



Vancouver Island University

2023 PSO Climate Change Accountability Report

May 31, 2024



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 minimize our GHG emissions, and our plans to continue reducing emissions in 2024 and beyond.

Carbon Neutral



2023 GHG Emissions and Offsets Summary Table

Retirement of Offsets

In accordance with the requirements of the *Climate Change Accountability Act* and Carbon Neutral Government Regulation, Vancouver Island University (**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 ton of offsets retired on its behalf plus GST.

GHG emissions for the period January 1 - December 31, 2023

Total BioCO ₂	9.63
Total Emissions (tCO ₂ e)	2800
Total Offsets (tCO ₂ e)	2790

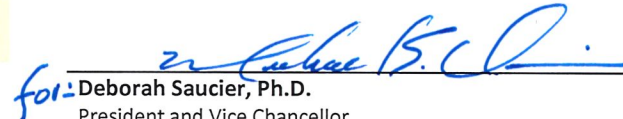
Adjustments to Offset Required GHG Emissions Reported in Prior Years

Total Offsets Adjustment (tCO ₂ e)	7
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Grand Total Offsets for the 2023 Reporting Year

Grand Total Offsets to be Retired for 2022 Reporting Year (tCO ₂ e)	2790
Offset Investment (\$25 per tCO ₂ e)	69,750

Note BioCO₂ is included in Total Emissions but not Total Offsets. For K-12 and Post-Secondary organizations, and BC Transit, Total Offsets might not equal Total Emissions minus Total BioCO₂ because offset exempt emissions for buses are included within Total Emissions.

for 
Deborah Saucier, Ph.D.
 President and Vice Chancellor
 Vancouver Island University

May 31, 2024

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Emission Reductions: Actions & Plans

Embracing the changing dynamics of teaching and learning, Vancouver Island University (VIU) has reviewed its operations, leading to a series of strategic initiatives aimed at reducing greenhouse gas emissions and enhancing environmental stewardship. These actions, ranging from infrastructure upgrades to energy conservation measures, signify VIU's unwavering commitment to building a greener and more resilient campus community.

Notable actions that are anticipated to decrease VIU's overall greenhouse gas emissions include, though are not limited to, the following:

- Continued implementation of replacing natural gas boilers and hot water tanks in a number of university buildings using a hybrid engineering strategy of heat pump technology and smaller, high-efficiency condensing boilers. This strategy is aimed at reducing carbon emissions, lowering operating costs and improving indoor air quality and comfort for building occupants.
- Continued implementation of the extended energy conservation measures identified through BC Hydro's Continuous Optimization Program. In 2023 this was focused on the Main Building of Cowichan campus, which included installing lighting and fan controls and 73 sensors throughout the entire building.
- Installation of Building Automation System (BAS) controls in Building 350 for the Energy Recovery Ventilator (ERV) system and connecting the ERV system to the university's BAS. This work enhances energy conservation by mitigating heat loss, improves indoor air quality for occupants, and enables remote controllability of the building's system to conserve energy through schedule and occupancy. . Further, a second phase of work to include split-system heat pumps, to replace electric baseboard heat is planned.
- Replacing interior lights at Building 335, leading to a lower energy draw and improved lighting in the building.
- A complete Building Enclosure replacement was done on Building 325, including the installation of a new exterior wall assembly with high-performance insulation, thermally broken windows, and new doors. This work also included completing a roof renewal with sloped insulation and membrane replacement.
- Remote working/studying options are offered thereby decreasing greenhouse gas emissions from travel to and from campuses.
- Building envelope refurbishments that enhance building energy performance. In 2022 buildings currently undergoing refurbishment were over 35 years old and represent over 1747m² (net). These updates will realize considerably improved resource use for heating and cooling as well as much increased occupant comfort.
- Proposed project to move existing Buildings 200 and 205 (3460 m² net space) from natural gas boiler systems to the current "South Node" of the Nanaimo Campus geo-exchange district energy system.

- Expansion to the geo-exchange system to include the new 10-storey student housing building (scheduled completion spring 2027) will ensure that the considerable addition of space will not add significantly to VIU's greenhouse gas output.
- The new student housing building will be built to the Zero Carbon Building standard and will include a fully electric commercial kitchen which will represent a notable reduction in greenhouse gas emissions.

Plans to continue reducing emissions

Moving forward, VIU is working to build climate action and sustainability strategically and effectively into its profile. Foundational steps are being taken to achieve this. Given the complexity of climate change, there are multiple foci. A variety of approaches were taken in 2022 from classroom research to risk assessment.

Many hands-on and research projects explored climate action. Through these teaching and learning opportunities, ways of thinking that consider and act on sustainable action support mitigation of climate change develop. In 2022, some of these projects included:

- Expanding the frontiers in real-time measurements of emerging contaminants in real-world samples Working with professors in the Chemistry department, students have the opportunity to use mass spectrometry tools for research. These tools allow simple, fast, robust methods to detect air, water, and soil contaminants allowing for quicker remediation of any contamination and ultimately improve access to clean water, air, and food.
[Read more about this research here.](#)
- Developing hardier shellfish. Researchers are investigating the adaptability of fourteen different families of Pacific oysters at VIU's research facility in Deep Bay.
[Read more about this research here.](#)
- Rethinking product packaging. Graphic design students were challenged to reimagine everyday packaging to use less space, have less waste, and less environmental impact.
[Read more about this project here.](#)
- Working collaboratively to improve food security. The Urchin Tank was a collaboration between microbiology and culinary arts students who pitched their fermented seaweed products to a panel of judges. The event, open to the public, was a semester-long project where microbiology and culinary arts students worked in partnership to develop safe and tasty fermented products that could be suitable for commercialization.
[Read more about this project here.](#)



65

VIU continues to develop its governance around climate change accountability. The President’s Task Force on Climate Action and Sustainability was charged with developing strategic recommendations to move VIU forward in its climate change actions. As part of that responsibility, the Task Force shaped [VIU’s position statement on climate action and sustainability](#), and encouraged VIU’s signing on to the UN’s SDG Accord. Further recommendations for the institution were submitted to the President’s Office in early 2023.

Initiatives and events for the wider VIU community, both internal and external were held. These less formal events help to build communities of climate action practitioners. The following are a sample of some of those initiatives.

- The Garry Oak Restoration project has, and continues to, engage students, employees, and community members in learning about and developing an appreciation of restoring biodiversity as well as developing their own connection with the natural world. It’s a terrific way to informally learn more about native plants and their uses, pollinators, species at risk and some everyday actions everyone can take to meet climate challenges.
- VIU provides end-of-trip facilities for active commuters and is planning to increase those facilities. As well, VIU is an active participant in promoting cycling. A successful bike film festival organized by The City of Nanaimo was energetically supported by VIU and drew over two hundred participants to an evening of bike demo’s, safety tips, car share info, and a well-curated show of short films about cycling.
- VIU continues to review space use and, where possible, shut down areas not in use during off-peak times.
- Campus-wide energy reduction campaigns were held throughout the year to encourage thoughtful stewardship of resources through campaigns such as holiday shutdowns and sweater days.
- VIU shifted to a single-stream recycling model making it easier to effectively sort waste.
- 65 kilograms of battery waste were kept out of the landfill through recycling efforts.