



(Picture: Stitó:s Lá:lém Totí:lt Elementary / Middle School)

Chilliwack School District 33 - Partners in learning!

Located in the Fraser Valley of British Columbia, we are a learning community of over 14,000 students, served by 1,800 teachers and support staff. Our diverse programs include elementary, middle and secondary neighborhood schools, French Immersion programs and more. There are twenty Elementary schools, five middle schools (grades 6 to 8) and five secondary schools (grades 9-12).

We are privileged to work and learn on the unceded traditional territory of Pilalt, Sema:th and Ts'elxwéyeqw.

2023 PSO Climate Change Accountability Report



**Chilliwack
School District**

Carbon Neutral

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EXECUTIVE SUMMARY

The Chilliwack School District is committed to promoting environmental sustainability by taking various green initiatives aimed at minimizing harmful greenhouse gas emissions. Thanks to our partnerships with Clean B.C., B.C. Hydro, Fortis, and the Ministry, we have successfully implemented several projects that have helped us achieve our goals. One of our proudest achievements is the CNCP funded Mechanical RTU upgrade at Strathcona Elementary. Through Ministry support and CNCP (Carbon Neutral Capital Program) funding our district was able to replace and retrofit 24 aging Roof Top Units with state-of-the-art heat pumps with full DDC additional controls. Through this project we able to Reduce GHG emissions by 40.49 Tons of CO₂e. Moreover, our heating plants will be controlled by building management software (DDC) that not only optimizes building efficiency but also helps to reduce the district's overall carbon emissions.



(Picture: above: Strathcona Elementary School, below: Strathcona Elementary Roof Top units)

Our school district promotes a sustainable culture, with our staff, students, parents, and community partners actively engaging in conservation activities such as turning off lights, recycling, and composting. These efforts align with our District environmental goals and are further supported by student-led "Green



Teams" who share their knowledge and enthusiasm with others. We are also proud of our district's move towards electronic document storage as part of our efforts to reduce paper consumption.

Even with these efforts, our school district acknowledges that we still generate GHG emissions. However, with careful planning and strategizing we look to further reduce our carbon footprint and achieve our goals for future generations.



(Picture: Stitó:s Lá:lém Totí:lt Elementary / Middle School)

Declaration statement: This PSO Climate Change Accountability Report for the period January 1, 2023 to December 31, 2023 summarizes our greenhouse gas (GHG) emissions profile, the total offsets to reach net-zero emissions, the actions we have taken in 2023 to reduce our GHG emissions, and our plans to continue reducing emissions in 2024 and beyond

OVERVIEW:

PART 1. EMISSION REDUCTIONS: ACTIONS & PLANS

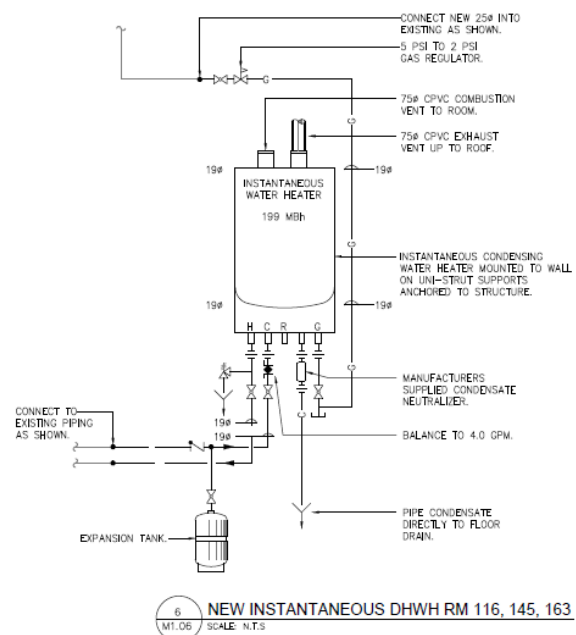
A. Stationary Sources

The Chilliwack school district is committed to reduce GHG emissions through a variety of building upgrades. The upgrades not only reduce harmful emissions but also reduce energy costs and replace aging infrastructures. Through Energy tracking software we can prioritize our building assets and target the ill performers.

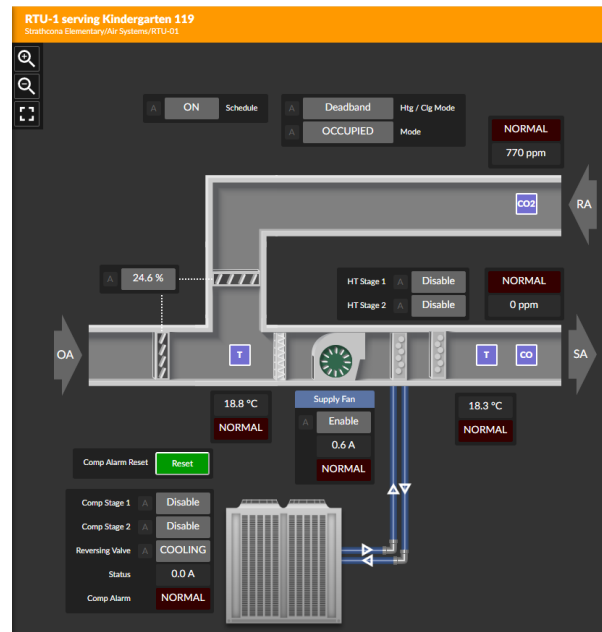
Mechanical - Boiler Optimization



- One of three high efficiency Navien instantaneous condensing water heater with 199 MBH input installed at Strathcona Elementary School. •



HVAC Control Upgrades



- Continued upgrades to our DDC (Direct Digital Controls) systems to enable precise control and monitoring of the various components of our HVAC systems resulting in improved energy efficiency, comfort, and indoor air quality.

(Pictures: DDC Panel and graphics)

- Continuously optimizing our DDC HVAC systems, controls, and building schedules to prioritize the identification and implementation of control adjustments to enhance building efficiency and conserve energy.



HVAC Mechanical – Upgrades (Robertson Elementary)



- 7 Roof Top Units replaced with new roof top heat pumps with gas fired back-up. The new heating system operates at a much higher level of efficiency than existing and at colder temperatures can switch to gas fired heating.

- Additional DDC system points, CO2 demand ventilation control and occupancy sensors. In addition to the economizer, 2 stages of heating and 2 stages of cooling provided.



HVAC Mechanical – Upgrades (Strathcona Elementary)



- 21 Roof Top Units replaced and 3 furnace replacements to new roof top heat pump with gas fired back-up. The new heating system operates at a much higher level of efficiency than existing and at colder temperatures can switch to gas fired heating.

- Additional DDC system points, CO2 demand ventilation control and occupancy sensors. In addition to the economizer, 2 stages of heating and 2 stages of cooling provided.



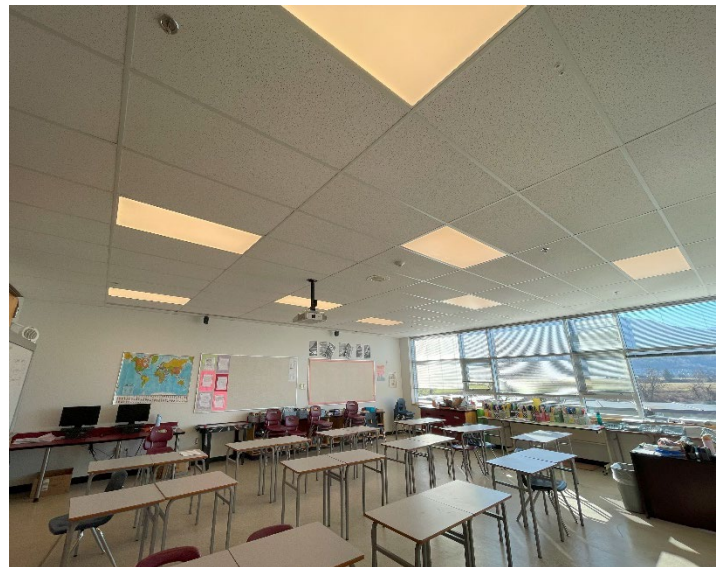
LED Lighting Upgrade



- Rosedale Elementary recently received upgrades to its classroom lighting, introducing dimmable LED fixtures. This initiative aims to enhance classroom comfort and flexibility by allowing adjustable lighting levels. Moreover, the transition to LED technology aligns with energy-saving objectives, contributing to sustainable practices within the school environment. It also received LED upgrades to corridors and common areas.



- Exterior building LED lighting upgrades at Vedder Elementary providing improved visibility and energy savings.



Building Envelope Upgrades



- Ministry funded Building Envelope retrofits have reduced energy usage and heat loss by providing additional insulation and have incorporated energy efficient window replacements.
- Roofing Upgrades have incorporated additional insulation packages for improved energy efficiency and savings.

(Picture: East Chilliwack Elementary Building Envelope Upgrade, Roofing upgrade, and Bus drop of G.W. Graham)

B. Mobile Sources

- Utilizing Video conferencing to reduce driving.
- Encourage carpooling to all district events.
- Smaller more fuel-efficient Vehicles utilized in I.T. departments fleet.
- 10-year Capital plan for fleet vehicle replacement based on vehicle age, fuel consumption, and maintenance costs.
- Exploring and planning for E.V. vehicles and infrastructure requirements






C. Paper Consumption

- Power management settings have been utilized in all computers, copiers, and printers.
- Experimenting with cold press bamboo paper.
- Exploring minimum Recycled content Policy.
- Reduced Paper consumption with the use of **PaperCut** software and low use presets like standard double-sided printing and print release functions.



Unreleased jobs, environmental impact - 2023

Jan 1, 2023 to Dec 31, 2023.

	Trees Saved	<i>By not printing these jobs, the number of trees saved.</i>
	C02 Saved	<i>By not printing these jobs, the amount of greenhouse gases not emitted due to reduced paper production.</i>
	Equivalent Bulb Hours	<i>The manufacturing energy saved from not producing paper, represented as the energy consumed by a standard light bulb in hours.</i>

Sheets:	326,502
Total Printed Pages:	438,699
Color Pages:	43,688
Grayscale Pages:	395,011
Value Saved:	\$11,906.96
Jobs:	33,390
Trees Saved:	4.06 trees
C02 Saved:	1,469.3 kg
Equivalent Bulb Hours:	92,508.9 hours

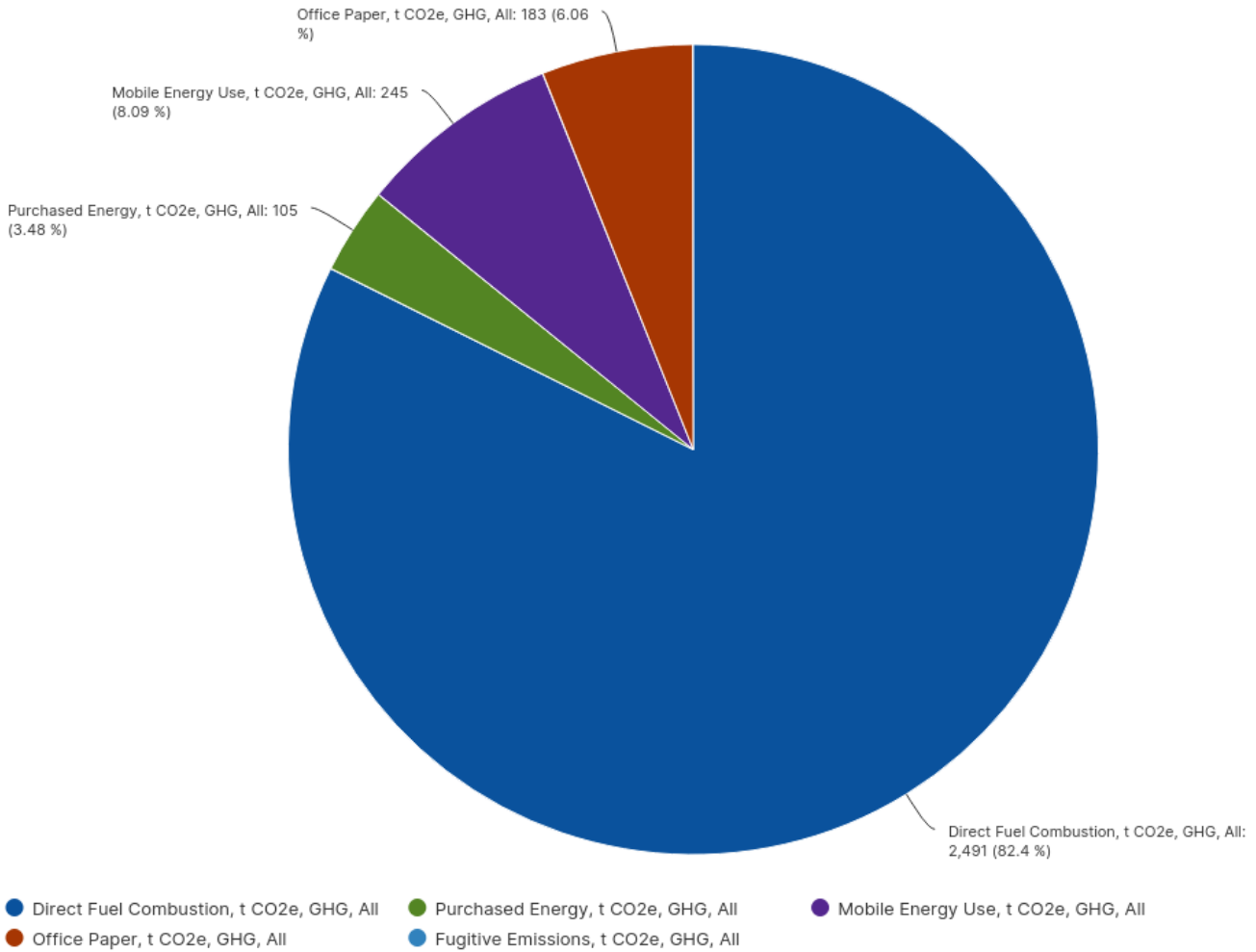
2023 GHG EMISSIONS AND OFFSETS SUMMARY TABLE:

Chilliwack School District 2023 GHG Emissions and Offsets Summary	
GHG Emissions for the period January 1 – December 31, 2023	
Total BioCO ₂	43.7
Total Emissions (tCO ₂ e)	3,997
Total Offsets (tCO ₂ e)	3,025
Adjustments to Offset Required GHG Emissions Reported in Prior Years	
Total Offsets Adjustment (tCO ₂ e)	0
Grand Total Offsets for the 2022 Reporting Year	
Grand Total Offsets to be Retired for 2023 Reporting Year (tCO ₂ e)	3025
Offset Investment (\$25 per tCO ₂ e)	\$75,625

Retirement of Offsets:

In accordance with the requirements of the *Climate Change Accountability Act* and Carbon Neutral Government Regulation, The Chilliwack School District (**the Organization**) 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 (if applicable). The Organization hereby agrees that, in exchange for the Ministry of Environment and Climate Change Strategy (**the Ministry**) 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.

Offset Required, 2023



Emissions Overview:

Most of our emissions (82.4 % + 3.48% = **85.88%**) come from our buildings through the burning of natural gas and electrical consumption with the remainder coming from our paper supplies (6.06%) and fleet vehicles (8.09%).

PART 2. PUBLIC SECTOR LEADERSHIP

2A. Climate Risk Management

Addressing climate change is crucial for the health and well-being of the School District. Understanding climate change and its related risks is the key to preparing for the future and implementing strategic plans to protect essential infrastructure and reducing potential costs. With careful planning the Chilliwack School District has implemented various strategies to tackle potential environmental concerns, such as.

- Integration of flood protection measures in all new constructions and expansions, with collaborative input from local authorities.
- Strategic planning and acquisition of specialized equipment aimed at flood control mitigation.
- Deployment of Merv 13 filters within ventilation systems to diminish airborne particles, particularly smoke during wildfire seasons.
- Implementation of water conservation practices, such as selective site irrigation and the utilization of drought-resistant flora, to curtail overall water usage. This approach not only bolsters resilience against heat waves but also mitigates the impacts of droughts.
- Development of robust building designs featuring cooling systems to counteract the escalating temperatures attributed to climate change.



2B. Other Sustainability Initiatives

- The district has implemented "Bin be gone" recycling stations that are easily recognizable and accessible to provide convenient locations for recycling. These recycling centers have significantly reduced our overall waste and have played a vital role in minimizing our impact on the environment.



- Our custodial operations have adopted ionized water technology to minimize our environmental impact and support eco-friendly cleaning practices across seven critical areas: energy, carbon dioxide emissions, ozone levels, smog, acidification, eutrophication, and particulate matter.



- As part of our ongoing commitment to provide clean drinking water while reducing plastic bottle waste, we have been increasing the number of water bottle filling stations throughout the district. These new filtered stations not only offer cleaner and healthier water, but also help to minimize the presence of harmful contaminants like lead. By implementing this strategy, we strive to make clean and healthy drinking water accessible to all, while also promoting a more sustainable environment.

- Have made the switch at several schools from small gas-powered tools to electric leaf blowers and snow blowers. This transition not only signifies a commitment to minimizing our carbon footprint but also addresses concerns regarding noise pollution and harmful emissions.



Executive sign-off:


Signature

May 15, 2024

Date

Rohan Arul-pragasam

Superintendent

Name (please print)

Title