



2022 CLIMATE CHANGE ACCOUNTABILITY REPORT

Burnaby School District #41

May 31 2023

TABLE OF CONTENTS

TABLE OF CONTENTS	2
LAND ACKNOWLEDGEMENT	2
DECLARATION STATEMENT	3
OVERVIEW.....	3
ENVIRONMENTAL POLICY.....	4
SUSTAINABILITY STRATEGIC PLAN	4
ACTIONS TAKEN IN 2022	5
PLANS FOR 2023 AND BEYOND.....	6
Buildings.....	6
Fleet	6
PUBLIC SECTOR CLIMATE LEADERSHIP	7
Energy Team Restructure	7
Burnaby Youth Sustainability Network (BYSN)	8
EMISSIONS AND OFFSET SUMMARY TABLE.....	9
RETIREMENT OF OFFSETS.....	10

LAND ACKNOWLEDGEMENT

Burnaby is on Coast Salish territory in the traditional, ancestral, and unceded lands of the xʷməθkʷəy̓əm (Musqueam), Skwxwú7mesh Úxwumixw (Squamish), and səfilwətaʔl (Tsleil-Waututh) Nations, where we teach, learn, and live.

DECLARATION STATEMENT

DECLARATION STATEMENT: This PSO Climate Change Accountability Report for the period January 1, 2022 to December 31, 2022 summarizes our greenhouse gas (GHG) emissions profile, the total offsets to reach net-zero emissions, the actions we have taken in 2022 to minimize our GHG emissions, and our plans to continue reducing emissions in 2023 and beyond.

OVERVIEW

On behalf of Burnaby Schools, we are pleased to present our Climate Change Accountability Report for 2022. This report summarizes the challenges, achievements and lessons learned as we continue our decade-long journey towards sustainability.

In the 2022 calendar year, the Burnaby School District continued to minimize our GHG emissions and implemented organizational changes that will impact how the District reduces emissions into the future.

In our pursuit of decreasing carbon emissions, Burnaby School District has long embraced energy efficiency technologies. These efforts have included early adoption of high-efficiency heating systems, utilization of solar panels, implementation of geothermal exchange systems, deployment of electric fleet vehicles and charging stations, as well as various water conservation initiatives.

Our unwavering dedication to emission reduction aligns with our organization's broader objective of fostering sustainability, community stewardship, and accountability across all levels. Numerous individuals and groups within the District actively contribute to this endeavor, including school-based Green Teams, the local chapter of the Environmental Educators Provincial Specialist Association (EEPSA), and various other organizations and individuals. While operating independently, they share a common goal of promoting awareness and educational initiatives, which have cultivated robust connections within the school community.

ENVIRONMENTAL POLICY

In 2010, the Burnaby School District was one of the first District's in BC to implement an official Environmental Sustainability Policy which in part states:

“The Board acknowledges that Environmental Sustainability is a joint responsibility of trustees, students and staff and is committed to sound practices that focus on minimizing pollution and refuse, reducing energy use and water consumption, and promoting a healthy environment for students and staff within the limited financial resources available.”

Furthering this policy, in 2019 the Burnaby Board of Education released its 5-year Strategic Plan, which includes the following objective under key priority “Modern, Safe, and Sustainable Learning Environment”, Goal 3 – Increase District awareness of climate change and decrease the District's environmental impact:

- Reduce the overall green-house gas output and carbon footprint of the District.
- Reduce the District's overall physical waste, diversion, and consumption.
- Engage the Burnaby Youth Sustainability Network (BYSN) to deliver quantifiable environmental outcomes.
- Build awareness of the efforts undertaken by the Burnaby School District as a model for environmental awareness and sustainability.
- Review and strengthen policies and practices related to environmental impact.”

SUSTAINABILITY STRATEGIC PLAN

Building on the aforementioned 5-year strategic plan, in 2022, the Burnaby School District adopted its official Sustainability Strategic Plan. This was created with input from diverse stakeholder groups and will be the guiding document for sustainability related endeavors for years to come.

Vision: A sustainable learning community where we inspire action and take care of the environment for generations.

Values:

- Indigenous Knowledge and Perspectives
- Equity, Diversity, and Inclusion
- Collaboration, Creativity, and Innovation
- Leadership and Action
- Mindful Resource Use

Goals and Objectives:

- 1) Support meaningful and innovative educational practices in the curricular areas of sustainability.
 - a. Expand and support professional learning opportunities and nurture leadership around sustainability.
 - b. Create learning environments for experimentation and transformation.
 - c. Identify innovative means and additional opportunities to enhance and inspire student engagement with sustainability.
- 2) Include Indigenous knowledge as the foundation to understanding and leading sustainable practices.
 - a. Understand local history and implement Indigenous knowledge and perspectives to guide sustainable practices.
- 3) Reduce the District's environmental impact in the areas of energy, paper, waste, and procurement.
 - a. Reduce the overall greenhouse gas output and carbon footprint of the District.
 - b. Reduce the District's overall physical waste and consumption.

Read the full Sustainability Strategic Plan [here](#).

ACTIONS TAKEN IN 2022

Like many public sector organizations, the burning of natural gas for heating purposes constitutes our largest source of emissions. As we navigate the ongoing ventilation requirements necessitated by the COVID-19 pandemic, we have observed a notable increase in gas and electricity consumption for 2022. This shift is noteworthy not only for its reversal of the previous downward trend but also for its persistence as we continue along this trajectory.

Despite the intensified ventilation protocols, we have actively pursued a range of projects aimed at reducing emissions, maintaining mechanical systems, and adapting to the impacts of climate change. In 2022, our projects encompassed both traditional emissions reduction initiatives, such as boiler upgrades, as well as non-traditional endeavors that have gained popularity in response to climate change and COVID-19, such as ventilation upgrades. Additionally, we conducted two HVAC studies to enhance our knowledge and inform future plans.

Mechanical projects completed in 2022 encompassed high efficiency retrofit projects at Seaforth Elementary and Taylor Park Elementary, along with the incorporation of hydronic loop additive at Alpha Secondary and Burnaby Mountain Secondary. On the electrical front, we successfully executed high efficiency lighting upgrade projects at Seaforth Elementary, Parkcrest Elementary, Edmonds Elementary, Morley Elementary, and Cariboo Hill Secondary.

The District has wholeheartedly embraced the adoption of Electric Vehicles (EVs) and has actively supported users through the installation of necessary infrastructure. Throughout 2022, we continued to integrate EV charging stations, further advancing our commitment to sustainable transportation.

PLANS FOR 2023 AND BEYOND

Buildings

Looking ahead to 2023, we have a comprehensive plan in motion. This includes lighting upgrades at three schools, ventilation upgrades at three schools, several mechanical upgrades, and an envelope remediation project. Additionally, we plan to commission various mechanical and lighting studies to ensure informed decision-making.

We eagerly anticipate the final construction phases of Burnaby North Secondary School, which commenced in the spring of 2020. This innovative project has involved collaborative efforts from numerous stakeholders and will showcase a range of energy-efficient design features, including both air-source and geo-exchange heat pump technology. This cutting-edge approach has the potential to serve as a model for GHG reduction in future school designs throughout the province.

Another noteworthy project on the horizon is the replacement of Stride Avenue Community School. The new school will also utilize a geo-exchange system for its heating requirements. Located in a rapidly developing area of Burnaby, this replacement will bring a welcome change to the community it serves.

In the years to come, the District will further intensify efforts to reduce GHG emissions while adapting to the new parameters of a post COVID-19 world. These impacts will be evident in various aspects of the schools' daily operations, including ventilation systems, heating, electricity usage, and more. We will face these challenges with safety, conservation, and efficiency at the forefront of our approach.

Fleet

Mobile sources of greenhouse gas emissions, specifically from Burnaby School District's 78 vehicle fleet, are increasingly becoming a priority in our emissions reduction plans. By installing over 27 EV charging stations since 2017, the District has seen how important leading by example and building EV infrastructure is to our broader community of teachers, school staff, and students in Burnaby.

Looking ahead to 2023, we are excited to proceed with the commissioning of the EV Ready Fleet Plan. We will collaborate with consultants to establish a baseline for our fleet, conduct an EV suitability assessment, design a comprehensive EV fleet transition plan, and formulate a strategy for EV charging infrastructure to enhance our existing network. These steps will further solidify our commitment to sustainable transportation and the reduction of emissions from our mobile fleet.

PUBLIC SECTOR CLIMATE LEADERSHIP

The Burnaby School District has long been a climate leader, experimenting with cutting edge technology and showing other school districts possibilities for a carbon neutral future. From piloting direct digital control (DDC) systems, to installing light emitting diodes (LED) lights and experimenting with geo-exchange heat pumps with natural gas backups, District 41 has been out front in climate leadership and we intend to keep true to this reputation for years to come.

Energy Team Restructure

The biggest example of climate leadership coming out of the Burnaby School District in 2022 was the exciting step of restructuring Burnaby School District Energy and Facilities Teams.

This year the District created the new role of Mechanical Manager to manage all HVAC, electrical, and plumbing projects, including energy conservation and electrification projects. This new role prioritizes mechanical expertise and will ensure that mechanical systems are in top working order and as energy efficient as they can be.

With the creation of the Mechanical Manager position, the District shifted the role of the Energy and Sustainability Manager, so less time is spent managing general mechanical maintenance projects and more time is spent assessing, analyzing, and strategizing our climate mitigation and adaption plans. By splitting one position into two, the Energy and Sustainability Manager will now be able to undertake new studies such as climate risk assessments and decarbonization roadmaps to better understand the steps the District must take to prepare for a changing climate. This change also allows for the Energy and Sustainability Manager to spend more time working on aspects of sustainability outside of energy, including waste reduction, climate education, youth engagement, and green career development. As a school district, we have the unique and special opportunity to not only implement physical upgrades, but to also communicate with and teach our large audience of students and educators. Doing physical work is not enough. To change our planet's trajectory, we must make sure every student, teacher, administrator, and support staff sees themselves in and sees their impact on the climate movement.

Burnaby Youth Sustainability Network (BYSN)

In addition to restructuring the Mechanical and Energy and Sustainability Manager positions, the District also made changes to the structure and management of the Burnaby Youth Sustainability Network (BYSN). For years the BYSN was managed solely by the Energy Team, but since the beginning of the COVID-19 pandemic, the District Principal of Student Voice has taken over the lead manager role. Increasing the number of central stakeholders in the BYSN has strengthened the purpose of the group. Now the group is supported by trained educators alongside energy and sustainability technical experts. This elevation of the BYSN is incredibly important for the Burnaby School District to show it is not only a leader in energy consumption reduction projects, but also in elevating student voice and ensuring students are ready to take on the challenges of the next seven generations.

In 2022, the BYSN featured:

- Representation from each of the eight secondary schools,
- Meetings organized and executed by youth members themselves and focused on encouraging sustainable behavior,
- In person meetings at rotating secondary schools, providing the opportunity for students to get out of their bubbles post-COVID-19.

This reinvigoration of the BYSN has also led to a budding partnership between the Burnaby School District, the Simon Fraser University Morris J. Wosk Centre for Dialogue, and the City of Burnaby. These relationships help us better understand how climate impacts affect our students outside of the school building and prepare us to address these risks collaboratively as a broader community.

As a District, we are proud of the emissions reduction projects we implemented in 2022 and the restructuring changes we took. This important groundwork sets us up for success as we move into 2023.

EMISSIONS AND OFFSET SUMMARY TABLE

The 2022 GHG Emissions and Offsets Summary Table below breaks down the total amount of greenhouse gases, calculated as tonnes of carbon dioxide equivalent or tCO₂e, we emitted as a District in 2022 and how much we must pay to retire the equivalent amount of carbon offsets as our emissions so we can achieve carbon neutrality.

The British Columbia Carbon Neutral Government Regulation establishes a price on greenhouse gas emissions (GHGs) which remains unchanged for 2022 at \$25 per tonne of CO₂e. Based on this rate we are mandated to purchase offsets for a total of \$167,875 plus GST. With this purchase, the Burnaby School District, along with the entirety of BC's public sector, is able to claim carbon neutrality.

Burnaby School District 2022 GHG Emissions and Offsets Summary	
GHG emissions for the period January 1 - December 31, 2022	
Total BioCO ₂	6.41 tCO ₂ e
Total Emissions (tCO ₂ e)	6,721 tCO ₂ e
Total Offsets (tCO ₂ e)	6,715 tCO ₂ e
Adjustments to Offset Required GHG Emissions Reported in Prior Years	
Total Offsets Adjustment (tCO ₂ e)	0 tCO ₂ e
Grand Total Offsets for the 2022 Reporting Year	
Grand Total Offsets to be Retired for 2022 Reporting Year (tCO ₂ e)	6,715 tCO ₂ e
Offset Investment (\$)	@ \$25per Tonne = \$167,875

RETIREMENT OF OFFSETS

Retirement of Offsets:

In accordance with the requirements of the *Climate Change Accountability Act* and Carbon Neutral Government Regulation, The Board of Education School District 41 - Burnaby (the Organization) 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 (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.

Executive sign-off:

June 6, 2023



6/6/2023

Signature

Date

Ishver Khunguray

Deputy Secretary-Treasurer

Name (please print)

Title