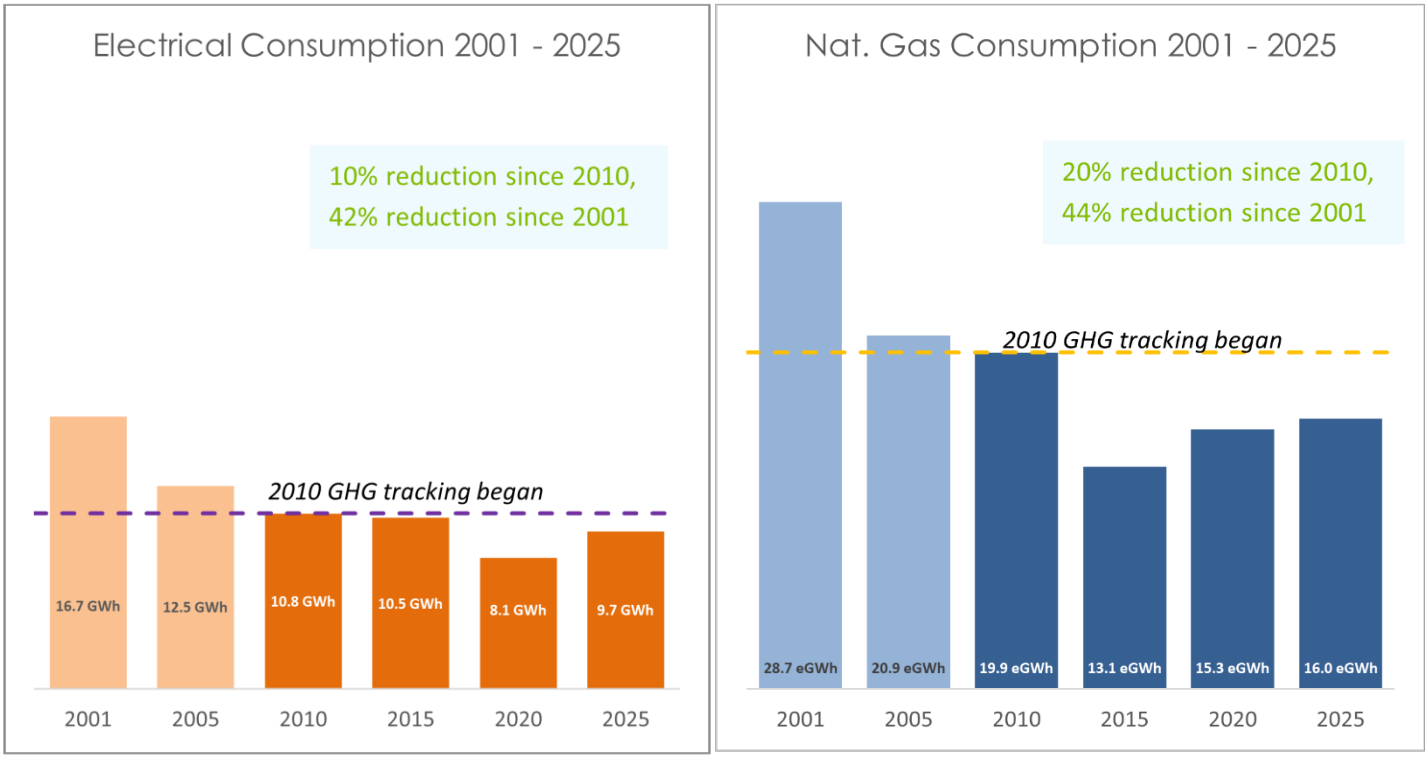

Figure 6. Historic Electricity Consumption Reductions and Historic Natural Gas Consumption Reductions

Fleet Vehicles

The District purchased its first battery electric vehicle (BEV) in 2016. It had then added an additional six BEVs, for a total of seven BEVs. In 2025, they reduced their fleet size, which led to a reduction in BEVs, down to five. The District hopes to purchase hybrid electric vehicles (HEV) in the future to continue contributing to their emission reduction goals. The District has also installed a network of electric vehicle charging stations throughout the District to facilitate electric fleet vehicle adoption, and to support staff who are making the switch to zero emission vehicles for personal use. In 2025, the District added new charging infrastructure at three schools: Ten-Broeck Elementary, Abbotsford Middle, and Auguston Traditional Elementary schools.

Paper

The District has undertaken numerous paper reduction initiatives. At the district level, many forms and procedures have been digitized. At the school level, the IT department is providing teachers, students, and staff with an ever-increasing array of digital resources to help facilitate learning and reduce paper use. The District procures some partially recycled paper. The District has also been exploring alternative fiber paper options such as sugarcane paper but has not yet found an economical and effective alternative.

Stationary Energy

The District has been undertaking measures to reduce stationary energy use and emissions for several years. A highlight in 2025 was at Margaret Stenersen Elementary School, where a centralized gas-fired air handling unit (AHU) was replaced with five decentralized dual-fuel heat pumps. The AHU previously served multiple classrooms but provided no cooling. The new system serves five separate classrooms. This decentralization enables individually controlled classrooms that can be adjusted to meet specific heating and cooling needs. The project has resulted in partial electrification and a corresponding reduction in GHG emissions.

Cost Savings from GHG Reductions

The District's GHG mitigation efforts have resulted in the co-benefit of decreasing operating costs and reducing the amount of carbon offsets the District must invest in each year (Figure 7). 2025 total carbon offset costs are $14,875 lower compared to those paid in 2010 and an average of $388 higher than those paid in the last 10 years.

The decrease in carbon offset cost in 2025 compared to 2024 is due in part to the significant reduction in reported paper emissions, the Margaret Stenersen Elementary upgrades, as well as the decline in HDDs. 2025 is the second year that the District reported refrigerant emissions. The 74 tCO_2e of GHG emissions from this category is equivalent to $1,850 in offsets.

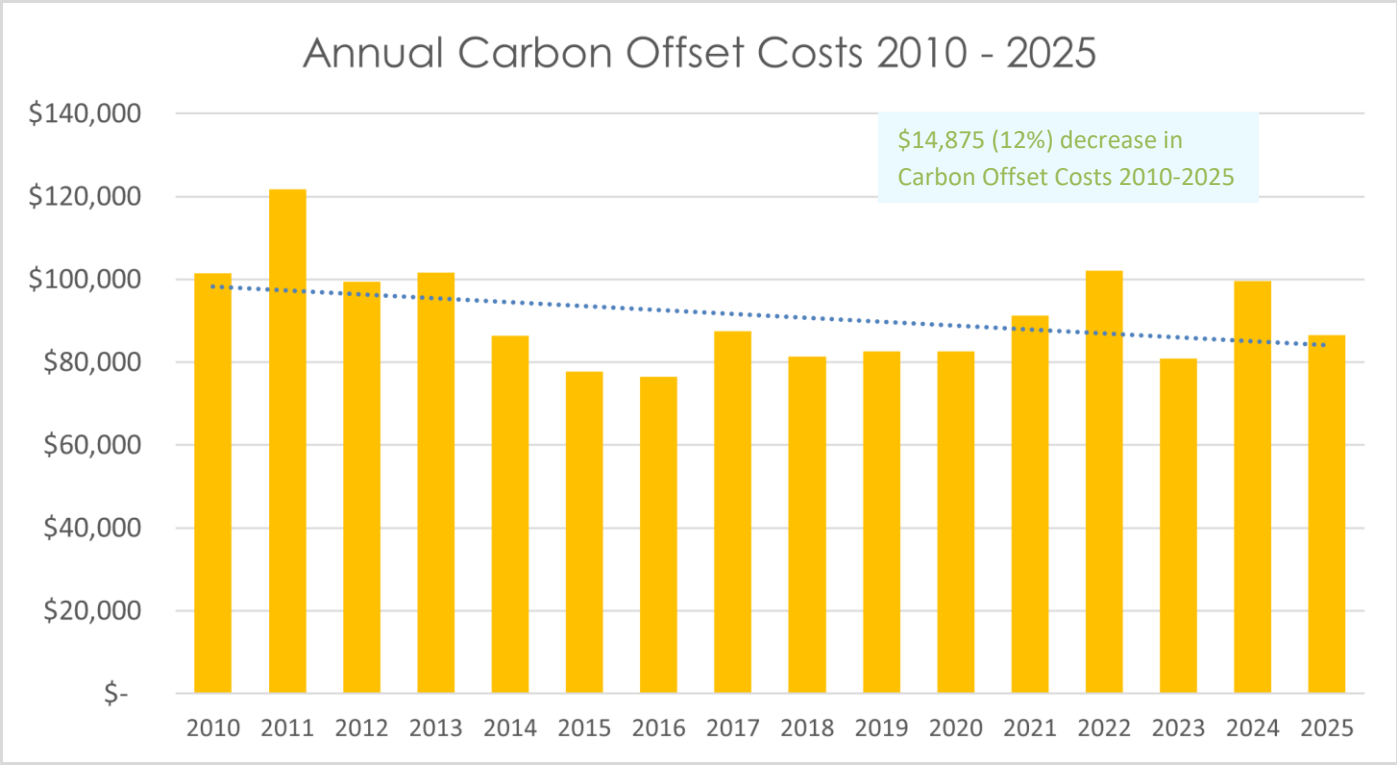

Figure 7. Annual carbon offset costs between 2010 - 2025

Summary of Actions Taken to Reduce Greenhouse Gas Emissions in 2025

To assist in reducing their energy consumption and GHG emissions, the District completed the following projects in 2025:

Stationary Sources (Buildings)

Actions Taken

Measure Type	Site	Project Description
Lighting & Electrical Infrastructure	Abbotsford Senior	• Theatre lighting upgrade
	Ross Elementary	• Exterior canopy lighting upgrade
	Various Sites	• Gym lighting upgrade
	Ten-Broeck Elementary	• LED lighting & lighting controls upgrade • Electrical panel upgrades to coincide with lighting upgrades • Back-up power system replacement
	Margaret Stenersen Elementary	• Back-up power system addition
Mechanical	Terry Fox Elementary	• HRV and Gym RTU upgrade with controls
	Dave Kandal Elementary	• 5 IBC boiler upgrades with controls
	Semá:th Elementary	• Boiler upgrade • Ventilation upgrade • Heat Pump upgrade with controls
	Yale Secondary	• Replaced rooftop HVAC unit with 1 Dual fuel heat pump, with updated controls
	WJ Mouat Secondary	• Replaced rooftop HVAC unit with 3 Dual fuel heat pumps, with updated controls
	Margaret Stenersen Elementary	• 5 Dual fuel heat pump installations with controls
	Abbotsford School of Integrated Arts (ASIA) Sumas	• Replaced rooftop HVAC unit with 1 Dual fuel heat pump installation, with updated controls
	John Maclure Community School	• DDC control upgrade

*Note: Measures for both emissions and climate adaptation impacts have been included in both lists.

Mobile Emissions (Fleet)

Actions Planned	Measure Type	Site	Project Description
	EV's and EV infrastructure	N/A – Vandalism, site restrictions, EV partners, software concerns, and required connectivity upgrades to existing chargers have been barriers to installing new EV infrastructure.	

GHG Reduction Actions Planned for 2026

To continue reducing its GHG emissions the District is planning to complete the following projects in 2026:

Stationary Sources (Buildings)

Actions Planned

Measure Type	Site	Project Description
Lighting & Electrical Infrastructure	Semá:th Elementary	• Electrical service upgrade from 400A single phase to 800A 3-phase power. This includes a new generator that provides back-up power to the whole school.
Mechanical	Semá:th Elementary	• Phase 2 of adding ventilators with heat pumps • Install a new gym rooftop make-up air unit and control upgrades
	King Traditional Elementary	• Phase 1 ventilation upgrade of installing 4-unit ventilator with heat pumps • Add gym make-up air unit
	Harry Sayers Elementary	• Replace 4 mid-efficiency boilers and install high-efficiency boiler plant
	École Centennial Park	• Replace 3 rooftop units with 3 dual-fuel heat pumps
	South Poplar Traditional Elementary	• Replace 2 mid-efficiency boilers with high-efficiency boilers
	Bradner Elementary	• Adding an additional high-efficient boiler

Emissions and Offset Summary Table

A full summary of the District's emissions for the 2025 calendar year, as well as their total offset costs are summarized in the table below.

Abbotsford School District 2025 GHG Emissions and Offsets	
GHG Emissions created in Calendar Year 2025	
Total $BioCO_2$	*116 tCO_2e*
Total Emissions (tCO_2e)	*4,362 tCO_2e*
Total Offsets (tCO_2e)	*3,464 tCO_2e*
Adjustments to Offset Required GHG Emissions Reported in Prior Years	
Total Offset Adjustment (tCO_2e)	*-74.62 tCO2e*
Grand Total Offsets for the 2025 Reporting Year	
Grand Total Offsets (tCO_2e) to be Retired for 2024 Reporting Year	*3,389 tCO_2e*
Offset Investment ($25 per tCO_2e)	*3,389 x $25 =* ***$84,725***

Note: The prior year adjustment value is a result of the refrigerant emissions credit due to the emissions factor error in 2024.

Retirement of Offsets

In accordance with the requirements of the Climate Change Accountability Act and the Carbon Neutral Government Regulation, the Abbotsford School District (SD 34) is responsible for arranging for the retirement of the offsets obligation reported above for the 2025 calendar year, together with any adjustments reported for past calendar years (if applicable). SD 34 hereby agrees that, in exchange for the Ministry of Energy and Climate Solutions (the Ministry) ensuring that these offsets are retired on SD 34's behalf, SD 34 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.

Climate Change Risk Management

This section provides a brief overview of the District's climate change impacts and risk management initiatives for 2024 and 2025.

Based on a high-level climate hazard assessment conducted by the District several years ago and climate hazard impacts experienced by in recent years, the District has begun looking at ways to adapt to current and future climate hazards. The District has also added an explicit climate change hazard metric to its annual risk registry for facilities and operations.

Thus far, the District has been most impacted by and has begun working towards adapting to two main hazards, namely, rising temperatures and extreme rain events. This section summarizes the impacts experienced in 2024 and the planned or implemented adaptation measures for these two hazard categories.

Climate Change Impacts and Adaptation Measures

Rising annual temperatures and more frequent extreme heat events

2025 Impacts

No significant impacts from extreme heat events were recorded in 2025. However, climate hazard projections for the area as well as anecdotal data from past school years indicates there may be an increased need for cooling at some sites as local temperatures begin to rise, particularly in the months of June to September.

Flooding from prolonged or extreme rain events

2025 Impacts

Partial flooding in the Sumas Prairie area led to service disruptions in 2025, particularly school closures for a week and restricted access to the area. Floodplain mapping for the City of Abbotsford shows that several schools are located in floodplain regions indicating that there may be a need to increase their resilience to inundation in the future.

2025 Adaptation Measures Implemented

	Hazard Type	Measure Type	Site	Adaptation Measure Description
Actions Taken	Extreme heat events & rising temperatures	Mechanical	Semá:th Elementary	• Heat pump upgrade with controls
			Margaret Stenersen Elementary	• 5 dual fuel heat pumps upgrade with controls
			Yale Secondary	• Replaced rooftop HVAC unit with 1 Dual fuel heat pump, with updated controls
			WJ Mouat Secondary	• Replaced rooftop HVAC unit with 3 Dual fuel heat pumps, with updated controls
			Abbotsford School of Integrated Arts (ASIA) Sumas	• Replaced rooftop HVAC unit with 1 Dual fuel heat pump installation, with updated controls
	Wildfire smoke due to wildfire activity	Mechanical	Semá:th Elementary	• Ventilation upgrades
			Terry Fox Elementary	• Heat Recovery Ventilation (HRV)

2026 Adaptation Measures Planned

	Hazard Type	Measure Type	Site	Adaptation Measure Description
Actions Planned	Extreme heat events & rising temperatures	Mechanical	Semá:th Elementary	• Phase 2 of adding ventilators with heat pumps
			King Traditional Elementary	• Phase 1 ventilation upgrade: Install 4-unit ventilator with heat pumps
			École Centennial Park	• Replace 3 rooftop units with 3 dual-fuel heat pumps

*Note: Measures for both emissions and climate adaptation impacts have been included in both lists.

Other Sustainability Initiatives

Waste reduction

The District has an established waste diversion system in place which facilitates the sorting of waste from recycling and compostables at all facilities. Some sites also have additional recycling collection initiatives in place to collect items such as batteries, used pens and markers, or soft plastics (all of which cannot currently be placed in mixed recycling bins) and bring them to local recycling facilities.

Green Procurement

The District purchasing department has instituted a “buy local” purchasing initiative and strives to purchase supplies and materials within a 100km radius whenever possible.

Executive sign-off

Signature	Date: May 25, 2026
Monica Schulte	Secretary-Treasurer
Name (please print)	Title

Please scan and email the completed form to Carbon.Neutral@gov.bc.ca