2025 Climate Change Accountability Report

May 2026

THE UNIVERSITY OF BRITISH COLUMBIA
Campus + Community Planning

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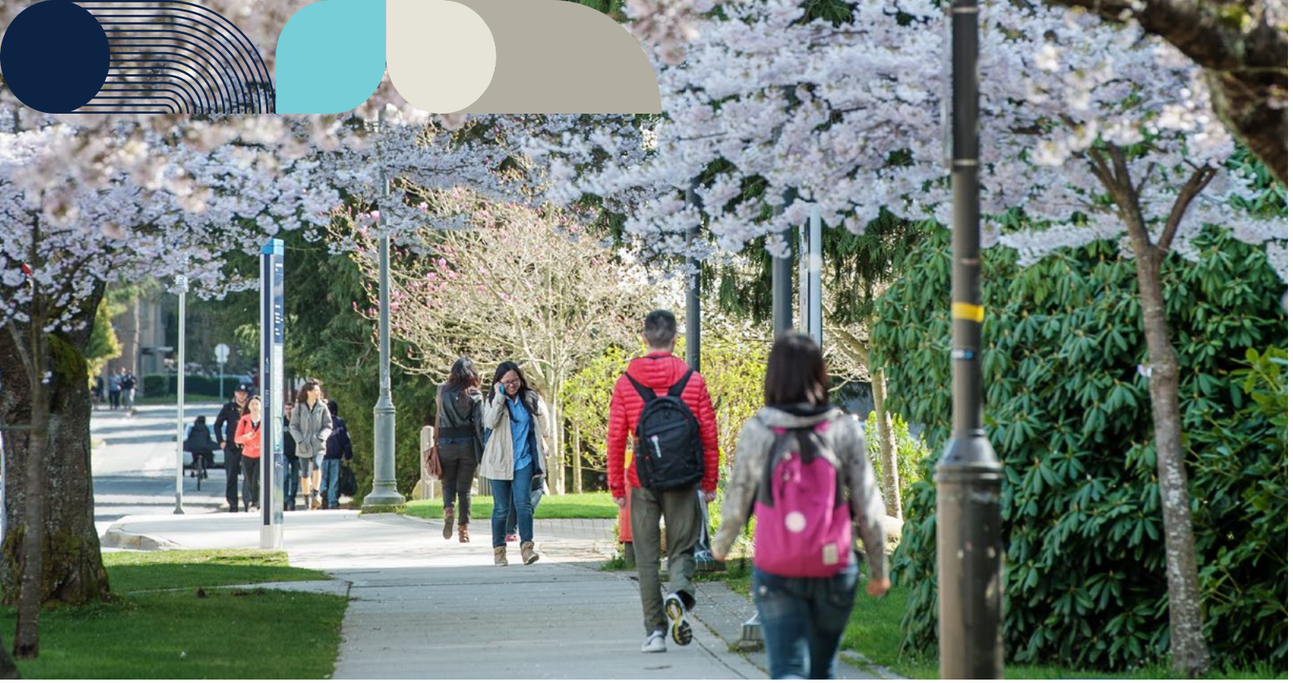

UBC University Boulevard

Introduction

ABOUT UBC

The University of British Columbia (UBC) is a global center for teaching, learning and research. With sustainability at the core of its identity and mission, UBC ranks second in Canada and fifth globally according to the QS Sustainability Rankings. Since 1915, our motto, Tuum Est (It is Yours), has been a declaration of our commitment to attract and support those who have the drive to shape a better world. As a result, UBC students, faculty and staff continue to embrace innovation and challenge the status quo, placing us at the forefront of discovery, learning, and engagement.

UBC encourages bold thinking, curiosity, and initiative so that one can realize their greatest potential. Our two main campuses, in Vancouver and in Okanagan, represent over 70,000 students and employ over 20,000 staff and faculty.

SUSTAINABILITY PLANS & PUBLICATIONS

UBC's Vancouver campus sustainability plans and reports, including annual GHG Inventories, Climate Change Accountability Reports, and Annual Sustainability Reports are available at:

sustain.ubc.ca/about/plans-policies-and-reports

UBC's Okanagan campus sustainability plans and reports, including annual GHG Inventories, Climate Change Accountability Reports, and Annual Sustainability Reports are available at:

https://sustain.ok.ubc.ca/institutional-reporting/regulatory-reporting/

Executive Summary

The UBC Vancouver and Okanagan Climate Action Plans 2030 (CAP 2030) set a bold vision and pathway for UBC in alignment with the Paris Agreement targets. UBC continues to demonstrate innovative approaches to address climate change through strong collaborations between academic researchers, operational staff and partnerships with government, utilities, industry and non-governmental organizations. These partnerships continue to elevate UBC's unique position to use its campus as a living laboratory -- its buildings, infrastructure, public realm and landscapes -- to create place-based solutions that drive innovations at the campus, regional and global scales. UBC's role in peer networks such as UC3, AASHE, ISCN and PICS also helps facilitate knowledge exchange to support rapid deployment of low carbon solutions.

UBC is uniquely positioned to use its institutional and intellectual capacities toward a bigger collective impact to advance the United Nations Sustainable Development Goals with top-tier thought leadership that inform innovative sustainable development.

In 2025, UBC achieved a combined 32% reduction in total offsetable GHG emissions across both campuses when compared to 2007 emissions; despite an overall 39% growth in floor space and 60% increase in student enrolment. Overall, UBC has achieved a 58% GHG emissions reduction per full-time equivalent student since 2007.

UBC Vancouver Campus Aerial

UBC Vancouver Campus

As a commitment to advance toward CAP2030 targets, the UBC Vancouver campus continued to put significant efforts to reducing GHG emissions in 2025. The Electric Boiler and Thermal Energy Storage project was granted Board 1 approval to reduce GHG emissions, increase resiliency, and enable campus growth. The Brimacombe and Swing Space decarbonization projects were completed, reducing emissions by around 350 tCO_2e per year. In combination with other energy efficiency projects to conserve thermal, electrical and peak demand, the campus achieved a reduction of 35% in GHG emissions from a 2007 baseline, despite a 49% increase in student enrolment and a 34% growth in campus building floor space. Per student FTE emissions are now 56% below the 2007 level. When compared to last year, emissions increased by 13% (4,518 tCO_2e), mainly driven by the tripling of the BC integrated grid electricity emission intensity factors[1]. Total energy consumption declined by 1% compared to 2024.

In 2025, the newly completed Gateway Health Building achieved embodied carbon reductions of 27%. Substantial progress was made on reducing extended impact emissions, achieving around a 30% reduction below the pre-COVID baseline, indicating that programs to provide cleaner alternatives are gaining traction. For 2025, program highlights including launching a $400 e-bike rebate for faculty and staff, a first plant-based milk by default at a UBC café, a new reusable cup and container exchange program, and more. The Residential Environmental Assessment Program (REAP) v4.0 approved in 2025 further advances new residential development toward net-zero operations by 2030.

Looking forward, UBC Vancouver will continue to improve the performance and reliability of the Bioenergy Research Demonstration Facility (BRDF), and to advance the Electric Boiler and Thermal Energy Storage project to transition the academic District Energy System (DES) to 100% clean and renewable energy by 2030.

1 BC Hydro's electricity emission intensity factor (EEIF) increases primarily due to higher reliance on imported electricity from neighbouring jurisdictions, which often use fossil-fuel generation (thermal power) to meet British Columbia's demand during periods of low water supply or high usage. While 98% of BC Hydro's generation is clean, these external factors fluctuate the total emissions per GWh of electricity produced.

UBC Okanagan Campus Aerial

UBC Okanagan Campus

UBC Okanagan continues to prioritize high-impact infrastructure investments to reduce emissions and manage long-term risk, in alignment with its updated Integrated Energy Strategy. In 2025, a 1.5 MW CO_2 Air Source Heat Pump project, the most significant decarbonization project to date, was completed, reducing GHG emissions by 815 tCO_2e annually while delivering long-term financial and operational benefits. In addition, the Strategic Energy Management Plan (SEMP) was updated to support campus growth while advancing CAP2030 targets and long-term climate goals. It integrates energy forecasting, demand-side management, decarbonization and infrastructure renewal. This year, the campus achieved a 13% reduction in GHG emissions compared to a 2013 baseline, despite a 43% increase in student enrolment and a 27% expansion in campus building floor area since 2013. Emissions per gross square metre of building space are now 31% lower than in 2013. When compared with last year, the GHG emissions for offset increased by 19% (499 tCO_2e). The increase was primarily due to changes to provincial electricity emissions intensity factors.

Strengthening climate resilience remains a core priority. Completion of the Climate Resilient Buildings Project, Multi-Hazard Infrastructure Resiliency Program, and updated Wildfire Management Plan enhances the campus' capacity to manage climate-related risks and inform long-term infrastructure investment decisions. The UBCO Neighbourhood Plan and UBCO Residential Environmental Assessment Program (REAP) advanced in 2025 provide a framework for low-carbon, climate resilient residential development.

Looking forward, UBC Okanagan will continue to advance low-carbon development approach. The x̌əl sic snpax̌nwix^{w}tn building, currently under construction, is designed to meet high-performance sustainability standards, incorporating low-carbon district energy, heat recovery, and a high-efficiency envelope. It is expected to achieve LEED® Gold Certification and deliver substantial reductions in energy use and emissions relative to conventional buildings, while supporting academic and community growth.

As a large, research-intensive university, with considerable land, assets and utilities, we are in a unique position to use our campuses as a test bed for climate solutions and deeper progress towards sustainable development. UBC will continue to engage students, faculty and staff to act collectively to reduce GHG emissions and achieve our climate target by 2030.

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Emissions Overview (Vancouver Campus & Okanagan Campus)

EMISSIONS AND OFFSET SUMMARY (SCOPE 1, 2 AND PAPER)

UBC tracks and reports the total offsetable emissions for each campus since 2007, as shown in Figure 1, to measure performance against our Climate Action Plan targets.

Figure 1: UBC Growth and Emissions for Carbon Offsets, 2007 to 2025

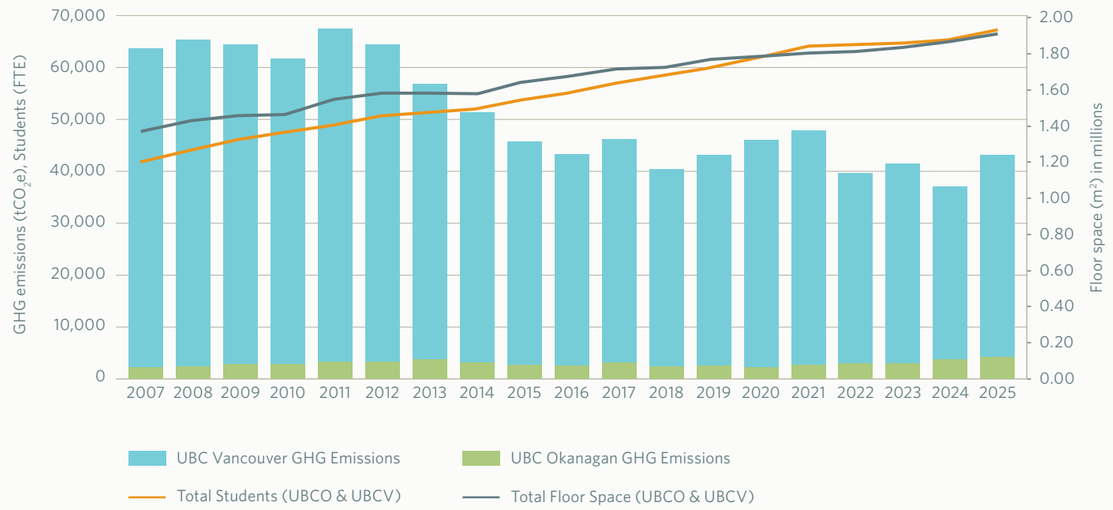
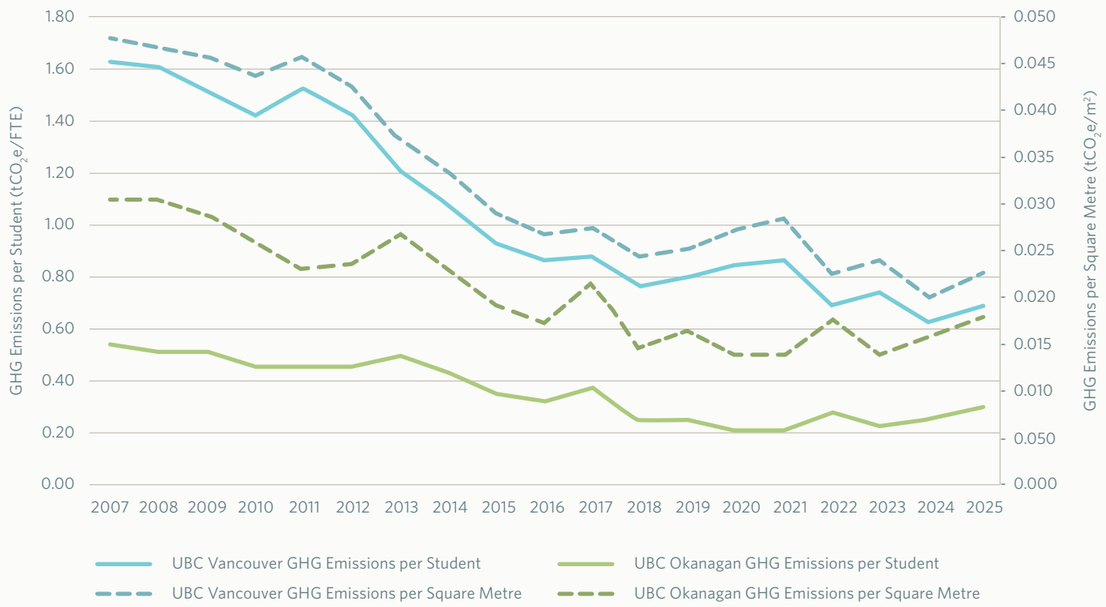


Figure 2 shows the offsetable GHG emissions intensity from 2007 to 2025. UBC's emissions intensity has been reduced by over 50% since 2007.

Figure 2: UBC Offsetable GHG Emissions Intensity, 2007 to 2025



2025 EMISSIONS AND OFFSETS

Under the Climate Change Accountability Act (formerly titled Greenhouse Gas Reductions Target Act), UBC has been required to report and offset Scope 1, 2 and paper emissions since 2010, including emissions from all properties owned and leased by UBC and its subsidiaries, UBC Properties Trust.

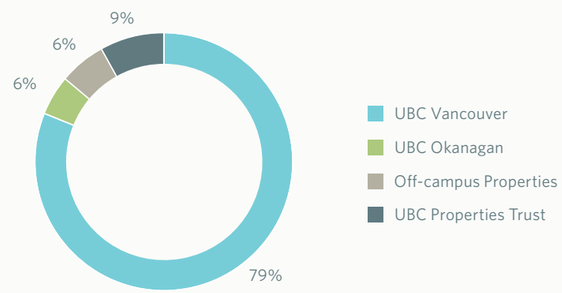
A summary of emissions attributed to UBC's two campuses, off-campus properties, and UBC Properties Trust are provided in Table 1 and Figure 3. UBC's total emissions for 2025 amounted to 71,248 tCO_2e, including 20,927 tCO_2e of biogenic emissions[2]. The biogenic emissions ($BioCO_2$) from biomass combustion are reported separately and not included in the emission totals for offset in accordance with provincial reporting guidelines as the $BioCO_2$ released is part of the biogenic carbon cycle and would be released naturally during decomposition. Among those 50,321 tCO_2e offsetable GHG emissions, the UBC Vancouver Campus accounted for 79%.

2 Biogenic emissions arise from biomass combustion, including wood waste, renewable natural gas and biofuels. The UBC Bioenergy Research and Demonstration Facility (BRDF) only uses clean wood waste from regional wood product manufacturing and municipal plant trimmings.

Table 1: 2025 UBC Total GHG Emissions by Location (in tCO_2e)

Location	2025 Emissions for offset	Emissions not required to be offset[3]	Total GHG Emissions
UBC Vancouver Campus	39,778	20,793	60,571
UBC Okanagan Campus	3,162	52	3,214
Off-campus Properties	2,780	26	2,806
UBC Properties Trust	4,601	56	4,657
UBC Total Emissions	**50,321**	**20,927**	**71,248**
2024 Adjustments – TRIUMF[4]	(58)		
2024 Adjustments – Fugitive[5]	(247)		
2025 Total Offsets	**50,016**		

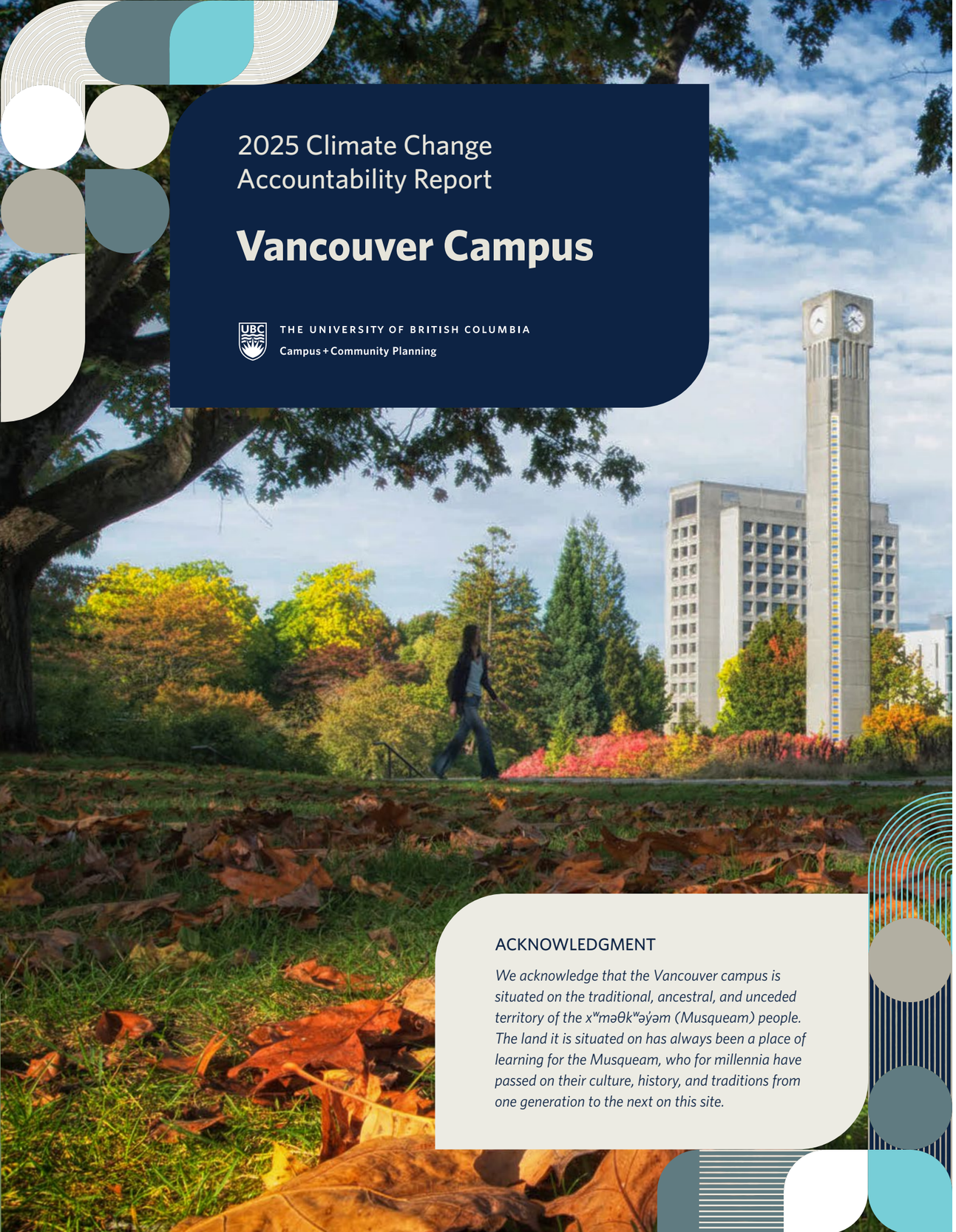
Figure 3: 2025 UBC Offsetable GHG Emissions Distribution by Location



3 The biogenic emissions ($BioCO_2$) from biomass combustion are reported separately and not included in the emission totals for offset in accordance with provincial reporting guidelines as the $BioCO_2$ released is part of the biogenic carbon cycle and would be released naturally during decomposition.

4 TRIUMF Inc. is now a federal not for profit corporation. It is not owned and operated by UBC. Its GHG emissions were taken out from 2022 onwards.

5 Fugitive emissions factors were revised by the Province of BC, resulting 2024 GHG emissions adjustment.



2025 Climate Change Accountability Report

Vancouver Campus

THE UNIVERSITY OF BRITISH COLUMBIA
Campus + Community Planning

ACKNOWLEDGMENT

We acknowledge that the Vancouver campus is situated on the traditional, ancestral, and unceded territory of the xʷməθkʷəy̓əm (Musqueam) people. The land it is situated on has always been a place of learning for the Musqueam, who for millennia have passed on their culture, history, and traditions from one generation to the next on this site.

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Vancouver Campus Summary

The UBC Vancouver Climate Action Plan 2030 (CAP 2030) sets ambitious targets for the Vancouver campus; an 85% Greenhouse gas (GHG) reduction for operational emissions and a 45% GHG reduction for extended impact emissions by 2030, reaching net zero operational emissions by 2035. UBC is investing in diverse clean energy solutions that will reduce carbon pollution, while also making the university more climate resilient in delivering top-tier teaching, learning and research despite increasing and more intense impacts associated with a changing climate. UBC's climate investments support core operations while also creating innovative platforms for teaching, learning and research — the foundation of leveraging our campus as a living lab.

In 2025, the UBC Vancouver campus achieved an offsetable GHG emissions reduction of 35% to 39,778 tCO_2e from a 2007 baseline, despite a 49% increase in student enrolment and a 34% growth in campus building floor space. Per student FTE emissions are now 56% below the 2007 level. When compared to 2024, emissions increased by 13% (4,518 tCO_2e). This was primarily due to the tripling of the BC integrated grid electricity emission intensity factors[1] this year, resulting from the 2023 drought that reduced water levels and hydroelectric generation and required more fossil-generated electricity imports. Although there were some planned and unplanned outages of the Bioenergy Research and Demonstration Facility (BRDF), the share of renewable energy supply still remained stable at 61% of total building energy consumed on campus in 2025, compared with 37% in 2007. Total energy consumption declined by 1%, outperforming a long-term goal to meet all campus growth without increasing energy usage.

As a commitment to advance toward these CAP2030 targets, the Vancouver campus had put significant efforts to reduce GHG emissions in 2025:

- UBC completed its Climate Resilience Buildings Strategy, aligning UBC policy with CleanBC's Climate Resilience Framework and Standards for Public Sector Buildings (CRFS).
- Residential Environmental Assessment Program (REAP) v4.0, was approved, helping guide new construction toward net-zero operations by 2030. This was recognized by the Community Energy Association with a 2025 Climate & Energy Action Award.
- UBC Facilities has updated its fleet policies to prioritize the procurement of low- and zero-emission vehicles, including electric (EV), compressed natural gas (CNG), hydrogen, propane, and hybrid technologies.
- UBC continued to improve the operational effectiveness, resilience, and reliability of the Bioenergy Research and Demonstration Facility (BRDF), including replacement of aging components and commissioning a major economizer and heat pump project.
- The Electric Boiler and Thermal Energy Storage project as part of the Campus Energy Centre (CEC) was granted Board 1 approval.
- Energy and Water Services (EWS) completed a number of energy efficiency projects to conserve thermal, electrical and peak demand at UBC such as upgrading steam boiler, installing occupancy sensors in Brimacombe building, moving a laboratory space in Food, Nutrition, and Health building off an air handling unit (AHU) which allows the AHU to turn off at night, re-evaluating of building on/off system scheduling to save electricity, and upgrading cooling plant in the IK Barber Library and the ICICIS Building.
- The Brimacombe and Swing Space building decarbonization projects were completed in 2025, reducing emissions by around 350 tCO_2e per year and helping reduce natural gas use in buildings by 10%.
- The newly completed Gateway Health Building achieved embodied carbon reductions of 27%.
- Many high-impact initiatives to reduce extended impact (Scope 3) emissions were advanced, including launching a $400 e-bike rebate for faculty and staff, a first plant-based milk by default at a UBC café, a new reusable cup and container exchange program, and more.

We forecast that with the continuous implementation of CAP 2030, Green Building Action Plan (GBAP), full commissioning of the BRDF expansion, transition of the Academic District Energy System (ADES) to clean and renewable energy, as well as campus and community engagement, our campus will continue reducing emissions and demonstrate our leadership in climate action.

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1 BC Hydro's electricity emission intensity factor (EEIF) increases primarily due to higher reliance on imported electricity from neighbouring jurisdictions, which often use fossil-fuel generation (thermal power) to meet British Columbia's demand during periods of low water supply or high usage. While 98% of BC Hydro's generation is clean, these external factors fluctuate the total emissions per GWh of electricity produced.

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.

By June 30, 2026, this PSO Climate Change Accountability Report will be posted to our website at: *https://sustain.ubc.ca/about/plans-policies-and-reports.*

GHG EMISSIONS AND OFFSETS SUMMARY

Table 1: UBC Vancouver 2025 GHG Emissions and Offsets Summary Table[2]

UBC Vancouver 2025 GHG Emissions and Offsets Summary	
GHG Emissions for the period January 1 – December 31, 2025	
Total $BioCO_2$ [3]	20,875
Total Emissions (tCO_2e) [4]	68,034
Total Offsets (tCO_2e)	47,159
Adjustments to Offset Required GHG Emissions Reported in Prior Years	
Total Offsets Adjustment (tCO_2e) [5]	(220)
Grand Total Offsets for the 2025 Reporting Year	
Grand Total Offsets to be Retired for 2025 Reporting Year (tCO_2e)	46,939
Offset Investment ($)	$1,173,475

RETIREMENT OF OFFSETS

In accordance with the requirements of the Climate Change Accountability Act and the Carbon Neutral Government Regulation, UBC Vancouver (the Organization) 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). 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.

2 This table includes combined details of Vancouver Campus, Off-Campus Properties, and UBC Properties Trust.

3 The biogenic emissions ($BioCO_2$) from biomass combustion are reported separately and not required for offset in accordance with provincial reporting guidelines as the $BioCO_2$ released is part of the biogenic carbon cycle and would be released naturally during decomposition.

4 Total emissions include total offsetable emissions and total biogenic emissions.

5 The adjustments to offsetable GHG emissions in 2024 was due to the GHG emissions adjustment for TRIUMF and fugitive emissions.

2025 Emissions Overview

OVERVIEW

Greenhouse gas (GHG) emissions were quantified using the BC Provincial Government's Clean Government Reporting Tool (CGRT). Table 2 provides a source breakdown of Vancouver campus GHG Inventory emissions from buildings, fleet, paper, and fugitive[6]. The Vancouver campus total emissions for offsets amounted to 39,778 tCO_2e in 2025, an increase of 13% tCO_2e from 2024.

Table 2: Vancouver Campus Offsetable Emissions Comparison by Source (in tCO_2e), 2007, 2024 & 2025

Source	2007 Emissions	2024 Emissions	2025 Emissions	% Change from 2007
Buildings	58,105	33,048	37,499	-35%
Fleet	1,973	869	949	-52%
Paper	1,003	156	176	-82%
Fugitive	-	1,188	1,155	N/A
Total Emissions	**61,082**	**35,260**	**39,778**	**-35%**
2024 Adjustment – TRIUMF[7]			(58)	
2024 Adjustment – Fugitive[8]			(162)	
2025 Total Offsets			**39,558**	

The UBC Boulevard Cascading Water Feature promotes biodiversity

6 Fugitive emissions are determined by the amount of refrigerants used to replenish refrigeration equipment, such as building chillers during servicing.

7 TRIUMF Inc. is now a federal not for profit corporation. It is not owned and operated by UBC. Its GHG emissions were taken out from 2022 onwards.

8 Fugitive emissions factors were revised by the Province of BC, resulting 2024 GHG emissions adjustment.

A detailed breakdown of the campus emission sources is provided in Table 3. Core academic buildings include teaching and learning spaces, lecture theatres and laboratories, while ancillary buildings include athletics, student housing residences and parking facilities. Tenants in UBC owned buildings are combined with the core buildings in this Table.

Table 3: 2025 Offsetable Emissions for the UBC Vancouver Campus (in tCO_2e)

Source	2007 Emissions	2024 Emissions	2025 Emissions	% of 2025 Total
UBC Vancouver Campus – Core buildings [9]	**46,478**	**24,365**	**26,958**	**68%**
DES (natural gas and light fuel oil) [10]	40,106	15,152	16,236	41%
Natural gas (direct burn)	3,515	7,492	6,515	16%
Electricity	2,856	1,238	3,889	10%
Biomass facility [11]	N/A	467	301	1%
Renewable Natural Gas [12]	N/A	17	17	0.04%
UBC Vancouver Campus – Ancillary buildings [13]	**11,405**	**8,682**	**10,541**	**26%**
DES (natural gas and light fuel oil)	7,311	4,406	5,105	13%
Natural gas (direct burn)	3,108	3,448	3,200	8%
Electricity	986	676	2,122	5%
Biomass facility	N/A	152	113	0.3%
TRIUMF [14]	**222**	**-**	**-**	**-**
Fleet	**1,973**	**869**	**949**	**2%**
Paper	**1,003**	**156**	**176**	**0.4%**
Fugitive	**-**	**1,188**	**1,155**	**3%**
Total Vancouver Campus Offsetable Emissions	**61,082**	**35,260**	**39,778**	**100%**

9 Core buildings comprise academic and administrative buildings. Tenants in UBC owned buildings are included with Core buildings in this table.

10 District Energy System (DES)

11 UBC is required to offset the CH_4 and N_2O portions of biomass combustion from the BRDF. In addition, the BRDF burns a small amount of natural gas.

12 UBC is required to offset the CH_4 and N_2O portions of renewable natural gas.

13 Ancillary buildings include student housing, conference, athletics and parking facilities.

14 TRIUMF Inc. is now a federal not for profit corporation. It is not owned and operated by UBC. Its GHG emissions were taken out from 2022 onwards.

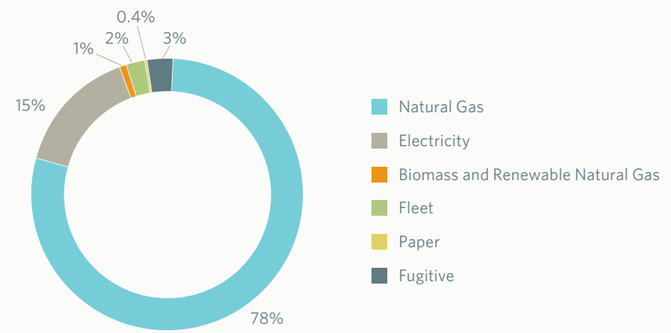
The year-over-year increase in GHG emissions was mainly due to a tripling of the BC integrated grid electricity emission intensity factors in this reporting year, resulting from the 2023 drought that reduced water levels and hydroelectric generation and required more fossil generated electricity imports. This brought our GHG emissions up by around 4,100 tCO_2e, more than 90% of the total increase. In addition, planned and unplanned outages of the Bioenergy Research and Demonstration Facility (BRDF) also resulted in more natural gas consumption in the District Energy System (DES) for heat production. This increased emissions by an additional 350 tCO_2e. Encouragingly, total energy consumption declined by 1%, outperforming a long-term goal to meet all campus growth without increasing energy usage.

TRIUMF changed from a university joint venture partnership to a federal not-for-profit corporation in June 2021. UBC now leases the site to TRIUMF. Since UBC no longer owns or operates TRIUMF, the facility is no longer in the operational boundaries scope of UBC for the purpose of measuring and reporting GHG emissions. This was rectified and TRIUMF's GHG emissions were taken out from 2022 onwards.

This year, UBC Vancouver campus also estimated the fugitive emissions from laboratory freezers and cold storage. These additional sub-category of fugitive emissions are around 50 tCO_2e which was far below the threshold of 1% of UBC Vancouver campus' total GHG emissions. For this reason, they are excluded from this GHG emissions reporting. Similar to last year, UBC Vancouver campus adopted a mixed approach of using the unit-based methodology and the asset group-based methodology. The unit-based methodology covered the refrigeration equipment which is maintained or monitored on a regular schedule and fugitive emissions were calculated based on how much refrigerant was added to the equipment. The asset group-based methodology was adopted for small refrigeration equipment which does not require regular monitoring on refrigerant refills. GHG emissions were estimated based on the type of refrigerant used and the full charge mass listed in the nameplate as well as applying the appropriate leak rate, as defined by the provincial methodology. In 2025, around 60% of fugitive emissions were from the refrigeration equipment which is monitored on a regular schedule with refrigerant refills while 40% were from small refrigeration equipment with their fugitive emissions estimated based on refrigerant leak rate.

Figure 1 shows the distribution of major offsetable emissions from UBC's Vancouver campus.

Figure 1: 2025 Offsetable Emissions Distribution for the UBC Vancouver Campus



COMPARISON TO BASELINE YEAR

UBC Vancouver campus tracks and reports the current emissions against a 2007 baseline to measure and demonstrate performance against our ***Climate Action Plan 2030*** (CAP 2030) targets.

Even with significant growth in buildings and student enrollment, UBC has made strategic investments to reduce its operational GHG emissions and reliance on fossil fuels. In 2025, the UBC Vancouver campus achieved a GHG emissions reduction of 35% from a 2007 baseline, despite a 49% increase in student enrolment and a 34% growth in campus building floor space. GHG emissions intensity was 0.71 tCO_2e per student FTE, a 56% decrease since 2007. Table 4 outlines key performance indicators for the UBC Vancouver campus.

Table 4: 2025 UBC Vancouver Campus Key Performance Indicators

Key Performance Indicator	2007	2025	% Change from 2007
GHG Emissions (tCO_2e)	61,082	39,778	-35%
GHG Emissions per Student (tCO_2e/FTE)	1.62	0.71	-56%
GHG Emissions per square meter (tCO_2e/m^2)	0.048	0.023	-51%
Floor Space (m^2)	1,284,482	1,718,687	34%
Student Enrolment (FTE)	37,589	56,063	49%
Staff and Faculty Employees (FTE)	10,509	18,543	76%

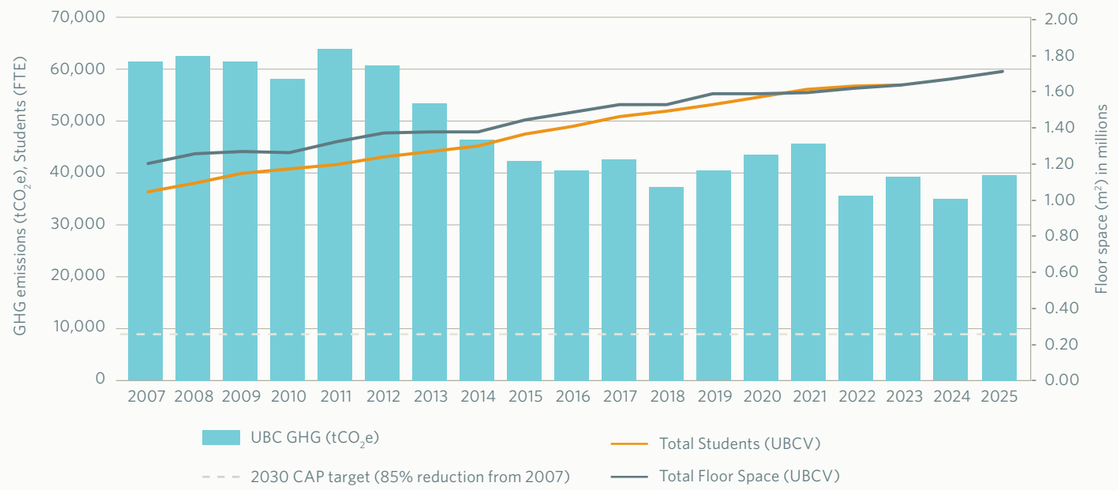
Buchanan Courtyard

Main Mall

COMPARING EMISSIONS TO GROWTH

Figure 2 below illustrates the change in campus emissions since the 2007 baseline year, along with some key indicators of Vancouver campus growth and CAP 2030 targets.

Figure 2: UBC Vancouver Campus Growth and Emissions Reduction



SCOPE 3 EMISSIONS

Under current provincial legislation, UBC is not responsible for carbon offset payments associated with Scope 3 emissions (except paper). Despite this, UBC has made an explicit target in CAP 2030 to reduce extended impact emissions by 45% by 2030, aligned with the reduction needed to achieve the Paris 1.5 °C Agreement. The Vancouver campus GHG inventory quantifies the optional Scope 3 emissions which are outlined in Table 5 below.

Table 5: 2025 UBC Vancouver Campus Scope 3 Emissions (in tCO_2e)

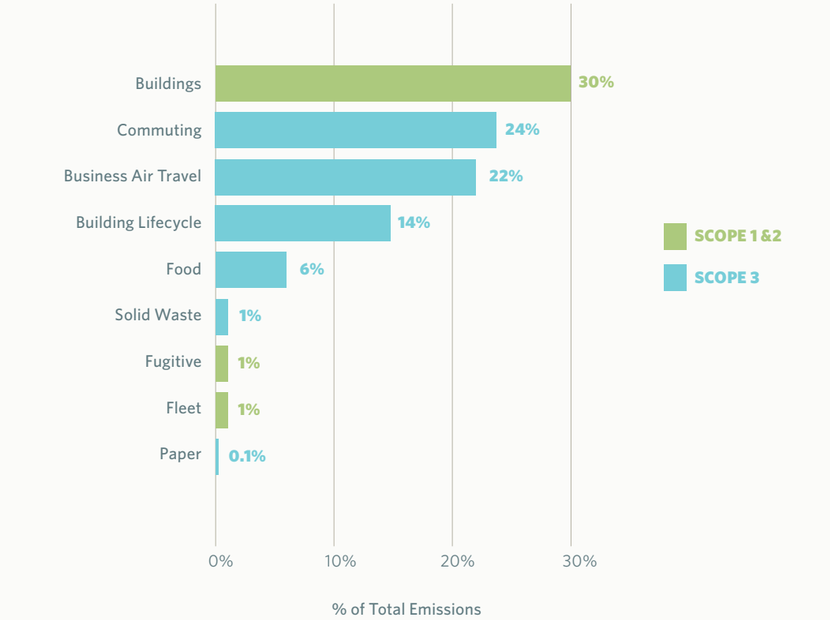
Source	Baseline Year	Baseline Emissions	2025 Emissions	% Change from Baseline Emissions
Commuting[15]	2010	42,248	30,384	-28%
Business Air Travel[16]	2019	40,653	27,860	-31%
Embodied Carbon[17]	NA	NA	17,479	-24%
Food[18]	NA	NA	7,348	NA
Operational Waste[19]	2019	1,953	1,249	-36%

2025 saw substantial reductions on a year-over-year basis and compared to baseline emissions (around 30% reduction) across categories, indicating that programs providing cleaner alternatives are gaining traction. It's a big step in the right direction towards the CAP2030 Extended Emissions targets of a 45%-50% reduction from pre-Covid levels by 2030. Highlights include:

- Commuting - Single occupant vehicle (SOV) share continues to decline, due to greater uptake of carpooling and public transit. Vehicle average emissions per kilometre also declined due to electric vehicles increasing market share. Importantly, more student and UBC neighbourhood housing is reducing the share of commuters, helping address the housing crisis while also reducing one of UBC's largest emissions sources.
- Business air travel - The UBC Sustainable Travel Program encourages alternatives to air travel to attend in-person meetings, learning and teaching and engagement with peer institutions to adopt best practices. This helped reduce business trips and associated air travel emissions.
- Embodied Carbon - 2025 saw major successes in reducing embodied carbon in buildings, including the completion of the Gateway and Recreation Centre North, which reduced embodied carbon by 27% and 19% respectively (see Table 6).
- Operational Waste – Emissions from solid waste reduced due to less waste generated and lower B.C. municipal solid waste emissions factor.

Figure 3 shows the comparative proportions of GHG emissions for the Vancouver campus. The top three GHG emissions sources are from building operations, commuting, and business air travel.

Figure 3: UBC Vancouver Campus Total Emissions for Scope 1, 2 and 3, 2025



15 An updated methodology has been implemented since 2021 reporting year to better track commuting GHG emissions. The baseline number was revised accordingly.

16 An updated methodology has been implemented since 2023 reporting year to better track business air travel GHG emissions. Radiative force factors (RFFs) are applied. The baseline number was revised accordingly.

17 An updated methodology using project-specific baseline comparison has been implemented since 2025 reporting year. Each building's design scenario is evaluated against a reference baseline developed for the same project under consistent assumptions and life-cycle boundaries.

18 Food emissions are measured every 3-5 years. Food emissions reported here was measured in 2024.

19 Baseline emissions was revised with updated emissions factors.

BUILDING LIFECYCLE GHG EMISSIONS ACCOUNTING METHODOLOGY UPDATE

Embodied carbon refers to greenhouse gas (GHG) emissions associated with the full life cycle of building materials, excluding operational energy use. At UBC Vancouver campus, embodied carbon is tracked as part of the Scope 3 emissions.

In previous years, embodied carbon in this report was estimated using a simplified floor-area-based approach, where total gross floor area was multiplied by a single emissions factor. The embodied carbon impacts were annualized, assuming a material lifespan of 50 years. However, for GHG inventory accounting purpose, embodied carbon should be booked in the construction stage and not spread throughout the lifespan.

For this 2025 CCAR, UBC revised the methodology to adopt a life-cycle assessment (LCA) approach. Embodied carbon of those buildings completed in the reporting year is now fully accounted for in that year. UBC requires all major projects (institutional and residential) to complete a whole building life cycle assessment (wbLCA) and show a minimum 10% reduction. In 2025, UBC updated the ***Embodied Carbon Guidelines*** to serve as an addendum to the National Research Council (NRC) Canada's National Whole-building Life Cycle Assessment Practitioner's Guide. To evaluate the embodied carbon reduction, projects must either show a reduction against a project-specific baseline building or the established UBC embodied carbon benchmark. The UBC Embodied Carbon Guidelines and alignment with the NRC's wbLCA guide ensures that all projects are evaluated with consistent assumptions and life-cycle boundaries.

Embodied carbon was calculated using a cradle-to-grave framework for three major capital projects completed in 2025 and as shown in Table 6.

Table 6: Embodied Carbon for Major Capital Projects Completed in 2025

Project	Baseline (tCO_2e)	Design (tCO_2e)	Baseline Intensity ($kgCO_2e/m^2$)	Design Intensity ($kgCO_2e/m^2$)	% Change
Beaty Biodiversity Centre Expansion	1,943	1,717	501	442	-12%
Gateway	17,333	12,641	701	511	-27%
Recreation Centre North	3,858	3,120	379	307	-19%
Total	23,135	17,479	566	428	-24%

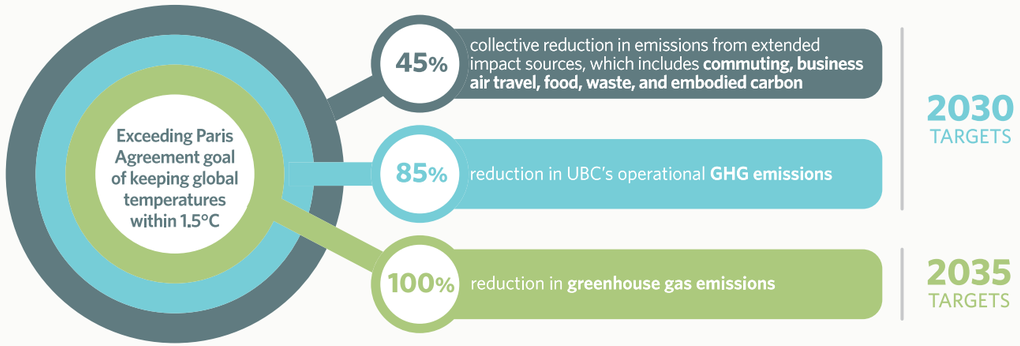
Across the evaluated portfolio, embodied carbon in 2025 decreased from 566 $kgCO_2e/m^2$ to 428 $kgCO_2e/m^2$, representing an overall 24% reduction compared to project-specific baselines. All projects exceeded UBC's required minimum 10% of embodied carbon reduction under current policy.

Total embodied carbon quantities fluctuate depending on the number and scale of projects completed each year, UBC emphasizes embodied carbon intensity ($kgCO_2e/m^2$) and percentage reduction relative to baseline as more stable and decision-relevant performance indicators.

2025 Emissions Reduction: Actions and Plan

As the largest post-secondary institution in the province, UBC plays an important role in supporting the provincial climate commitments under CleanBC and in charting a path to net-zero for other higher education institutions to follow. The UBC Vancouver CAP 2030, endorsed by the Board of Governors (BoGs) in 2021, provides the impetus for UBC to accelerate decarbonization of its core operations. This includes expanding the scope of action to address extended (indirect) emissions that UBC has influence over. CAP 2030 charts an accelerated path to net zero emissions for buildings and energy supply, and to significantly reduce GHG emissions for extended impact areas (scope 3 emissions).

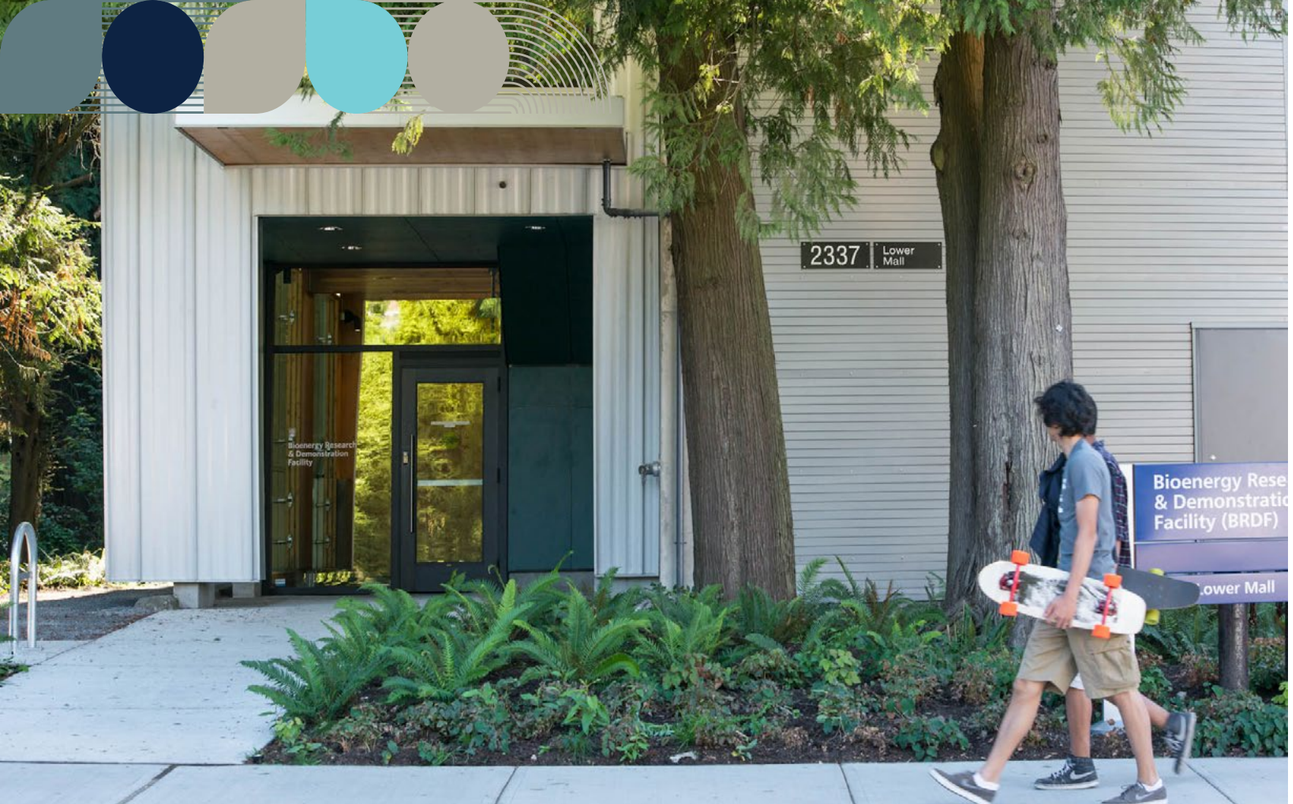
Figure 4: UBC Vancouver CAP 2030 Targets



A. STATIONARY SOURCES (BUILDINGS)

UBC is continuously innovating to decarbonize its buildings and energy supply. Increased investments in expanding clean energy supply and energy-efficient technologies provide an opportunity for partnering with faculty researchers to advance innovation in these areas. UBC's role in peer networks (e.g. UC3, AASHE, ISCN, PICS)[20] helps facilitate knowledge exchange to support rapid deployment of low carbon solutions.

20 UC3 – University Climate Change Coalition; AASHE – The Association for the Advancement of Sustainability in Higher Education; ISCN – The International Sustainable Campus Network; PICS – The Pacific Institute for Climate Solutions



Bioenergy Research and Demonstration Facility

Energy Supply

ACTIONS:

UBC is advancing toward its goal of supplying 100% of Academic District Energy System (ADES) energy from clean sources by 2030. In 2025, around 39% of total building energy consumed on campus was provided by fossil fuels, down from about 63% in 2007. The Bioenergy Research Demonstration Facility (BRDF), which uses carbon-neutral wood waste, remains a cornerstone of this effort to decarbonize thermal energy supply. In 2025, efforts focused on improving the facility's operational effectiveness, resilience, and reliability, including replacement of aging components and initiatives to enhance efficiency. A more robust thermal preventative maintenance program is now in place, supported by the necessary skilled trades resources to ensure the long-term performance of this critical asset. A major economizer and heat pump project is now in commissioning in BRDF, recovering 2.8 MW of wasted heat.

The Campus Energy Centre remains the second major thermal energy source within ADES, currently relying on three large natural gas boilers and a condensing economizer to meet heating demand. Partial electrification of this facility is essential to achieving UBC's target of an 85% reduction in emissions, while also supporting energy resilience and accommodating future campus growth. This will be achieved by the ADES Electric Boiler & Thermal Energy Storage project which was granted Board 1 approval in September 2025.

PLAN:

To further capture the wasted heat from BRDF, another economizer and heat pump project has entered the design stage. This project will recover an additional 2.8 MW wasted heat. These advancements position the BRDF to play an increasingly important role in delivering affordable, low-carbon energy to campus.

The ADES Electric Boiler & Thermal Energy Storage project has entered the design phase. This project enables the partial electrification of the ADES and is critical to meet UBC's ambitious climate targets. More detailed cost estimates and design updates are expected to be presented to the BoGs in late 2026 as part of the next approval stage.

Existing Buildings

ACTIONS:

Many UBC buildings have undergone retrofits over the years which provide pedagogical updates and significantly improve building seismic performance, target energy and operational emissions reductions and improve occupant thermal comfort considering future climate change events (i.e. extreme heat). Natural gas use in existing buildings dropped by around 10% year-over-year, due in part to two major clean energy retrofits commencing operations. UBC Energy & Water Services (EWS) Energy Conservation Group is actively advancing a number of projects to conserve thermal, electrical, and peak demand at UBC:

- The Brimacombe and Swing Space decarbonization projects were completed in 2025, reducing emissions by about 350 tCO_2e per year. The Arena Rink A decarbonization project is advancing and expected to be completed in 2027, which will further reduce emissions.
- A burner on one of our large steam boilers on campus was upgraded. This upgrade renewed an older burner nearing end of life to a more efficient one, savings 1,000 GJ of natural gas per year.
- A number of occupancy sensors were installed in the Brimacombe building, allowing airflow rates to turn down when a space is unoccupied. A laboratory space in Food, Nutrition, and Health building was moved off of an office air handling unit (AHU), allowing that AHU to turn off at night. These combined efforts are expected to save 100 MWh of electricity and 1,900 GJ of thermal demand.
- Re-evaluation of building on/off system scheduling was completed, saving an impressive 260 MWh of electricity alone.
- Cooling plant upgrades were also done in the IK Barber library and the ICICIS building, improving energy efficiency during the cooling season.

The **Jack Bell Renewal** project was completed in early 2026. The project preserved the existing structural framework and foundations, resulting in a 59% reduction in embodied carbon against Zero Carbon Building (ZCB) – Design Standard. The construction work of **Anthropology and Sociology (ANSO) Building Renewal** began in January 2026, which will also preserve the structure and foundation and is estimated to achieve embodied carbon reductions of around 60%.

PLAN:

To inform the implementation and resource requirements of the CAP 2030, UBC is undertaking several consulting studies, including a partnership with CleanBC and BC Hydro, examining low-carbon electrification pathways for a variety of UBC buildings. UBC EWS continues to update the Strategic Energy Management Plan (SEMP) outlining future energy conservation projects within existing buildings which include:

- Pursuing additional building retrofits and renewals (e.g. through seismic upgrades) to achieve further reductions in GHG emissions, energy and water; and
- Supporting UBC Sustainability & Engineering to deliver climate action and engagement programming to students, staff, and faculty to encourage energy conservation within buildings and in laboratories and to advance a culture of sustainability across the UBC community.
- Advancing technical studies and designs to decarbonize the remaining carbon intensive buildings on campus. The goal is to have a "shovel ready" list of projects, to be able to take advantage of end-of-life equipment replacement opportunities. It is our experience that there is often not enough time to do the necessary design work and identify incremental funding once equipment starts to show signs of failure, risking the locking-in of new fossil fuel replacement equipment for several decades.

New Buildings

ACTIONS:

The *Green Building Action Plan* (GBAP) outlines the sustainability pathway for academic and residential buildings at UBC campus. GBAP is implemented within UBC's institutional buildings through the *Institutional Green Building Requirements*. It includes the following requirements applicable to all new and major building renovation projects:

GREEN BUILDING CERTIFICATION:

- LEED Gold certification is mandatory for all new construction and major renovations.
- UBC developed a *LEED v4.1 Implementation Guide* to optimize the LEED process at UBC. A new Guide will be developed in 2026 for LEED v5.

ENERGY AND CARBON TARGETS:

- These cover both operational energy and carbon, as well as *embodied carbon*.
- Aligned with CAP 2030, a stepped reduction target of 50% for embodied carbon in 2030 was defined.

CLIMATE READY REQUIREMENTS:

- These focus on actions that will reduce risk and life cycle costs of the university's buildings due to predicted climate change in our region.

Gateway Health Building at the corner of Wesbrook Mall and University Boulevard, was completed in February 2026 and now serves as a symbolic entry point to UBC's Point Grey Campus. It is UBC's first building to achieve the Canada Green Building Council's Zero Carbon Building – Design Standard certification, which demonstrates that the building is designed to be highly energy-efficient and minimize both operational and embodied GHG emissions. The embodied carbon has been reduced by 27% compared to a reference building thanks to the hybrid wood structure and careful choice of low embodied carbon materials.

GBAP is also implemented within UBC's residential neighbourhoods through the *Residential Environmental Assessment Program* (REAP). The latest version of REAP v4.0, was approved in June 2025, with updates supporting UBC's *Neighbourhood Climate Action Plan* and aligns with B.C.'s Zero Carbon Step Code, helping guide new construction toward net-zero operations by 2030.

PLAN:

Through the GBAP, new buildings are required to meet operational emissions and embodied carbon reduction targets to support CAP 2030 and be designed to address occupant comfort, health and safety in future climate.

The Lower Mall Precinct Phase One Project, a new student residence complex supported by significant funding from the province of BC, with 6 new student residence buildings providing approximately 1,500 graduate student focused beds. The design work aims to achieve provincial requirements of minimum LEED Gold certification and to achieve higher performance standards for sustainability, resiliency and inclusivity on campus. The project will be fully powered with low carbon electricity and feature UBC's first all-electric commercial kitchen.

Gateway Health Building

B. MOBILE SOURCES (FLEET)

ACTIONS:

UBC Facilities continued to advance fleet decarbonization in 2025. UBC has achieved a significant milestone, reducing fleet-related emissions by over 50% even as the campus itself expanded by more than 50% during the same period, earning multiple E3 Platinum ratings, the highest distinction for fleet sustainability.

In alignment with Climate Action Plan (CAP) 2030 and 2035 targets, UBC Facilities has updated its fleet policies to prioritize the procurement of low- and zero-emission vehicles, including electric (EV), compressed natural gas (CNG), hydrogen, propane, and hybrid technologies.

As part of its ongoing modernization efforts, four aging Smart EVs were replaced with new Toyota bZ and Kia Niro EV models, both offering significantly improved battery range and performance. To support this transition, UBC mechanics have completed specialized two-week electric vehicle training at BCIT and are now fully equipped to service and maintain EVs in-house.

UBC Vancouver campus now has 104 Level 2 EV chargers, 4 Level 2 D-80 EV chargers, and 4 DC Fast chargers. Total EV charging has increased to 540,000 kWh in 2025, a 46% increase over last year. Several Direct Current Fast Chargers are currently in development across campus. The hydrogen fueling station, part of the Smart Hydrogen Energy District, is now operational.

PLAN:

UBC will continue to work on its vehicle replacement schedule and fleet optimization based on the following four core principles:

- Right sizing – aligning vehicle supply with operational demand to avoid under- or over-utilization;
- Right typing – ensuring vehicles are appropriately matched to job requirements, thereby optimizing efficiency, reducing costs, and improving productivity;
- Fleet standardization – minimizing variability in vehicle makes and models to streamline maintenance, procurement, and overall fleet efficiency; and
- Fuel efficiency and emissions reduction – continuously evaluating the fleet to lower greenhouse gas (GHG) emissions, reduce fuel costs, and maintain a modern, efficient fleet profile.

C. PAPER CONSUMPTION

ACTIONS:

UBC applies the sustainability vision and goals to all UBC business decisions affecting the supply of services, goods and equipment for operational needs and related transactions. UBC has established a Sustainable Purchasing Guide, a Supplier Code of Conduct, and is working to integrate sustainability into scoring criteria for all major bids. The Sustainability Purchasing Guide

Fleet vehicle/electric charger

is designed to help UBC staff and faculty members or students to purchase sustainable goods and services. The guide supports the adoption of UBC's Sustainability Priorities and reflects a triple-bottom-line approach that balances best value, social equity and environmental protection.

UBC continues to apply its sustainability vision to all purchasing decisions. In 2025, approximately 60% of paper procured for UBC Vancouver Campus consisted of 30–100% post-consumer recycled (PCR) content or alternative fibre (sugar sheet) paper, consistent with 2024.

PLAN:

UBC continues to promote the Sustainable Purchasing Guide to the campus community, especially for the departmental and unit administrators, and the network of Sustainability Coordinators across campus.

D. FUGITIVE EMISSIONS

ACTIONS:

The UBC Technical Guidelines address mitigation for leak detection and prevention of refrigerant loss, which are leading causes of fugitive GHG emissions. UBC Safety and Risk Services has developed specific pollution prevention policies, procedures and forms which aim to ensure compliance with the Environmental Management Act, Ozone Depleting Substances and Other Halocarbons Regulation, and Environmental Code of Practice for the Elimination of Fluorocarbon Emissions from Refrigeration and Air Conditioning Systems. This has improved communication with UBC operational departments/teams who manage refrigeration/air conditioning equipment on campus. UBC keeps comprehensive, up-to date inventories of refrigeration equipment, and refrigerant releases, including annual top-up volumes. Regular maintenance helped identifying and rectifying leaks to minimize emissions.

PLAN:

With increasing heat pump and air conditioning adoption across campus, refrigerant leak management remains a priority. UBC will continue to work with internal and external partners to identify installation and maintenance protocols to reduce the risk of leaks, transition to lower GWP refrigerants, and replace older inefficient refrigeration equipment.

UBC Main Mall

Beaty Biodiversity Museum

Public Sector Leadership

A. CLIMATE RISK MANAGEMENT

UBC assesses climate risk and takes actions to manage such climate risk in capital planning, asset management, infrastructure upgrades, and strategic planning. Consideration is taken when determining strategy for end-of-life assets, while asset management risk assessment is considered for upsizing infrastructure to deal with climate-related changes. Furthermore, climate change is incorporated into the assessment of infrastructure for capital works and is included in building design.

UBC has undertaken several climate action planning processes in the past that have focused primarily on climate mitigation. In 2025, UBC completed its Climate Resilience Buildings Strategy, aligning UBC policy with CleanBC's Climate Resilience Framework and Standards for Public Sector Buildings (CRFS). The strategy has identified cost-effective strategies to future-proof UBC's buildings against climate change while reducing GHG emissions, and these will be implemented through updates to UBC's Technical Guidelines. Specific actions have also been identified in the GBAP to assess issues from a coordinated climate mitigation and adaptation lens. For example, considerations for campus cooling strategies are being investigated in addition to future demand on UBC's district energy system. Also, UBC Technical Guidelines include a variety of ventilation strategies that include passive (or natural systems) as part of UBC's passive-first approach, adding active mechanical systems where needed.

UBC's Enterprise Risk Assurance (ERA) Group provides trusted and impactful risk and assurance insights to

enhance and protect the institution, and to advance a culture of risk informed decision making. They work in conjunction with specific groups to provide an overarching risk assessment portfolio. The ERA Group maintains the University's Major Risk Register which identifies, assesses and manages all major risks – The Major Risk Registry will be updated with significant climate related risks as they are identified.

UBC is also advancing an update to its Integrated Stormwater Management Plan (ISMP), now being developed as the Integrated Rainwater Management Plan (IRMP) to align with ***Campus Vision 2050*** and the ***Land Use Plan***. The updated plan has modeled and identified strategies to respond to changes in natural hydrological cycles, provide climate resilience, mitigate cliff erosion risks, and identify opportunities to achieve multi-benefit amenity for the campus community and Musqueam. It is targeted for completion in spring 2026.

UBC's transportation network is reviewed from a priority access perspective annually, and recent climate events flagged critical access points and the need to ensure emergency and public transit access. UBC is updating its Transportation Plan to refresh UBC's transportation demand management strategies and actions, contributing to continued progress on emissions reductions. Providing more affordable and climate resilient housing on campus for students, staff and faculty is also a priority that reduces the demands on a constrained regional transportation system.

B. OTHER SUSTAINABILITY INITIATIVES & SUCCESS STORIES

A number of broader sustainability initiatives are underway at UBC Vancouver, with a specific focus on reducing Scope 3 emissions to achieve the new CAP 2030 target of a 45% overall reduction in these emissions by 2030. Key 2025 highlights and successes include:

Planning and Advocacy for SkyTrain to UBC

The ***UBC SkyTrain Extension*** is a well-supported and much needed rapid transit project that will advance regional climate action. Ongoing advocacy efforts have led to the UBC Extension being named as a priority in Minister of Transportation and Transit mandate letter.

Rapid transit is a key measure for UBC to achieve its target of having at least two thirds of trips to and from campus be made by walking, cycling, or transit by 2040. SkyTrain to UBC will increase sustainable transit usage along the entire length of the Broadway corridor, reducing congestion, GHG emissions and air contaminants while improving personal health and wellbeing. Importantly, the project will provide access to greater affordable housing opportunities for UBC students, as the SkyTrain extension will increase travel speeds and broaden the radius to access affordable housing with similar commuting times. This, together with greater on-campus housing are the key initiatives to mitigating the impacts of the student housing crisis.

Commute Smart UBC

Commute Smart UBC is an ongoing initiative to encourage the UBC community to make smart, sustainable, and healthy commute choices. The program includes an on-line trip planning tool, regular outreach via social media channels and engagement programs such as:

- UBC introduced a $400 ***e-bike rebate*** for faculty and staff that purchase a qualifying e-bike in 2025. Discounts are also available to UBC employees from various partners, and free two-week e-bike trials were also made available to all faculty and staff through UBC's ***Try an E-bike program***.

- ***UBC's bike share program*** was further expanded in 2025 with an additional 6 Mobi stations. There are now 17 Mobi bike share stations on campus, with space for over 350 devices, fully integrated with the City of Vancouver's shared bike and e-bike program. Over 500 people have taken advantage of discounted e-bike inclusive annual memberships exclusively available to UBC students, faculty and staff.
- ***Go by Bike Week*** is a bi-annual initiative that celebrates cycling and encourages everyone in Metro Vancouver to shift their commute via cycling. UBC workplace units compete as teams for awards. In 2025, over 30 teams participated in Go by Bike Week events, logging over 350,000 kilometres in total. UBC consistently ranks as a top organization regionally for its participation.
- UBC offers eligible faculty and staff a 50% discount on monthly transit passes to support sustainable commuting. The Vancouver campus program covers monthly TransLink passes for select employee groups.
- UBC's Carpooling Program continues to operate in partnership with Liftango, with reserved stalls around campus for carpoolers.

Business Air Travel

The UBC Sustainable Travel Program supports the goal of reducing UBC's business air travel emissions by 50% from pre-COVID levels by 2030 and aims to inspire other organizations to take similar actions. Outreach and engagement activities feature sustainable travel best practices and involve a diverse network of staff and faculty.

Climate Friendly Food Systems

The ***SEEDS Sustainability Program*** (SEEDS) collaborates on many climate-friendly food research initiatives in partnership with UBC Food Services and AMS. The Climate-Friendly Food Systems Action Team (CFFS-AT) plays an instrumental role in advancing UBC's ***CAP 2030*** Food Actions. CFFS-AT developed the ***Climate Friendly Food Systems Procurement Guidelines*** to help inform UBC's food purchasing decisions with the goals of: 1) reducing food GHG emissions, 2) promoting biodiverse, resilient & regenerative food systems, and 3) supporting just, sovereign and resilient communities. Key initiatives this year include:

- The first plant-based milk by default at a UBC café was launched. This pilot project flips the switch on choice architecture models for customers while advancing the guidelines.
- Expanded strategic partnerships and advanced work on Climate-Friendly Food (CFF) Label including two key milestones: expansion to retail outlets and kickstarting grant-funded and peer-reviewed research in ***partnership with Sauder School of Business***. Over 1,700 meals across UBC Food Services dining halls, retail outlets and the Alma Mater Society are now covered by the comprehensive CFF Label.
- Hosted UBC's inaugural World Food Day, engaging community in hands-on learning across key themes including climate-friendly (plant-based) eating, food security, circularity, food skills and sustainable agriculture.
- Identified peer-to-peer activation strategies to enhance the adoption of CFF actions, particularly among first-year students.

Zero Waste Actions

Zero Waste Action Plan 2030 (ZWAP 2030): towards a Circular Economy was endorsed in 2023, setting out new targets of reducing operational waste by 50% by 2030, and progressing towards a zero-waste community. The Zero Waste Committee (ZWC) continues to pursue advancement of the Zero Waste Action Plan 2030 targets and operational efficiencies through engagement works:

- Two high-priority working groups were launched: one seeking to reduce food-waste to landfill in student residences and one developing a Sustainable Procurement Program/Strategy.
- A "gamification" approach is used in student residences to engage people, with the chance to win prizes when using interactive mobile device-based tools to help with waste sorting and promoting these contests on social media.

UBC's reuse and recycling programs have continued with the goal of expanding impacts. Key initiatives include:

- UBC continues to promote single-use item reduction through the ***Let's Choose to Reuse*** campaign, supporting the Zero Waste Food Ware Strategy. Faculty, staff and students are encouraged to choose reusable cups, bags, foodware, and cutlery.
- The ***reuse-it!*** UBC online warehouse that allows UBC Vancouver employees to find and exchange items such as furniture, lab equipment, office supplies, and more from other departments. Studies are underway to identify opportunities to increase use and enable surplus equipment owners to donate or sell them to organizations outside UBC.
- ***The Furniture Reuse Program and Zero Waste Market*** continues to identify opportunities to increase sales and donation of surplus items as well as IT or other higher-value items.
- A new reusable cup and container exchange program was launched in late 2025, in partnership with a private service ***provider***, currently operating at 10 food outlets on campus. Over 177,000 food and beverage containers have already been reused, preventing 24 tCO_2e.
- In partnership with Call2Recycle, UBC adopts new wifi-enabled automated collection bins. This provides a safer, more convenient, and visible system for both users and staff supporting the program to recycle batteries. In 2025, UBC was named a Call2Recycle® Leader in Sustainability Award winner for the second consecutive year, recognizing our commitment to protecting the environment and our remarkable battery collection results of more than 1,800 kg from UBC.
- In the Staff Welcome Back BBQ, 5,400 attendees advanced sustainability together by diverting 99.9% of waste generated in the event, equivalent to 383 kg, out of the landfill.
- Waste sorting and diversion at Marine Drive residence were audited and evaluated through ***SEEDS*** studies. A new organics collection method has demonstrated a 30-40% increase in diversion. Student Housing is pursuing expanding this method to several other large residences and monitoring results over the coming year.

UBC Green Labs Program

Green Labs Program

Green Labs helps researchers to reduce energy consumption of laboratories, provides lab recycling options, promotes sustainable purchasing, and hosts interactive challenges between lab buildings:

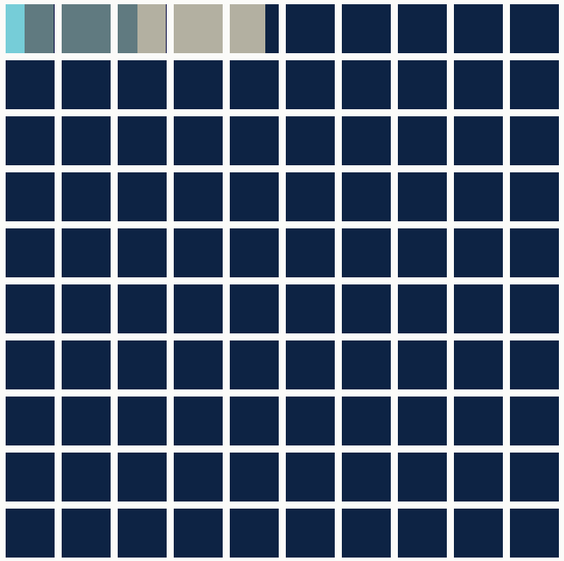
- The ***Lab Sustainability Course*** was designed to help researchers take climate actions and improve the sustainability of their labs. 203 people enrolled in the course since its launch in 2023.
- The ***Green Labs Fund*** granted a total of $19,000 to support eight new projects in 2025 in advancing energy-efficient infrastructure and renewable-powered systems, waste reduction/recycling initiatives, and safer material use across research and healthcare settings.
- The ***International Freezer Challenge*** is an annual competition for researchers to promote best practices in laboratory cold storage management. In 2025, the participants collectively took a whopping 283 actions to make their labs more sustainable, equivalent to over 10,000 kWh energy saving annually. That is the equivalent of retiring 531 standard chest freezers, and emission reductions of 1,313 kg CO_2e.
- Green Labs offered two freezer rebates to qualifying lab groups to replace old ***Ultra-low temperature freezers*** (ULTs) with new, energy efficient models to save energy in 2025.

Green Labs continues to drive UBC laboratories to reduce waste through different recycling programs in 2025:

- 9,000 kg of Styrofoam was recycled through ***Styrofoam Recycling Program***.
- 7,900 kg of non-hazardous amber glass was recycled into bottles or ground into sand-blasting material through ***Amber Glass Recycling Program***.
- Through ***Glove Recycling Program***, over 242,000 gloves and masks were recycled into plastic pellets used for building and construction supplies, diverting around 1,400 kilograms of waste from landfills.
- ***Lab Plastics Recycling Program*** helps divert an estimated 128 tonnes of lab plastics each year. This year, 13 additional recycling bins were added to lab buildings around campus.
- In collaboration with Spud, more than 25,000 ice packs were collected in the Life Sciences Centre and donated to third parties for reuse since inception.

Emissions Profile 2025

Figure 5: UBC Vancouver Total Emissions by Source (Vancouver Campus, Off-campus Properties, and UBCPT) for the 2025 Calendar Year (tCO_2e*)



- Stationary Fuel Combustion [Building Heating and Generators] and electricity
  44,879 (95.2%)
- Fugitive
  1,155 (2.4%)
- Mobile Fuel Combustion [Fleet and other mobile equipment]
  949 (2.0%)
- Supplies (Paper)
  177 (0.4%)

TOTAL EMISSIONS: 68,034

Offsets Applied to Become Carbon Neutral in 2025 (Generated on April 17, 2026)
Total offsets required: 47,159
Prior year offsets credit: 220
Total offset investment: $1,173,475
Emissions which do not require offset**: 20,875

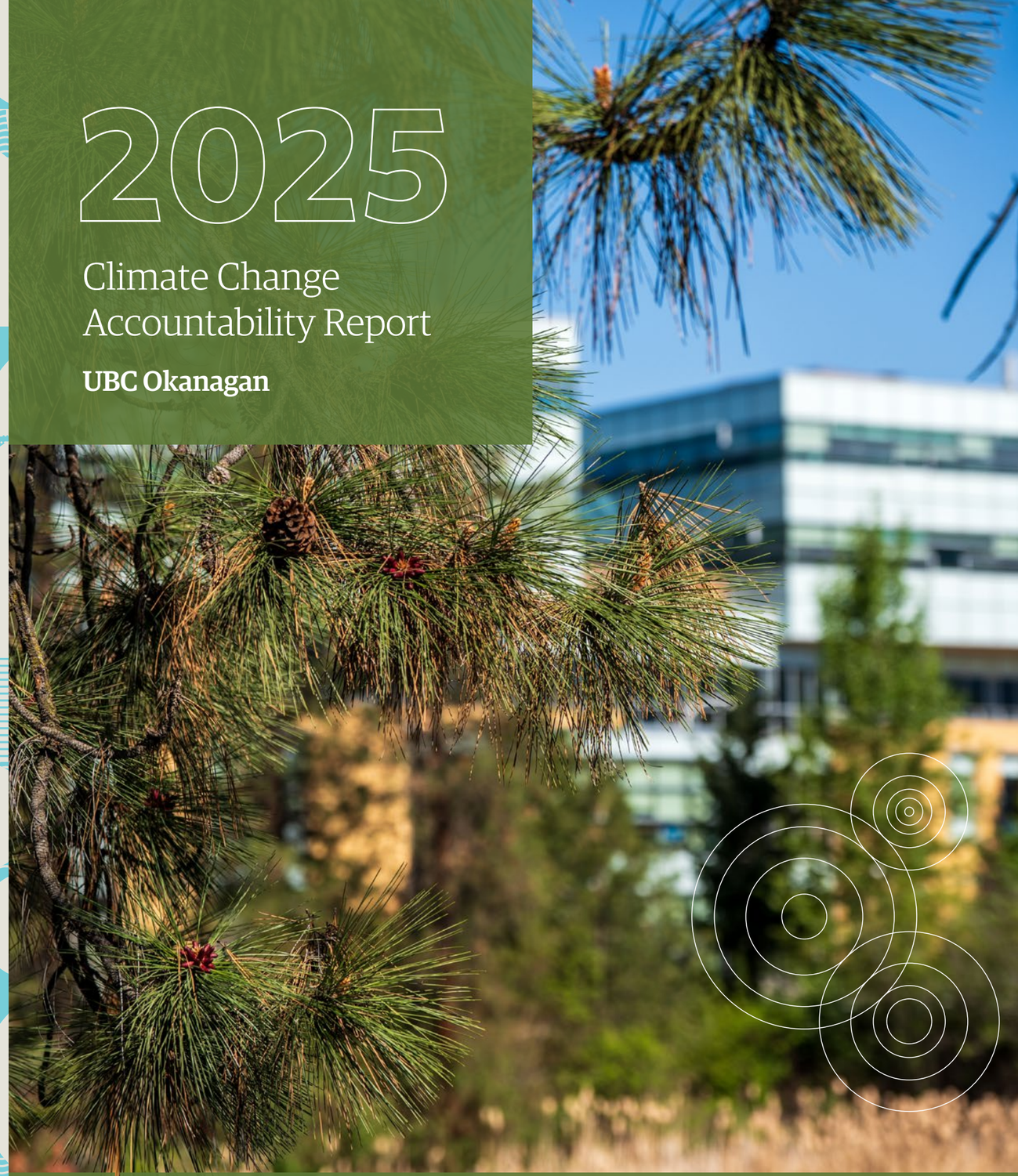
* Tonnes of carbon dioxide equivalent (tCO_2e) is a standard unit measure in which all types of greenhouse gases are expressed based on their global warming potential relative to carbon dioxide.

** Under the Carbon Neutral Government Regulation of the Greenhouse Gas ReductionTargets Act, all emissions from the sources listed above must be reported. As outlined in the regulation, some emissions do not require offsets.

2025

Climate Change Accountability Report

UBC Okanagan



THE UNIVERSITY OF BRITISH COLUMBIA

Office of Sustainability

Okanagan Campus

Acknowledgement

The UBC Okanagan campus is situated on the traditional, ancestral and unceded territory of the Syilx Okanagan people.

For millennia, the Syilx Okanagan people have been the stewards and caretakers of the lands upon which UBC is now located. In September 2005, the Okanagan Nation Alliance officially welcomed UBC to traditional Syilx Okanagan territory in an official ceremony, Knaqs npi'lsmist, where UBC signed a Memorandum of Understanding with the Okanagan Nation.

UBC strives toward building meaningful, reciprocal and mutually beneficial partnerships with the Syilx Okanagan Nation, and works with the Okanagan Nation to ensure they are partners in the pursuit of campus plans for UBC Okanagan.

This report is led and delivered annually by the UBC Okanagan Sustainability Office within Campus Planning. We acknowledge and thank the many individuals and teams across the campus community whose contributions support the continued advancement of our shared climate and sustainability objectives. Contact: Leanne Bilodeau, Associate Director, Sustainability Operations

Photography: Darren Hull, Paul Joseph, Erika Lachance, Geoff Lister, Margo Yacheshyn, Stephanie French, Fiona Still

Contents

Executive summary

The University of British Columbia Okanagan (UBCO) continues to advance implementation of the **UBCO Climate Action Plan (CAP2030)**, supporting institutional, provincial and global climate targets. This report outlines the campus' 2025 greenhouse gas (GHG) emissions profile, key drivers, and progress toward CAP2030, long-term decarbonization and climate resilience objectives.

In 2025, total emissions for offset were **3,162 tCO_2e, a 19 per cent increase over 2024**. This increase was driven primarily by changes to provincial electricity emissions intensity factors. Despite the increase, the campus' operational emissions for offset are **13 per cent below the 2013 baseline**, indicating continued progress toward CAP2030 targets.

UBCO continues to prioritize high-impact infrastructure investments to reduce emissions and manage long-term risk, guided by its **Integrated Energy Strategy**. In 2025, the campus completed a **1.5 MW CO_2 air source heat pump** as part of its district energy system transformation – its most significant decarbonization project to date – reducing emissions by approximately **815 tCO_2e annually** while delivering long-term financial and operational benefits. In addition, the 2025 update to the **Strategic Energy Management Plan (SEMP)** integrates energy forecasting, demand-side management, decarbonization and infrastructure renewal to support campus growth while advancing CAP2030 targets and long-term climate goals.

Capital projects underway in 2025 support UBCO's low-carbon development approach. The **x̌al sic snpax̌nwix^{w}tn** building, currently under construction, is designed to meet high-performance sustainability standards, incorporating low-carbon district energy, heat recovery, and a high-efficiency envelope. It is expected to achieve LEED® Gold Certification and deliver substantial reductions in energy use and emissions relative to conventional buildings, while supporting academic and community growth.

Strategic planning initiatives advanced in 2025 to guide sustainable development and align future growth with climate objectives. Notably, the **UBCO Neighbourhood Plan** and **UBCO Residential Environmental Assessment Program (REAP)** provide a framework for low-carbon, climate resilient residential development.

Strengthening climate resilience remains a core priority. Completion of the **Climate Resilient Buildings Project**, **Multi-Hazard Infrastructure Resiliency Program**, and updated **Wildfire Management Plan** enhances the campus' capacity to manage climate-related risks and inform long-term infrastructure investment decisions.

Overall, UBC Okanagan continues to make steady progress toward its **CAP2030 target of a 65 per cent reduction in operational emissions**, while improving its ability to manage regulatory, financial and climate risks. Continued implementation of the UBCO CAP2030 and supporting plans will be critical to achieving these targets and advancing toward the university's long-term net-positive goals.

Rob Einarson

Associate Vice-President Finance and Operations
UBC Okanagan

Ben Johnson

Director, Campus Planning
UBC Okanagan

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.

By June 30, 2026, UBCO's final 2025 PSO Climate Change Accountability Report will be posted to our website at https://sustain.ok.ubc.ca/institutional-reporting/regulatory-reporting.

2025 Emissions overview

UBC Okanagan 2025 GHG Emissions and Offsets Summary	
GHG Emissions for the period January 1 – December 1, 2025	
Total $BioCO_2$	52
Total emissions (tCO_2e)	3,214
Total offsets (tCO_2e)	3,162
Adjustments to offset required GHG emissions reported in prior years	
Total offsets adjustment (tCO_2e)	(85)
Grand total offsets for the 2025 reporting year	
Grand total offsets to be retired for 2025 reporting year (tCO_2e)	3,077
Offset investment ($)	$76,925.00

Retirement of offsets

In accordance with the requirements of the Climate Change Accountability Act and the Carbon Neutral Government Regulation, UBC Okanagan (the Organization) 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). 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.

Greenhouse gas emissions

The following GHG emissions have been qualified using the BC Provincial Government's Clean Government Reporting Tool Reporting Framework.

Table 1 presents a comparison of UBC Okanagan's GHG emissions by source for 2024 and 2025. Emissions for offset increased by 19 per cent, resulting in a $12,475 (excluding tax) increase in carbon liability. This increase is largely due to updated electricity emissions intensity factors (EEIFs). In addition, revisions to refrigerant emissions intensity factors reduced 2024 emissions for offset by 85 tCO_2e, resulting in a credit applied to the 2025 reporting year.

TABLE 1 GHG COMPARISON BY SOURCE 2024-2025

Source	2024 emissions (tonnes CO_2e)		2025 emissions (tonnes CO_2e)		Changes from 2024 to 2025	
Buildings	2,237	84%	2,775	86%	+24%	+538 tCO_2e
Fleet	40	1.5%	59	1.8%	+48%	+19 tCO_2e
Paper	23	0.9%	25	0.8%	+9%	+2 tCO_2e
Fugitive emissions	376[1]	14%	355	11%	-6%	-21 tCO_2e
Total emissions *	**2,676**	**100%**	**3,214**	**100%**	**+20%**	**+538 tCO_2e**
$BioCO_2$ (not for offset)	(13)	-	(52)	-		
Total Emissions for Offset	**2,663**	**100%**	**3,162**	**100%**	**+19%**	**+499 tCO_2e**
Prior Year Adjustment	-	-	(85)	-		
Total Offsets Due 2025	**-**	**-**	**3,077**	**-**		

[1] *2024 data has been updated by the Provincial Government to account for an 85 tCO_2e credit resulting from refrigerant emission factors updates. As a result of the 2024 over-payment, 85 tCO_2e are not required for offset in 2025.*

Carbon neutral offsets in 2025

In accordance with the Clean Government Reporting Tool, and as required by the *Climate Change Accountability Act (CCAA)*, offsets required to achieve carbon neutrality in 2025 total 3,077 tCO_2e. As part of UBCO's 2025 GHG emissions profile, 52 tCO_2e do not require offsets and 85 tCO_2e are 2024 credits applied to the 2025 reporting year.

Emission reduction activities:

Actions taken in 2025 to minimize emissions

The following provides an overview and plans reported in the CCAR Actions Form, Part 1.

A. Stationary Sources (e.g. Buildings, Power Generation)

In 2025, building emissions accounted for **2,775 tCO_2e (86 per cent)** of UBCO's in-scope GHG emissions. These emissions increased by 538 tCO_2e (24 per cent) primarily due to updated electricity emission intensity factors (EEIFs) established by the Provincial Government. This section of the report provides an overview of actions taken by the campus to reduce emissions in 2025.

Climate change policy and planning

UBCO's CAP 2030 establishes a pathway to reduce emissions from buildings and energy systems while addressing GHG emissions from extended impact areas. Together with related resilience initiatives, CAP2030 supports a coordinated approach to low carbon, climate resilient campus development.

In 2025, UBC completed the **Climate Resilient Buildings Project**, a joint initiative between the Vancouver and Okanagan campuses. The project identifies cost-effective climate adaptation strategies to enhance building resilience while reducing emissions. The study's recommendations seek to align UBC's existing green building policies with requirements set out in **Clean BC's Climate Resilience Framework and Standards for Public Sector Buildings**. Tailored recommendations for each campus will be implemented through updates to **UBC's Technical Guidelines.**

The campus also developed the **UBCO Residential Environmental Assessment Program (REAP)**, a bespoke green building rating system for multi-unit residential construction in the new **UBC Okanagan neighbourhood**. REAP supports high-performance, climate-resilient buildings through reduced carbon emissions and improved energy efficiency, while enhancing occupant comfort under future climate conditions, incorporating wildfire-resilient design, improving indoor air quality. It also promotes healthy, livable communities and advances biodiversity and sustainable rainwater management.

In addition, UBCO completed the **Multi-Hazard Infrastructure Resiliency Program (MIRP)**, which provides a strategic framework to enhance campus-wide disaster resilience through the long-term, risk-informed future-proofing of critical infrastructure systems. It is intended to support informed decision-making by key stakeholders with respect to infrastructure investment, prioritization, and enterprise risk management.

The campus also began an update to its 2006 Wildland Fire Management Plan. The new **Wildfire Management Plan (WFMP)**, provides a coordinated, evidence-based approach to mitigating wildfire risk across the campus and strengthening long-term resilience. This plan builds on the foundation established in the 2006 UBCO Wildland Fire Management Plan, updates and refines mitigation strategies, and incorporates findings from the 2025 campus-wide wildfire hazard assessment to ensure alignment with current risk conditions and best practices.

Key energy and emission reduction initiatives

The **UBCO Strategic Energy Management Plan (SEMP)** was updated in 2025. It brings together a range of initiatives that support UBC Okanagan's overall energy strategy. The update aligns with the campus' goal of achieving a future state that is modern, renewed, and growing to meet both current and future energy needs, while also supporting UBCO's CAP2030 and longer-term climate goals. The updated plan includes:

- Utilities tracking and forecasting that supports future utility needs and costs for the campus;
- Demand-Side Management initiatives that prioritize energy efficiency and optimization;
- Building Energy Targets for net-positive ready buildings;
- Decarbonization with targets to advance the UBCO Climate Action Plan (CAP2030);
- Updated campus growth projections for buildings (GSM) and campus population (FTE); and,
- Renewal and Modernization: to align the scheduling of retrofits, modernization, and stranded load connections with the District Energy (DE) strategy to reduce capital costs while ensuring long-term sustainability.

Projects advanced through the SEMP in 2025 include:

- Completion of a **Geo-Exchange Boiler Efficiency Project**, which is anticipated to increase the boiler's efficiency by 8-10 per cent, saving 750 GJ of natural gas and avoiding 37 tCO_2e annually.
- Completion of a **Fluid Cooler Pump Optimization Project**, expected to save 70,000 kWH and reduce emissions by 2 tCO_2e per year.
- Completion of a **Central Heating Plant (CHP) Boiler Efficiency Enhancement project**, which is expected to improve boiler efficiency, resulting significant natural gas and electricity savings and more stable and reliable operations. This work included the installation of variable frequency drives on boiler circulation pumps to reduce short circuiting within the boiler loo to lowers return water temperatures and improves condensing performance.
- Initiation of an **Energy Plant Efficiency Study, a Campus as a Living Lab Initiative (CLL)**. This project will analyze the performance of the Medium Temperature District Energy System plant to identify opportunities to optimize system performance at a campus-wide level.

Energy reduction studies completed in 2025 include:

- Completion of an **Energy Optimization and Decarbonization Study for the Arts Building** to identify energy efficiency and emission reduction opportunities. Proposed measures include HVAC controls, upgrading older air systems, adding heat recovery, enabling connection to the campus low-temperature district energy system, and replacing aging gas equipment with efficient electric alternatives such as heat pumps.
- Completion of a **Domestic Hot Water (DHW) Heat Pump / District Energy Integration Study for the Gym Building** to evaluate options to modernize the building's DHW system by integrating it with a Cluster Plant four-pipe district energy system in the **x̌əl sic snpax̌nwixʷtn (XSS)** building. Proposed upgrades include preheating water using district energy and installing a high-efficiency system to reduce natural gas use and GHG emissions while maintaining required temperatures.
- Completion of a Four-Pipe District Energy Connection Study for the **Administration Building (ADM)** to assess connection of the building to the system supplied by the XSS cluster plant. The proposed design includes new equipment to support the connection and transitioning from natural gas heating to an electrified system, reducing emissions by approximately 49 tCO_2e annually.
- Completion of a **Retrofit Study on the University Centre's (UNC) Heating, Ventilation and Air Conditioning (HVAC) system** to examine long-term upgrade options for when existing ceiling-mounted heat pumps reach end of life. Options were evaluated based on cost, energy performance, reliability, and ease of implementation.
- Completion of a **BMS LoRaWAN® Wireless Sensor Pilot** to evaluate the use of Long-Range Wide Area Network (LoRaWAN) technology for connecting sensors and meters to the campus Building Management System (BMS). The pilot assessed a cost-effective alternative to traditional wired systems for applications such as utility metering, occupancy sensing, and environmental monitoring (e.g., temperature, humidity, CO_2). It included installation of wireless gateways and test devices to evaluate range, reliability, and compatibility with existing systems. Results will inform potential campus-wide deployment.

Low carbon district energy system

Additional energy reduction plans implemented last year include the **UBCO Integrated Energy Strategy**. Updated in 2025, the strategy outlines a pathway toward an integrated energy system that is affordable, sustainable, and resilient while serving a growing campus community.

Priority projects underway in 2025 include **integration of a four-pipe Cluster Energy Plant into the x̌əl sic snpax̌nwixʷtn building**. The system will provide heating and cooling to the building and surrounding facilities using water source heat pumps.

The campus is also completing **installation of a 1.5 MW CO_2 Air Source Heat Pump (ASHP)** into the campus District Energy System (DES) at the Geothermal Exchange Building. Upon commissioning, the ASHP is expected to significantly improve system efficiency (from 72 per cent to 174 per cent) and reduce emissions by approximately 815 tCO_2e annually. It will also eliminate the need for conventional refrigerants for cooling, increase system capacity, and improve operational flexibility. These upgrades will support future expansion and connection of new academic, research, and neighbourhood buildings.

Change management programs

UBCO's energy reduction change management programs are designed to engage the campus community in day-to-day conservation actions, helping to reduce energy use, lower emissions and deliver cost savings across campus operations.

In 2025 energy reduction change management programs implemented on campus funded by FortisBC have delivered measurable savings, and include:

- The annual **Shut the Sash** competition achieved energy savings of 14,566 kWh and 54.13 GJ, reducing emissions by 2.9 tCO_2e;
- The **Cozy Campus** winter energy conservation campaign delivered an estimated energy savings of 107,802 kWh and 39.3 GJ, avoiding 5.2 tCO_2e;
- The campus-led **Lights Out** events, held in support of the global Earth Hour initiative, resulted in an estimated annual reduction of 118,625 kWh, avoiding 3.5 tCO_2e.
- The **UBCO Green Office Program** pilot supported by BC Hydro and FortisBC engaged staff in operational energy reduction measures, achieving an estimated savings of 38,560 kWh and avoiding 1.13 tCO_2e.

Together, these programs reduced utility and carbon offset costs by approximately $30,700, demonstrating the financial benefits of behaviour-based energy savings.

In addition, operational departments continued to support the **Lights Out and Cozy & Closed** initiatives by conducting voluntary energy audits during nightly rounds. These efforts resulted in turning off 8,695 lights, shutting down four projectors and screens, and closing 184 windows. Collectively, these actions achieved an estimated energy reduction of 253,894 kWh and avoided 7.4 tCO_2e in emissions.

New buildings advanced in 2025

UBC Okanagan's buildings play a key role in achieving CAP2030 carbon reduction targets by meeting high-performance, low-carbon design standards that reduce operational emissions from energy systems and support the campus' transition to a more efficient, resilient, and low-carbon built environment. This section outlines major building projects and planning initiatives that are in design or in construction in 2025.

Targeting LEED® Gold certification, the **x̌əl sic snpaxnwixʷtn building** is designed to set a new low-carbon benchmark for energy-intensive research facilities. Key features include one of Canada's longest earth tube systems for pre-conditioning ventilation air, connection to the campus low-carbon district energy system, a high-performance envelope, heat recovery chiller and efficient lighting with occupancy and daylight controls. Laboratory ventilation is optimized through Aircuity demand-based systems, informed by wind dispersion analysis to improve exhaust efficiency. The project also pilots a 10 per cent reduction in embodied carbon. Together, these strategies are expected to reduce energy use by 63 per cent and carbon emissions by 92 per cent compared to a baseline facility.

UBCO Downtown is a mixed-use development that expands UBC's presence in the Okanagan. Targeting LEED® Gold Certification and Step 3 of the BC Energy Step Code, the project incorporates high-performance design features, including a solar wall on the south façade that passively preheats ventilation air to reduce energy demand. The facility will provide academic, research and residential space, along with collaborative and social amenities that support community connections.

The campus is advancing design of a new **Recreation Facility**. This design-build project will address a shortage of indoor recreational space while supporting student wellbeing and strengthening community connections. The facility is being designed to meet high standards for energy efficiency and climate resilience, and to enable future connection to the campus district energy system.

Existing buildings

Projects completed in existing campus buildings in 2025 that focused on reducing energy use and emissions included the following.

- A **Thermal Cross Flow Investigation Study** was initiated to identify and address unwanted mixing between hot and chilled water in the **Engineering, Management and Education (EME)** building's HVAC system. The study assessed energy losses, identified issues across key equipment (such as air handling units, heat recovery units, heat pumps, fan coil units, and in-slab systems) and developed cost-effective solutions to restore system performance and reduce energy use.
- **Lab ventilation improvements** were implemented in EME, including optimizing set points and installing motion sensors to adjust airflow based on room occupancy. These upgrades address previously identified deficiencies in heat recovery and fume exhaust systems.
- Completion of a **Heat Recovery Project in the Science Building** which improves heating efficiency by capturing heat from exhaust air and using it to preheat water for the building's water source heat pumps. This project is expected to reduce natural gas use by approximately 1,500 GJ and avoid 70 tCO_2e annually.
- In the **Library Building** recommissioning measures were implemented to optimize mechanical systems and controls, including air-handling units, ventilation, and heating plant sequencing. These updates improve system performance by aligning operations with actual building demand, resulting in reduced energy use and emissions, while enhancing occupant comfort and overall efficiency.
- In the **Creative & Critical Studies Building**, recommissioning measures were implemented to improve HVAC control and occupant comfort. Updates included reprogramming fan coil units to adjust supply air temperature based on room conditions and modifying the hot water plant sequence to respond to building demand. These improvements enhance temperature control, reduce equipment cycling, increase system efficiency and lower energy use and emissions.

Student residence buildings

Energy efficiency projects completed in student residence buildings in 2025 included end-of-life LED lighting replacements, with targeted upgrades in Similkameen Residence and Cascades Buildings E and F. This initiative is expected to result in measurable annual reductions in both energy consumption and greenhouse gas emissions. In addition, a 24 degrees Celsius limit was implemented on heating temperature controls across all residences to reduce energy use and save utility costs.

IT infrastructure actions

IT projects completed in 2025 that focused on improving efficiency and reducing energy use included:

- Replacing desktop computers with more efficient laptops.
- Transitioning from desktop towers to docking stations to reduce power consumption.
- Upgrading uninterruptible power supply units with more efficient power sharing technology.
- Retiring over 400 desk phones for software-based service.
- Installing new low energy storage racks.

Departments also continued to advance lifecycle planning for IT infrastructure, prioritizing energy efficient equipment and reducing both power consumption and associated cooling requirements.

B. Mobile Sources (e.g., Fleet Vehicles, Off-Road/Portable Equipment)

In 2025, fleet emissions accounted for **59 tCO_2e (1.8 per cent of total campus emissions)**, a 19 tCO_2e (48 per cent) increase from 2024, largely due to increased use of researcher-owned vehicles. Despite this year's increase, ongoing emission reduction efforts included:

- Prioritizing alternative fuel vehicles including the purchase of one new electric truck in 2025.
- Consolidating off-campus trips to improve efficiency.
- Promoting fleet carpooling, walking, and cycling to move around campus.
- Adhering to sustainable fleet procedures, replacing retired vehicles with more efficient or electric models , and providing training on sustainable fleet use.
- Continuing the plan to purchase 2 electric golf carts annually to replace older stock.

UBCO also supports low-carbon transportation through 14 level-2 electric vehicle chargers available to the campus community.

C. Paper Consumption

Paper-related emissions in 2025 totaled **25 tCO_2e (less than 1 per cent of total campus emissions)**, representing a slight increase of 2 tCO_2e compared to 2024. In 2025 the campus continued to implement paper reduction measures including:

- Promoting the purchase of **paper with at least 30 per cent post-consumer recycled content** promoted on the procurement website.
- Expanding the use of **digital communications** to reduce printed materials.
- Continuing the **Find-Me printing system through the PaperCut™ print-tracking software**. The system increases awareness of print volumes and requires users to release print jobs within four hours. In 2025, approximately 430,000 pages were not released, avoiding 1,224 kgCO_2e and saving an estimated 3.4 trees.

D. Fugitive Emissions

Fugitive emissions are unintended leaks of GHG's such as hydrofluorocarbons (HFCs) from equipment into the atmosphere. HFCs accounted for **355 tCO_2e (11 per cent of the total campus emissions)** in 2025, a decrease of 21 tCO_2e (6 per cent) from the previous year. This reduction is largely due to provincially updated refrigerant emissions intensity factors that corrected over-reporting in 2024. This resulted in an 85 tCO_2e credit to fugitive emissions and corresponding changes to offset requirements in 2025. In addition, part of the 2025 reduction can be attributed to improvements in the campus inventory of refrigerant-emitting assets.

The campus continues to track and report fugitive emissions using a unit-based methodology for large HVAC systems, supported by service reports, alongside asset group-based methodology to estimate refrigerant leaks from assets identified for tracking. To reduce fugitive refrigerant emissions, the campus is taking the following actions.

- Advancing a comprehensive refrigerant inventory to improve reporting of in-scope emissions, where possible.
- Continuing to research and identify alternative refrigerants for those being phased out.
- Continuing to replace aging and inefficient refrigerant equipment through maintenance and upgrades.

Emission reduction activities:

Plans to continue reducing emissions in 2026 and beyond

This section describes planned actions across buildings, fleet, fugitive emissions, and procurement in 2026 and the coming years.

A. Stationary Sources (e.g., Buildings, Power Generation)

Climate change policy and planning

UBCO will continue implementing CAP2030 to reduce operational and extended GHG emissions, with a focus on achieving 2030 targets and advancing toward long-term net-positive campus performance.

The campus will incrementally advance recommendations of the **Climate Resilient Buildings Project** to align with requirements set out in Clean **BC's Climate Resilience Framework and Standards for Public Sector Buildings** through updates to **UBC's Technical Guidelines.**

UBCO also anticipates completing the new **Residential Environmental Assessment Program (UBCO REAP)** policy by engaging in public consultation in the Spring, followed by UBC Board of Governor's approval in the Fall of 2026. Similarly, UBCO will present its updated **Wildfire Management Plan** to UBCO senior executives for approval in the Spring of 2026.

In 2026 UBC Okanagan and Vancouver are expected to initiate a new project to update to UBC's LEED Implementation Guide for Building Design and Construction V.4.1, to bring it into alignment with new **LEED V5** requirements. The Guide provides tailored compliance paths, resources and credits that align with UBC's priorities for the most effective outcomes at both the Vancouver and Okanagan campuses.

It is also anticipated that UBCO will initiate updates to the **Campus Design Guidelines**, including **Green Building requirements** to align with the recent **2025 Campus Plan update**.

Energy and emission reduction initiatives

In the coming year UBCO will continue to complete projects to reduce energy and emissions through the SEMP and the Integrated Energy Strategy toward achievement of UBCO's CAP2030 targets, including:

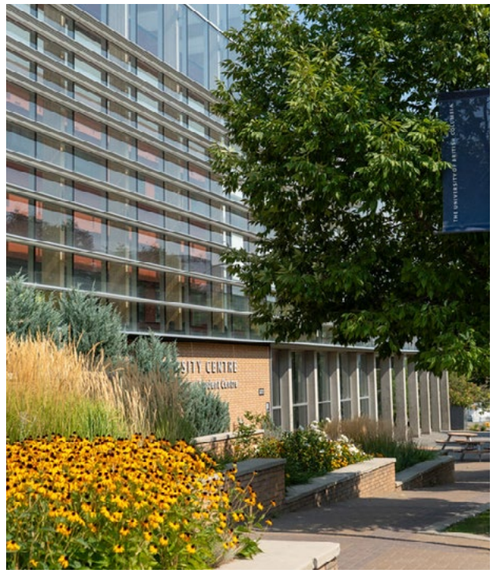
- Completing the **replacement evaluation on the University Center's Heat Pump**;
- Piloting projects to test the **LoRaWAN technology** with the campus' BMS;
- Initiating a **Four-Pipe District Energy Connection Study on the Arts Building** to assess connection of the building to the system supplied by the XSS Cluster Plant; and,
- Completing final commissioning of the **1.5 MW CO_2 Air Source Heat Pump**, which will reduce the reliance of the campus' District Energy System on gas-fired boilers.

New building projects in 2026 and beyond

This section outlines major building projects and planning initiatives that are not yet in design or construction, but will shape future campus growth and emissions.

In 2026, UBCO will continue to advance planning for major capital projects that will integrate the sustainability principles outlined earlier in this report.

UBCO will bring its new **Neighbourhood Plan** to the UBC Board of Governors for approval in 2026. This Plan represents an important step toward building a more complete, inclusive, and sustainable university community. Over the next 20 years, the neighbourhood will deliver up to 1,500 housing units—aligned with the City of Kelowna 2040 Official Community Plan—with land reserved for an additional 1,000 units in the longer term. Expanding on-campus housing will improve access to diverse and affordable accommodation for students, faculty, and staff while reducing reliance on commuting, currently the largest source of greenhouse gas (GHG) emissions associated with the campus. Designed with integrated amenities, open spaces, and walkable connections, the neighbourhood will support sustainable lifestyles and enhance community wellbeing. Over time, it will also generate financial returns through the creation of an endowment that supports UBC Okanagan's academic mission and strategic priorities.



Student residence buildings

Student residences will continue to implement energy and emission reduction projects in the coming year that include conducting LED lighting renewal project with a focus on the Cascades Residences.

IT infrastructure actions

UBCO will continue implementing initiatives that support energy reduction across campus operations. Through UBCO IT Services' Computer Replacement Program, desktop computers are being progressively replaced with laptops and other more energy-efficient devices, reducing overall electricity consumption associated with computing equipment.

In addition, the campus will continue to phase out desktop towers and docking stations to further lower power demand and improve the efficiency of IT workstations. UBCO will also continue to apply a phased approach to replace step-down transformer uninterruptible power supply (UPS) units with power-sharing splice devices, improving energy efficiency while maintaining reliable power management for critical systems.

B. Mobile Sources (e.g., Fleet Vehicles, Off-Road/Portable Equipment)

In the coming year, UBCO will continue reducing its reliance on operational fleet vehicles by consolidating off-campus trips and decreasing the number of trips taken by encouraging carpooling, walking or cycling.

The campus will also continue to encourage sustainable mobile-fuel combustion by:

- Adhering to internal sustainable fleet procedures.
- Considering electric and energy-efficient models when purchasing new fleet vehicles.
- Conducting ongoing staff training and education to support sustainable fleet use.

C. Paper Consumption

UBCO will continue to implement projects that support emissions reductions from paper consumption in the coming years, which include:

- Continuing to display messaging prompts through the PaperCut™ print-tracking software to increase user awareness about reducing paper consumption behaviours to align with implementation of printing charge increases.
- Continuing to promote the purchase of 30 per cent or greater post-consumer recycled content paper, as well as alternative, tree-free options, including Sugar Sheet™.
- Continuing to increase the use of digital signs and related communications platforms within buildings to share news, activities and events to reduce the reliance on paper-based promotional materials.
- Ongoing investment in improved and more sustainable technologies, which provide better performance with a reduced environmental impact.

D. Fugitive Emissions

Moving forward, fugitive emission reductions will be supported through implementation of projects that include:

- Continuing to develop a comprehensive refrigerant inventory to improve reporting of in-scope equipment and refrigerants.
- Continuing to research and identify alternative refrigerants for those being phased out.
- Continuing to replace inefficient and older equipment identified while performing preventative maintenance and upgrades to existing HVAC systems and associated appliances.
- Replacing individual packaged terminal air conditioner units in residences, on an as-needed basis.

Campus emission trends

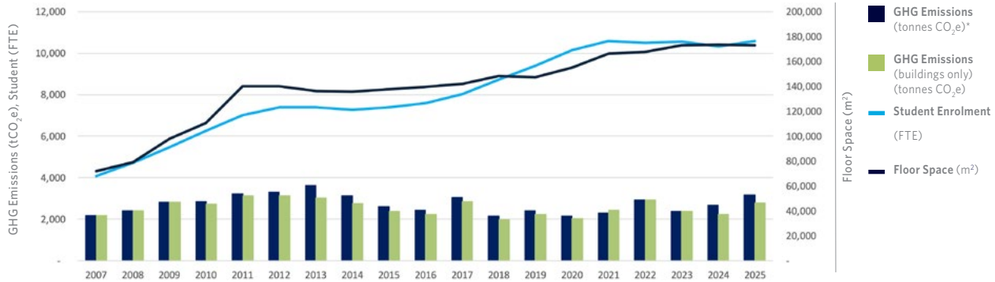
Comparing emissions to growth

In 2025, UBCO reported a 499 tCO_2e (19 per cent) increase in GHG emissions for offset compared to 2024, primarily driven by higher provincial electricity emissions intensity factors (EEIFs).

Figure 1 illustrates UBCO's GHG emissions trends (2007–2025) alongside campus growth. Despite 27 per cent increase in building floor area and a 43 per cent increase in student enrolment since 2013, GHG emissions for offset have remained relatively stable and continue to be below the 2013 baseline, with a 13 per cent reduction in 2025.

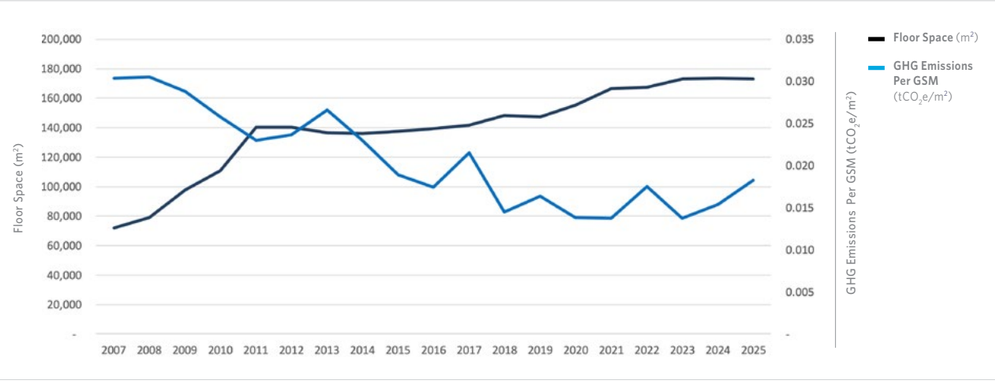
Emissions intensity provides additional insight by accounting for campus growth. As shown in **Figure 2**, emissions for offset per gross square metre (m^2) of building spaces has declined from 0.027 in 2013 to 0.018 in 2025 - a 31 per cent reduction over this period.

Figure 1 Total GHG emissions relative to growth: 2007-2025



* Total GHG Emissions for 2007-2009 reported buildings only emissions; 2010-2025 includes all in-scope emissions.

Figure 2 GHG emissions intensity relative to building GSM: 2007-2025



* Total GHG Emissions for 2007-2009 reported buildings only emissions; 2010-2025 includes all in-scope emissions.

Public sector leadership

Climate Risk Management

UBC Okanagan recognizes climate resilience is a core component of our sustainability strategy, critical to protecting campus assets and maintaining business continuity amid climate-related risks.

The campus' approach integrates natural systems, biodiversity enhancement, and resilient building design to ensure campus infrastructure remains functional, sustainable, and prepared for the impacts of a changing climate.

Policies, plans and initiatives addressing climate adaptation and resilience for 2025, as well as those planned for in 2026 are outlined in earlier sections of this report.

In addition, staff are advancing updates to key policies, such as the Integrated Rainwater Management Plan, to better mitigate climate risks while accommodating future campus growth identified in the 2025 Campus Plan.

UBC Okanagan Policies and Plans that Incorporate Climate Resiliency

Over the past two decades, UBC's Okanagan campus has demonstrated sustained leadership in climate action through the development and implementation of institutional policies and initiatives that advance both climate mitigation and adaptation. These efforts are grounded in environmental stewardship and aligned with provincial climate and sustainability priorities. The campus has also consistently undertaken comprehensive environmental and ecological assessments for consideration in land use planning.

- UBCO REAP (2026), pending approval
- UBCO Wildfire Management Plan (2025), pending approval
- UBCO Neighbourhood Plan (2025), pending approval
- UBCO Campus Plan (2025)
- UBCO Multi-Hazard Infrastructure Resiliency Program
- Climate Adaptation, Resilience, & Biodiversity Strategy (2023)
- UBCO Multi-Hazard Assessment (2022)
- UBCO Climate Action Plan 2030 (2021)
- UBCO Green Buildings: Institutional Building Requirements
- UBCO Integrated Rainwater Management Plan (2017)
- UBCO Whole Systems Infrastructure Plan (2016)
- UBCO Campus Environmental & Ecological Assessment Reports
- Species at Risk and Sensitive Habitat Reports

UBCO CAP2030 implementation and change management programs

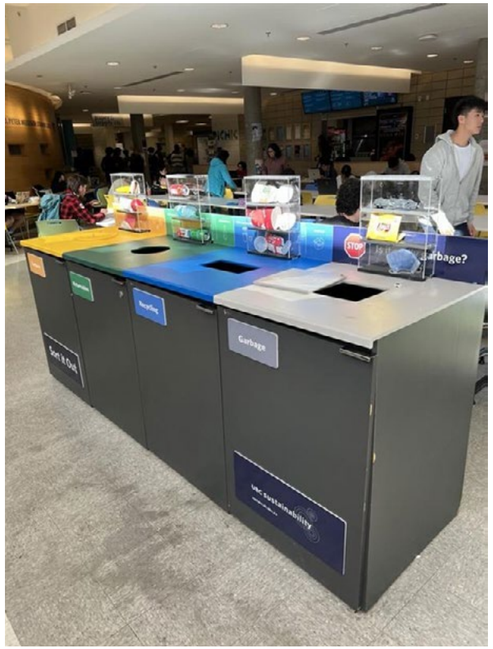
UBC Okanagan continues to implement **targeted, campus-wide change management programs** that support progress toward CAP2030 emission reduction targets while improving operational efficiency and reducing costs. Scope 1 and 2 emissions reduction actions, including those from campus operations, have been identified in the previous sections of this report.

Initiatives focused on reducing extended (Scope 3) emissions from commuting, waste and materials, and food systems undertaken in 2025 are described in this section of the report.

Commuting

CAP target: 40% reduction in emissions from 2013 by 2030

In 2025, commuting emissions totaled 8,210 tCO_2e, representing a 23 per cent reduction from baseline. Key initiatives included continued implementation of the UBCO Transportation Plan through the Sustainable Transportation Office, delivery of the ProPass program providing a 50 per cent subsidized transit pass (with an average of 191 participants per term), and expansion of the Bike Share e-bike and scooter program, which recorded more than 55,682 trips to and from campus.



Waste and materials

CAP target: 50% less waste (per capita) from 2020 by 2030, progressing to a zero-waste community

In 2025, operational waste and materials emissions totaled 628 tCO_2e, or 52.6 $kgCO_2e$/FTE, representing a 36 per cent increase from the baseline year. Despite this increase, several programs supported waste reduction and emissions mitigation across campus.

These included a collaboration between the UBC Students' Union Okanagan (SUO) and the UBCO Sustainability Office to install transparent acrylic displays above waste sorting stations, improving sorting behaviour and reducing contamination. Behaviour change campaigns such as *It Only Takes 1 or 2* were reintroduced to encourage reduced paper towel use and promote composting.

Recycling programs for non-hazardous, hard-to-recycle plastics continued to expand, with participation increasing by 12 per cent to include 25 laboratories and three departments. These efforts diverted 390 kg of material from landfill, avoiding an estimated 244 $kgCO_2e$ in emissions—equivalent to approximately 999 km of driving.

Additional initiatives included the Reusable Mug Eco-Discount program, applied to 12,785 transactions, and the Eat-In Discount program, which increased participation by 39 per cent compared to 2024. Dining and catering services continued to prioritize reusable food ware, supported by an upcharge on single-use items.

The campus also continued to divert food waste through the Spa Hills Compost facility. In 2025, more than 165,969 kgs of organic material was composted, representing a 2 per cent increase from the previous year.

Looking ahead, UBCO Food Services will invest in improved tracking systems, including scales and updated software, to establish a baseline and support future waste reduction targets.

Food systems

CAP target: 50% reduction in GHG emission from food systems by 2030

In 2025, UBCO continued to implement programs that support lower-carbon food systems. Student-led initiatives included the launch of the Community Meals Program, which has provided more than 6,000 meals since September 2025, encouraging the use of reusable containers. For those without containers, 350 were distributed. Community Cooking Classes, featuring plant-based meals, also engaged 326 participants.

Across campus, UBCO Food Services continued to expand plant-based menu offerings, with more than 55 per cent of options at Pritchard Dining Hall now plant-based. Approximately 50 per cent of food continues to be sourced from local farms and suppliers. Additional initiatives, including "Farmer Spotlight" events, highlight local producers and strengthen regional food connections.

UBCO Food Services will continue to review and implement actions from the UBC Climate-Friendly Food System Procurement Guidelines (2024) to further reduce emissions associated with food systems.

Mathew Hall and Erika Lachance: Green Office Pilot Program Champions.

Outreach and engagement

CAP target: 75% of UBC students, faculty and staff will be aware of UBC's climate action goals by 2030

In 2025, key departments delivered more than a dozen outreach, engagement, and behaviour change initiatives to support CAP2030 implementation. Participation across the campus community, including students, faculty, and staff, exceeded 2,200 individuals.

Looking ahead, UBCO will review existing programs and identify opportunities to expand reach and impact, supporting continued progress toward 2030 targets and the university's long-term goal of becoming a net-positive campus.

Emissions profile 2025

UBC Okanagan GHG emissions by source for the 2025 Calendar Year (tCO_2e*)

Buildings	2,775 tCO_2e	86%
Fugitive Emissions	355 tCO_2e	11%
Fleet	59 tCO_2e	1.8%
Paper	25 tCO_2e	0.8%

Total Emissions

3,214 tCO_2e

Offsets applied to become carbon neutral in 2025

Total offsets required: **3,077** **tCO_2e**

Total offset investment: **$76,925**

(Generated March 5, 2026)

Emissions which do not require offsets: 52 tCO_2e** and Prior Year Offset Credit: 85 tCO_2e.

*Tonnes of carbon dioxide equivalent (tCO_2e) is a standard unit of measure in which all types of greenhouse gases are expressed based on their global warming potential relative to carbon dioxide.

** Under the Carbon Neutral Government Regulation of the Greenhouse Gas Reduction Targets Act, all emissions from the sources listed above must be reported. As outlined in the regulation, some emissions do not require offsets.

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The University of British Columbia

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