

2024 PSO Climate Change Accountability Report

qathet School District (SD47)



Declaration Statement

This PSO Climate Change Accountability Report for the period January 1, 2024 to December 31, 2024 summarizes our greenhouse gas (GHG) emissions profile, the total offsets to reach net-zero emissions, the actions we have taken in 2024 to minimize our GHG emissions, and our plans to continue reducing emissions in 2025 and beyond.

Emission Reductions: Actions & Plans

The School District established a goal in late 2023 to reduce Greenhouse Gas Emissions by 15% within 4 years and are on target to hit the metric at the end of 2025, ahead of our initial sustainability target. The School District has reviewed the identified three key areas for GHG emissions, paper, buildings, and fleet, and continues to develop strategies to mitigate emissions in each.

Emissions by Source (tCO₂e)

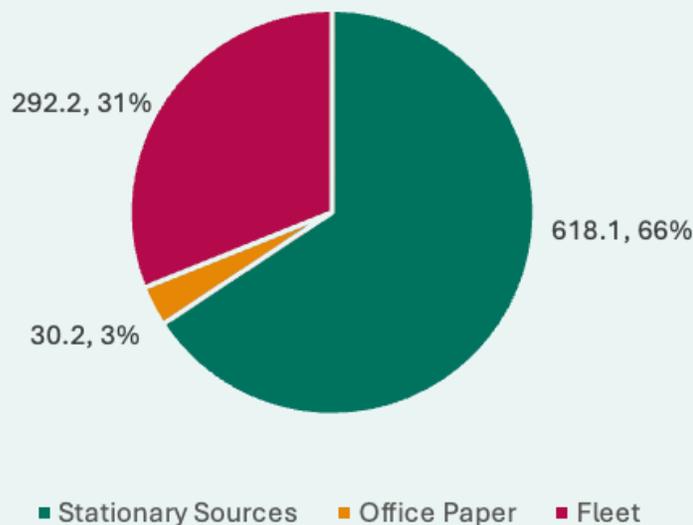


FIGURE 1 – GHG EMISSIONS BY 3 KEY SOURCES

Stationary Sources

Stationary sources represent the largest contribution of emissions at 618.1 tCO₂e, or approximately 66% of the District's total. Emission sources in the stationary category include natural gas, electricity, and fugitive emissions from refrigeration sources (Heat pumps, refrigerators, coolers, freezers, etc). The energy used provides heating, lighting, and necessary electronics to operate our schools and District buildings.

As can be seen from Figure 2, Direct Fuel Consumption (Natural Gas/Propane) was used as approximately 53% of the District's Stationary Energy use, but when compared to the Figure 1, contributed to 66% of total District emissions while electrical emissions represents 3% of the total. Given the significant relative difference between Natural Gas and Electricity emissions per equivalent energy unit, the School District will continue to mitigate stationary source emissions through the reduction of fugitive emissions and removal of inefficient natural gas consumption with electrical equivalent replacement options, where practicable.

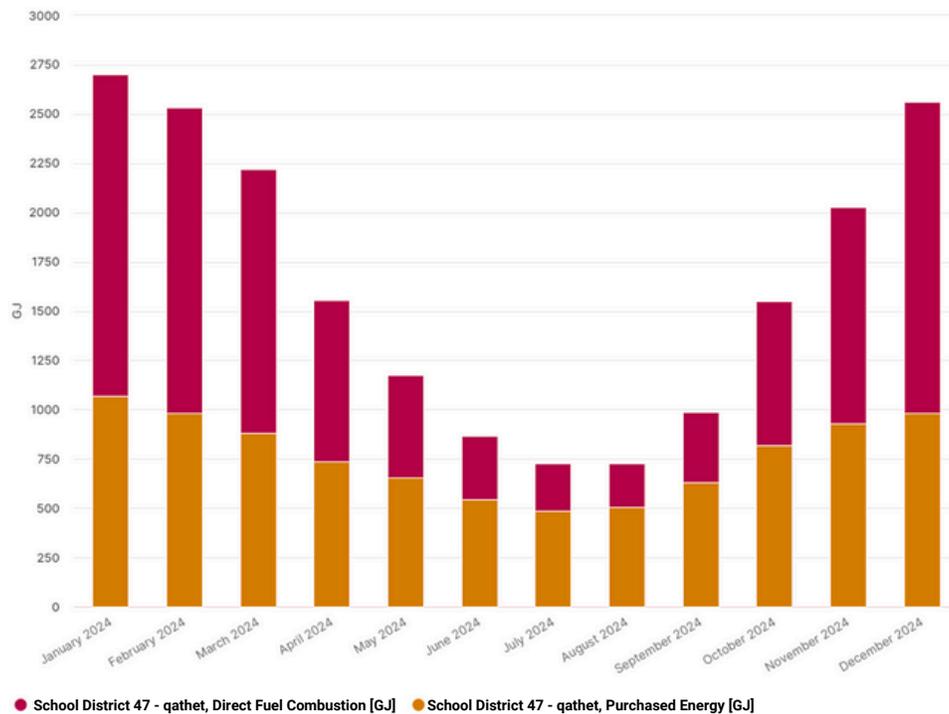


FIGURE 2 – STATIONARY ENERGY USE – ELECTRICAL AND FUEL

In 2024, the School District had a primary focus on the stationary source reductions with the following projects completed:

James Thomson Elementary School HVAC Upgrade Commissioning

- The James Thomson HVAC project received the final rooftop unit for the gym and was fully commissioned in the first quarter of 2024. This system operates on a new efficient DDC system which is able to shut down the system when not in use and monitor facility HVAC systems throughout the day to ensure the system is working as efficiently as practicable.

Henderson Elementary School 3-phase Power Upgrade

- Power upgrade to improve electrical capacity at Henderson School from single phase to 3-phase and effectively replace the 3 Natural Gas boiler units that were supplying heat to the school.

Henderson Elementary School HVAC Upgrade

- A complete replacement of all HVAC equipment throughout the building to improve air quality, greatly reduce GHG emissions, and provide climate resiliency with the addition of cooling capacity in all classrooms.

Henderson Elementary School LED Lighting Upgrade

- Replace the dated T8/T12 lighting fixtures with new energy-efficient LED lighting throughout the school.

Elementary School Domestic Hot Water Heat Pump Tanks

- Replace specific high-usage hot water tanks with a cascading heat pump hot water tank to improve energy efficiency and remove natural gas heaters.



In looking at 2025, the focus continues to be on Stationary Sources and opportunities to reduce emissions and improve climate resiliency. The following project work is being planned or completed to support operational efficiencies and sustainability:

Edgehill Elementary School Addition Solar Capacity

- During the Detailed Design phase of the project, the capacity of the roof was upgraded prior to issuing for construction to include capacity for an additional 35kW solar array and parallel source electrical distribution system. As part of our renewable energy infrastructure planning, Future funding applications will support the added solar capacity project once the school addition has been commissioned.

Edgehill Elementary School HVAC Upgrade

- The existing school building areas will undergo an extensive upgrade to replace all HVAC equipment from a Natural Gas heating system to a refrigerant heat pump system which will provide energy efficient heating and cooling to all spaces. This system will tie directly into the building addition to provide one modern operating system through DDC control system ensuring operational efficiency.

Edgehill Elementary School LED Lighting Upgrade

- Replace the dated T8/T12 lighting fixtures with new energy efficient LED lighting throughout the school.

Westview Elementary School LED Lighting Upgrade

- Replace the existing older LED lighting unit and replace with newer LED lighting and dimming controls throughout the school for added efficiency based on occupancy.

Mobile Sources

The School District fleet, consisting of yellow school buses and white fleet vehicles (such as maintenance vans, activity buses, etc) and is the second largest contributor to the District's emissions at 292 tCO_{2e}, or 31% of the total emissions.

Given the moderate climate in the qathet region relative to other school districts in the province, as well as the length and duration of bus trips across the region, electric fleet options are being pursued through infrastructure grant funding and will perform well within the existing School District bus fleet.

The District has enrolled in BC Hydro's EV Fleet Ready Program which provides funding for studies to be completed to assess facility and fleet infrastructure requirements to support converting portions of the fleet to electric. Infrastructure upgrades expected would include a 3-phase power upgrade to extend the BC Hydro 3-phase power access to the SD47 Bus Garage and install a bank of electric chargers capable of charging the school bus fleet. The study is expected to be completed mid-2025 and engagement with BC Hydro for next steps within the EV program, as well as other funding opportunities.

It is the District's goal to prepare the necessary facility infrastructure to facilitate the use of an electric bus on the next fleet replacement. The current goal to begin receiving electric school bus fleet vehicles is currently 2027.

In addition to the large infrastructure planning for large fleet vehicles, the School District plans to extend charging capabilities at remote locations, including Texada Elementary School. The EV charging capacity is in addition to the EV chargers at all other school sites to promote energy efficient transportation across the District.



Paper Consumption

The third key contributor to School District emissions is paper consumption at 30 tCO_{2e}, or approximately 3% of total emissions. The District continues to use increased recycled-content printing paper and promote paperless options as an alternative. The introduction of SharePoint sites in place of a stand-alone file directory promotes use of digital materials that can be accessed and referenced easily as opposed to stored files to be printed and distributed. As more sustainable alternative come to market, such as sugar paper or other fiber alternatives, they will continue to be reviewed for cost and effectiveness within District operations.

2024 GHG Emissions and Offsets Summary

GHG emissions for the period January 1 - December 31, 2024

Total BioCO₂	13.8
Total Emissions (tCO₂e)	943
Total Offsets (tCO₂e)	738

Adjustments to Offset Required GHG Emissions Reported in Prior Years

Total Offsets Adjustment (tCO₂e)	0
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Grand Total Offsets for the 2024 Reporting Year

Grand Total Offsets to be Retired for 2024 Reporting Year (tCO₂e)	738
Offset Investment (\$)	\$ 18,450.00

Retirement of Offsets:

In accordance with the requirements of the Climate Change Accountability Act and the Carbon Neutral Government Regulation, qathet School District – SD47 (the Organization) is responsible for arranging for the retirement of the offsets obligation reported above for the 2024 calendar year, together with any adjustments reported for past calendar years (if applicable). The Organization hereby agrees that, in exchange for the Ministry of Energy and Climate Solutions (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.

PART 2: Public Sector Climate Leadership

The qathet School District continues to promote sustainability and climate resilience in both education and District facilities/operations.

The District Sustainability Committee has created a committee plan to support outdoor education, climate change awareness, and sustainable goal setting and tracking. Through the committee meetings, ownership and accountability is maintained at both the District and individual level to ensure goals are met and initiatives are implemented. Through the committee, a sustainable fund has been established to promote school sustainability ideation and planning involving staff, students, and the public.

2A. Climate Risk Management

The School District did not experience any significant climatic impact, including extreme heat or flooding/prolonged rain event in the qathet region within the 2024 year. Although not experienced in the last year, it is recognized that climate resilience is necessary for the inevitability of such events. Climate hazard projections based on anecdotal evidence across school districts sites indicate a rise in local temperatures which may require additional cooling demands, specifically in the months of June to September.

2B. Additional Sustainability Initiatives

Waste Reduction

The qathet region underwent a significant change during the 2024 year which resulted in a loss of recyclable waste diversion streams. The School District was affected in the streams that could be diverted and continues to work with provincial partners to reduce waste across all streams. In working with the City of Powell River, the School District was able to introduce curb side pick-up for recycling at the James Thomson and Edgehill Elementary Schools. The District has worked with the City to submit requests to Recycle BC to add all other District sites within the municipality to the allowed Institutional recycling sites and further improve the District recycling program.

Executive Sign-off:



Signature

May 30, 2025

Steve Hopkins

Secretary-Treasurer