

UBCO CAP 2030 Implementation Progress Report

October 2022

Executive Summary of Key Achievements to date

Scope Area	Action
Buildings	Updated UBC LEED v4.1 Implementation Guide – provides Okanagan campus-specific guidance for project teams to achieve LEED credits and align with relevant UBCO policies Implemented Strategic Energy Management Plan – projects reduced 150 tCO ₂ e (tonnes of carbon)/year Developed Okanagan climate-specific building performance targets – for approval
Energy Supply	Updated UBC Technical Guidelines for compatibility with Low Carbon Energy Strategy Implemented Low Carbon Energy Strategy - Air Source Heat Pump Project and \$3M funding for next phase. Procured 10% RNG
Commuting	Completed UBCO Transportation Plan Established Sustainable Transportation Levy Launched Staff/Faculty ProPASS and increased employer subsidy to 50% Launched e-bike and e-scooters
Food Systems	Completed UBCO CAP Food GHG Baseline Project Report and reduction strategies Scaled-up local food procurement through Land to Table Network Partnership Eliminated single use plastics in Pritchard Dining Hall and offer plant-based options at every station
Business Air	Completed ' Reducing Greenhouse Gas Emissions from UBC Intercampus Air Travel ' SEEDS Study – Inter-campus air travel accounts for 17% of UBC's total air travel in 2019. The report is a key input into policy development.
Waste & Materials	Implemented 4 stream sorting stations in Student Residences Composted/dehydrated all organics at Pritchard Dining Hall to support zero food waste Green-to-go re-launched at UBCO Food Services Outlets (post-Covid) Campus food waste sent to Spa Hills Compost Faculty offset emissions by 430 kg (40 tCO ₂ e) of carbon
Embodied Carbon	Piloted whole building lifecycle analysis for ICI to evaluate low embodied carbon options and savings. ICI will achieve a minimum 10% embodied carbon reduction (building structure/envelope) Completing UBC Whole Building Lifecycle Assessment Guidelines for Design Teams
Outreach & Engagement	Completed study on Community Engagement Strategies for Climate Change coming out of the Pandemic Established UBCO CAP Implementation engagement working group (faculty-led). Hosted Climate/Justice Teach-In Event Developed Sustainability/CAP new employee engagement module (Canvas) Developed new student orientation sustainability/CAP engagement content (Sustainability 101)
Adaptation, Resilience & Biodiversity	Completed a Multi-Hazards Assessment to identify the main hazards and vulnerability to critical campus infrastructure Initiated the development of a Climate Adaptation, Resiliency and Biodiversity Strategy Plan (SCARP Student Project)

Key Priority FY 23 Actions

Scope Area	Action
Buildings	Update/clarify UBCO Green Building Guidelines/Policy (e.g., UBCO Green Building Plan) Reduce emissions from refrigerants used in buildings Continue to implement Strategy Energy Management Plan
Energy Supply	Continue to implement Low Carbon Energy Strategy (e.g., Phase 1 of \$3m, 2-year 700kW Air Source Heat Pump project (H Lot)) Anticipated annual reduction 5-10k GJ and 200-500 tCO ₂ e of carbon Continue to implement 10% renewable natural gas (RNG) supply
Commuting	Implement the UBC Okanagan Transportation Plan (e.g., continue E-Bikes/E-Scooters & faculty/staff ProPASS subsidy)
Food Systems	Scale up community-driven food procurement partnerships (e.g., local Land to Table Network, Okanagan Tree Fruits) Continue to advance zero food waste actions Launch Community Security Food Hub
Waste & Materials	Deliver community engagement programs/education to improve separation of waste streams on campus
Embodied Carbon	Co-Lead (Vancouver & Okanagan) an Embodied Carbon Policy Review to establish a baseline and cost-effective strategies to effectively achieve UBC's embodied carbon targets tailored to each campus
Outreach & Engagement	Tailor and implement UBC's 'Take Climate Action' social media campaign at UBCO Develop new and expanded climate and sustainability communications and engagement programs for high impact audiences to amplify climate action engagement at UBCO (i.e., work with student clubs/groups to recruit, launch and promote CAP initiatives, update websites) Scale up existing Green Labs programs targeting energy and waste reduction
Adaptation, Resilience & Biodiversity	Develop procedures and protocols for facility managers in response to increased summer temperatures, decreased outdoor air quality/wildfire smoke for new and existing buildings (ongoing) Undertake Phase 2 of Multi-Hazard Assessment (Resiliency Plan for Campus Infrastructure) Develop a Climate Adaptation, Resiliency and Biodiversity Strategy Plan (SCARP Student Project) Review for update existing guidelines and plans that support climate adaptation and resiliency (e.g., wildfire plans)

Appendix A – Detailed CAP Implementation Progress to date (short term actions)

Complete	Active	Reduced/Deferred	Not Started
Scope Area	Action	Status	Progress Details
Buildings	Eliminate fossil fuel equipment installation in new and existing buildings (except back-up)		UBCO Technical Guidelines updated.
	Update UBC LEED v4.1 Implementation Guide		Provides Okanagan campus specific guidance for project teams to optimize LEED credits and align with relevant UBCO policies.
	Reduce emissions from refrigerants used in buildings.		Conducting research to replace high GHG impact refrigerants
	Develop Okanagan climate-specific building performance targets.		Proposed targets to be approved
	Update UBCO Whole Systems Infrastructure Plan (WSIP 2016).		Future update to reference UBCO CAP 2030, Green Building Requirements, Low Carbon Energy Strategy and new Building Performance Targets.
	Update UBCO Green Building Guidelines/Policy (UBCO Green Building Action Plan)		Scoping underway.
	Continue to implement institutional building performance requirements in UBCO's Design Guidelines' Green Buildings requirements.		
Energy Supply	Update UBC Technical Guidelines for compatibility with UBCO Low Carbon Energy Strategy		Updated
	Implement Low Carbon Energy Strategy (By 2024 & By 2030)		FY21/22: Developed LCES and implemented Air Source Heat Pump Project (below)
	Implement Phase 1 Air Source Heat Pump (ASHP) 700 kW Project. (By 2024 & By 2030)		FY22/23: Secured \$3m funding for project
	Implement SEMP (By 2024 & By 2030)		FY21/22: Saved over 665,000 kWh and 2,800 GJ of energy and reduced emissions by 146tCO ₂ e/year
	Implement 10% renewable natural gas (RNG) supply		FY21/22: Purchased 4,000 GJ RNG; reduced carbon offset liability by 200 tCO ₂ e
Fleet	Continue to plan and report on action related to fleet through the provincially mandated Climate Change Accountability Report (CCAR) process.		Reporting ongoing, procurement of green fleet on a voluntary basis
Carbon Pricing	Pilot UBC Internal Carbon Pricing Policy Guidelines		TBD
Commuting	Complete UBCO Transportation Plan (2021) (New Action)		UBCO Transportation Plan completed.
	Promote sustainable transportation. (By 2024 & By 2030)		FY22/23: Launched Staff/Faculty ProPASS pilot - Employer subsidy increased from 15% to 50% effective August 2022
	Develop policies, targets and tools that enable and support departments in incorporating teleworking, flex days and e-learning on an ongoing basis. (By 2024 & By 2030)		FY22/23: Hybrid working trialed/initiated by many departments 2022
	Implement a "Sustainable Transportation Levy" to support sustainable transportation programming. (By 2024 & By 2030)		FY22/23: Sustainable Transportation Levy on Parking established
	Improve the cycling experience to support more cycling trips to and from campus. (By 2024 & By 2030)		FY22/23: Launched e-bike pilot program; expanded to 2-year term with 2 operators (SPIN & LIME) - UBCO ridership accounted for 52% total City of Kelowna users * Expanded to 2-year term with 2 operators (SPIN & LIME) - Offered GoByBike Week
	Continue to enable the widespread adoption of Zero Emission Vehicles (By 2024 & By 2030)		FY21/22: Currently offer 14 EV charging stations
Food Systems	UBCO-O CAP Food Baseline Project Report		* Food procured = 1,500 tCO ₂ e (July 2019-June 2021) making food the 4th largest contributor to UBCO Campus GHG emissions. - Beef products accounted for 41% total GHG's and 2% of the

			<p>food inventory mass.</p> <ul style="list-style-type: none"> - Beef had the highest GHG's per dollar spent, making its reduction one of the most cost-effective opportunities. - Plant-based meat alternatives emit 3% of the GHG's of beef per dollar.
	Foster partnerships to enhance community driven food procurement, security and transparency (By 2030)		FY21/22: Early Implementation - Scale up community-driven food procurement partnerships (e.g., local Land to Table Network, Okanagan Tree Fruits) (2022-23)
	Continue to advance zero food waste actions at the Pritchard Dining Hall Facility at the UBCO Nechako Residence and Commons Block. (By 2030)		FY21/22: Early Implementation - Pritchard has completely eliminated single use plastic
	Develop Physical Food Hub at UBCO (2021-22) (New Action)		<ul style="list-style-type: none"> * Completed and underway - Envisioning a Physical Food Hub - Launching Partnerships - Pilot programs
	Offer Plant-Based Options at Every Station in Pritchard, in addition 2 stations are vegan-only. (New Action)		
Business Air	Initiate a Sustainable Travel Program to develop behavioural change programming and awareness campaigns around travel impacts and alternatives.		Currently in development at the Vancouver campus only
	Conduct 'Reducing Greenhouse Gas Emissions from UBC Intercampus Air Travel' SEEDS Study		<ul style="list-style-type: none"> * Intercampus air travel accounts for 17% of UBC's total air travel in 2019 * Post-Covid air travel preference is to increase virtual meetings * Results informing policy development (underway).
	Continue to support Zoom and MSTeams as alterative meeting and collaboration options.		Ongoing
Waste & Materials	Identify and implement high impact Green Labs Programs that target waste reduction.		In progress
	Increase the volume of organics captured from the landfill and recycling waste streams.		Implementation of collection receptacles are in all SHHS buildings
	Reduce volumes of waste on campus. (By 2024)		FY22/23: Implementation of discrete actions based on existing resources
Embodied Carbon	Develop clear guidance for embodied carbon Life Cycle Assessment (LCA) studies for new buildings and renewals, potentially including an early embodied carbon reduction target.		Completed by Vancouver campus, needs to be socialized at UBC Okanagan
	Develop guidance for reducing embodied carbon in UBC buildings.		<ul style="list-style-type: none"> * ICI project piloted whole building LCA to evaluate low embodied carbon options and savings. ICI will achieve a minimum 10% embodied carbon reduction (building structure/envelope) and is targeting LEED v4 Building Lifecycle Impact Reduction credit. * New consultancy to begin Sept 2022 (Vancouver & Okanagan leads)
	Update the method for campus level reporting on embodied carbon emissions.		
Outreach & Engagement	Review/adapt UBCV's plan to track, support, and coordinate the implementation of CAP-related engagement and outreach programming.		
	Co-develop/adapt UBCV's climate action communications, engagement and outreach model for both targeted and campus-wide audiences.		Adapted UBCV social media campaign (September - December 2022)
	Adapt cross-campus climate action campaign management model for university-wide CAP 2030 campaigns to guide engagement and outreach campaign implementation.		
	Develop UBCO community engagement/ behavioural change strategies for climate action based on lessons learned from COVID-19.		Study completed. Implementing findings in community engagement programs.

	Amplify climate action engagement at the UBCO Campus. (By 2024)		<p>FY21/22:</p> <ul style="list-style-type: none"> * Established UBCO CAP Implementation engagement working group (staff, faculty and students). * Developed/hosted Climate/Justice Teach-In event. * Partnered with HR to develop Sustainability/CAP new employee engagement module (Canvas). * Partnered with Student Experience Office to develop new student orientation sustainability/CAP engagement content (Sustainability 101).
Adaptation, Resilience & Biodiversity	Develop procedures and protocols for facility managers in response to increased summer temperatures, decreased outdoor air quality/wildfire smoke for new and existing buildings.		
	Amend UBCO Technical Guidelines to perform thermal comfort modeling of new buildings based on 2050 climate files.		
	Undertake a Multi-Hazards Assessment to identify the main hazards and vulnerability facing critical campus infrastructure, teaching and research continuity.		Underway
	Continue to implement Low Carbon Energy Strategy.		
	Continue to implement and build on campus-scale water, ecological landscape and biodiversity recommendations in the WSIP.		Presently limited to environmental assessments/ESA mapping required for new capital and land use projects. Scoping a Campus Ecological Report update.
	Review and plan to update existing guidelines and plans that support climate adaptation and resiliency (e.g., wildfire plans).		Under review
	Tailor, expand and implement UBC's Climate Ready Building Requirements for new construction at the Okanagan campus.		Currently referencing UBCV's and under review
	Develop a Climate Adaptation, Resiliency and Biodiversity Strategy Campus Plan. (By 2024)		FY21/22: Early implementation