

UBC sustainability



2013 ISCN-GULF Sustainable Campus Charter Report

University of British Columbia
Vancouver Campus

2012/2013 Fiscal Year



a place of mind

THE UNIVERSITY OF BRITISH COLUMBIA

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Letter from the President

On behalf of the University of British Columbia, it is my pleasure to present our 2012-13 UBC Sustainability Annual Report. This report highlights our achievements in both academic and operational sustainability practices and our commitment to integrate these efforts over the past fiscal year.

As a large, research-intensive university with considerable land, assets and utilities, UBC realizes it can take action in ways that others cannot by advancing debates, technologies, instruction, and discoveries that support a more sustainable future both on and off campus. We are committed to transforming the entire university into a living laboratory – a societal test-bed for sustainability where campus community members test, study, teach, apply and share lessons learned, and where sustainability technologies are created and policies developed. We are also building and strengthening our partnerships with private, public and civil society sector organizations to help us share and apply our knowledge beyond the campus, enabling the University to work in tandem with those partners as an agent of change to address pressing sustainability challenges.

Our achievements to date are built on more than 20 years of incorporating sustainability into campus operations, research, and teaching. Using the campus as a living laboratory, UBC is currently investing \$150 million in four major projects to meet our climate and sustainability goals: a Continuous Optimization program for 70 core academic and ancillary buildings; the Centre for Interactive Research on Sustainability; a Bioenergy Research and Demonstration Facility; and the conversion of our steam district energy system to hot water, one of the largest projects of its kind in North America.

We're proud of the great strides made this year towards achieving our sustainability goals; in 2012-13 alone we were recognized with 14 provincial, national and international awards for our leadership in sustainability. We will continue to challenge ourselves in ways that benefit our community members here at home and around the world. And we remain steadfast in our goal: to provide substantial momentum to a global push towards a more civil and sustainable society.



Stephen J. Toope
President and Vice-Chancellor
The University of British Columbia

1. Introduction



About UBC

The University of British Columbia (UBC), established in 1908, is one of Canada's leading research universities and is consistently ranked among the top 40 in the world. UBC is a public institution with a \$2 billion annual operating budget. In 2012-13, UBC received over \$519 million in research funding from all sources, supporting a total of 8,158 projects. More than 400 hectares in size, our Vancouver campus is located at the western tip of the Point Grey Peninsula in the City of Vancouver in British Columbia, Canada. The campus has been located on this site for most of its 100 year history on land that is traditional territory of the Musqueam people.

The Vancouver campus educates more than 49,000 undergraduate and graduate students each year in hundreds of academic programs offered through our 12 Faculties and 14 Schools. Our students come from around the world, representing 140 different countries. UBC is one of the largest employers in the Province of BC, employing over 13,000 staff and faculty FTEs, and has a significant economic impact on the region and Province as a hub of research and innovation. UBC also has a vibrant, sustainable, residential community, where over 19,000 students, faculty, staff, and other residents live, work and learn together.

University Governance

UBC's two major campuses are governed by a single Board of Governors, a President, and two Senates (one at each campus) whose activities are coordinated by a Council of Senates. UBC's Board of Governors is comprised of 21 members. By legislation, the Board is responsible for the management, administration and control of the property, revenue, business and affairs of the University, including the appointment of senior officials and faculty on the recommendation of the President. Under the terms of the British Columbia University Act, academic governance is vested in the Senate. Executive officers and management (including the President, Chancellor, Deputy Chancellor & Principal UBC Okanagan, seven Vice Presidents, and associated systems)

provide general supervision and direction of the business and academic work of the University, in accordance with, and to effectively implement, the strategic framework and oversight directions of the Board of Governors and the Senates.

About Sustainability at UBC

UBC has a [strong track record](#) in both academic and operational sustainability. In 1997, UBC was the first Canadian university to adopt a sustainable development policy and, a year later, to open a Campus Sustainability office. In 2007, we met our Kyoto targets for academic buildings—five years early and in spite of growing our building floor space by 35 percent and enrolment by 48 percent. In 2010, our [Climate Action Plan](#) committed the University to aggressive greenhouse gas emission reduction targets—33 percent by 2015, 67 percent by 2020, and 100 percent by 2050, compared to 2007 levels.

In 2009, UBC’s Strategic Plan, [Place and Promise](#) included sustainability as one of nine key commitments, embedding sustainability into the University’s strategic direction and committing UBC to explore and exemplify all aspects of economic, environmental and social sustainability.

In 2010, the [UBC Sustainability Initiative \(USI\)](#) was established and began its ground breaking work on deeply integrating UBC’s academic and operational efforts in sustainability across the campus. Under the USI umbrella, many UBC offices, committees and groups work collaboratively under two cross-cutting themes: campus as a living laboratory and the University as an agent of change.

UBC has produced [annual reports](#) on sustainability activities and performance metrics since 1998. The Sustainability Annual Report is presented to the Board of Governors, and key performance indicators are also included as part of UBC’s Place and Promise Reports, in addition to climate reports prepared for the Province as required under the Carbon Neutral Governmental Regulation. In 2011, UBC received [Canada’s first Gold rating in STARS](#) (Sustainability Tracking, Assessment & Rating System), a comprehensive university sustainability rating system.

About this Report

UBC’s 2013 ISCN-GULF Sustainable Campus Charter Report provides a summary of sustainability achievements and progress at UBC’s Vancouver campus for fiscal year 2012-13, provides a discussion of our management approach in relation to ISCN Charter Principles and serves as our first Charter Report submitted to the [International Sustainable Campus Network](#). For additional details on UBC’s sustainability initiatives, goals, and performance, please read the full [2013 UBC Sustainability Annual Report](#).

For questions on this report, please contact:

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2. Summary Report

UBC Sustainability activities over the past year have contributed to the integration of academic and operational sustainability on campus and have led to progress on two UBC cross-cutting sustainability goals: i) to turn our campuses into living laboratories for sustainability; and ii) to consolidate UBC's role as an agent of change for sustainability in the community. The following are highlights of our achievements and a summary of UBC's sustainability goals, targets, and progress on our strategic priorities over the past 2012-13 fiscal year. Additional detail on performance outcomes are explained in more detail in the full [2013 UBC Sustainability Annual Report](#).

Achievement Highlights

Academic Sustainability

- The Teaching and Learning Office (TLO) continued to focus on UBC's curriculum evolution through the USI [Teaching and Learning Fellowship Program](#) and the Spotlight Program. Additionally, the TLO supported departments across the University in their sustainability work, improving cross-Faculty communications and understanding.
- Our [Research Fellowships Program](#) helped build interdisciplinary sustainability research capacity on campus, and started to define a campus-wide sustainability assessment framework or "lens" for campus infrastructure and development projects.

Operational Sustainability

- September 2012 marked the official opening of UBC's [Bioenergy Research and Demonstration Facility](#), the first biomass gasification co-generation facility of its kind in the world. The pioneering \$34-million clean energy facility will eliminate 9 per cent of campus GHG emissions and generate enough clean electricity to power 1,500 homes.
- As part of the Academic District Energy System (ADES) Upgrades, we completed Phases 2 and 3 of one of the largest [steam to hot water conversions](#) in North America, installing 4.7 km of piping and connecting 18 buildings totalling 100,000 m² to the district energy system. When finished, the project will replace 14 km of aging steam piping infrastructure, and connect 800,000 m² of building floor space to reduce GHG emissions by 22 per cent and save \$5.5 million a year in operational and energy costs.
- As part of the Continuous Optimization "[Building Tune-Up](#)" program to enhance energy efficiency in over 70 buildings across campus to reduce GHG emissions by 10 per cent, implementation began on the 17 most energy-intensive laboratory buildings in Phase 1, totalling 198,000 m², and investigation began on over 50 more buildings in Phases 2 and 3.

- UBC and the [University Neighborhoods Association \(UNA\)](#) completed a [Community Energy & Emissions Plan \(CEEP\)](#) for the [UTown@UBC](#) residential community, which will complement the [Climate Action Plan](#) for the academic campus and outline strategies for a low-carbon future for UBC's residential community.
- UBC's [Housing Action Plan](#) for the Vancouver campus was approved in September 2012 by the UBC Board of Governors. Implementation of the plan has begun and will result in an increase in housing choice and affordability for faculty, staff, and students at UBC.

Integration, Communications and Engagement

- The [Campus as Living Laboratory \(CLL\)](#) initiative was expanded to include UBC mixed-use capital projects, including the Ponderosa Commons and the proposed Orchard Commons. The CLL also grew to include the deployment of [electric vehicle charging stations](#) on campus. The opportunity assessment process or "pipeline" was upgraded to include more rigorous cost-benefit and risk analyses of prospective partners and projects.
- In 2012, UBC's sustainability leadership was recognized with 14 provincial, national, and international [sustainability awards](#), including the Excellence in Integration Award from the International Sustainable Campus Network, recognizing UBC's achievements in integrating operational and academic sustainability across campus, and APPA's inaugural Sustainability Award, recognizing UBC's comprehensive campus sustainability achievements.
- In 2012, UBC initiated the development of a Campus Sustainability Engagement Strategy, which will outline the University's approach for engaging campus community members to reduce energy use, GHG emissions, water, and waste generation.

Performance Summary

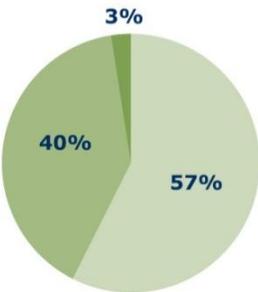
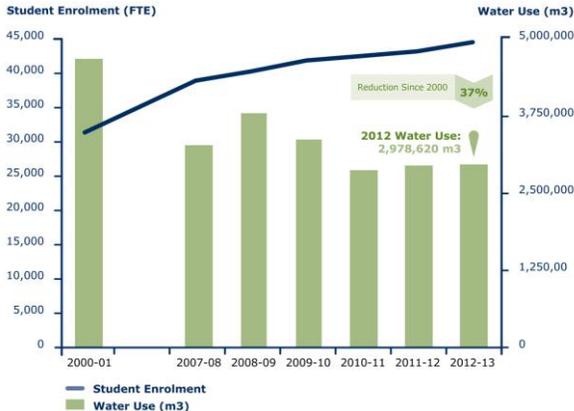
The following table provides a summary of UBC’s sustainability goals, targets and progress on our strategic priorities over the past year.

Goals & Targets	2012-13 Highlights	2012-13 Performance	Trends
Academic Sustainability			
<p>Teaching & Learning:</p> <p>Provide an overall framework for sustainability education at UBC.</p> <p>Build the capacity of UBC’s teaching community to deliver outstanding sustainability learning opportunities.</p> <p>Educate UBC students to be the next generation of sustainability leaders.</p> <p>Coordinate sustainability teaching and learning across UBC’s Vancouver campus.</p>	<p>Curriculum Changes</p> <ul style="list-style-type: none"> Revised the student sustainability attributes document Awarded four \$5,000 Spotlight Grants Developed a sustainability pathway in the Department of Biology curriculum <p>Engaging Students</p> <ul style="list-style-type: none"> Ongoing use of the Sustainability Education Resource Centre at CIRS Launched the Sustainability Ambassadors Peer Program 10 UBC graduate students participated in the UBC-City of Vancouver Greenest City Scholars program <p>Outreach & Communications</p> <ul style="list-style-type: none"> Delivered the UBC Sustainability Reads program Published the Sustainability Education Newsletter 	<p>Faculty engaged in sustainability research: 14.5% of total faculty (2011/12); 725 out of 5,000</p> <p>Sustainability focused courses: 139; 2% (of total courses)</p> <p>Sustainability related courses: 472; 7% (of total courses)</p> <p>These metrics are applicable to Teaching & Learning as well as Research & Partnerships</p>	<p>Research & Courses</p> <p>n/a (this is the first year this data was collected)</p>

Goals & Targets	2012-13 Highlights	2012-13 Performance	Trends
<p>Research & Partnerships:</p> <p>Leverage UBC’s research expertise to create interdisciplinary partnerships that contribute to the achievement of UBC’s and UBC partners’ sustainability objectives.</p> <p>Develop a sustainability "lens" to evaluate the sustainability attributes and performance of prospective projects on campus.</p> <p>Institutionalize the concept of a sustainability "gradient" to improve UBC’s overall sustainability performance relative to past or ongoing projects.</p>	<ul style="list-style-type: none"> Identified interdisciplinary sustainability research opportunities Continued interdisciplinary research in CIRS Awarded several grants for developing a sustainability assessment framework for the neighbourhood scale Began development of a UBC Sustainability Gradient Process with operational group decision makers 	See above	n/a (this is the first year this data was collected)

Operational Sustainability

<p>Energy & Emissions:</p> <p>Reduce greenhouse gas emissions and be a net positive energy campus.</p> <p><u>Target:</u> 33% reduction from 2007 levels by 2015</p>	<p>Buildings:</p> <ul style="list-style-type: none"> Continued the Building Tune-up program in over 70 buildings Opened new, more energy efficient University Data Centre Opened 2 new LEED Gold buildings on campus Updated design standards with new energy efficiency requirements <p>Operational Fleet & Travel:</p> <ul style="list-style-type: none"> Updated Fleet Plan for centrally managed fleet Registered for E3 certification 	<p>Absolute Campus GHG emissions: 60,715 tCO₂e</p> <p>GHG emissions per student: 1.42 tCO₂e/ student FTE</p>	<p>Absolute Campus GHG emissions</p> <table border="1"> <caption>Absolute Campus GHG emissions Data (2007-2012)</caption> <thead> <tr> <th>Year</th> <th>Absolute GHG Emissions (tCO₂e)</th> <th>Total Floor Space (m²)</th> <th>Student Enrolment</th> </tr> </thead> <tbody> <tr> <td>2007</td> <td>~55,000</td> <td>~1,300,000</td> <td>~14,000</td> </tr> <tr> <td>2008</td> <td>~58,000</td> <td>~1,350,000</td> <td>~14,500</td> </tr> <tr> <td>2009</td> <td>~55,000</td> <td>~1,350,000</td> <td>~14,500</td> </tr> <tr> <td>2010</td> <td>~52,000</td> <td>~1,350,000</td> <td>~14,500</td> </tr> <tr> <td>2011</td> <td>~65,000</td> <td>~1,400,000</td> <td>~15,000</td> </tr> <tr> <td>2012</td> <td>60,715</td> <td>~1,450,000</td> <td>~15,500</td> </tr> <tr> <td>2015 (Target)</td> <td>39,875 (33% reduction)</td> <td>~1,500,000</td> <td>~16,000</td> </tr> </tbody> </table>	Year	Absolute GHG Emissions (tCO ₂ e)	Total Floor Space (m ²)	Student Enrolment	2007	~55,000	~1,300,000	~14,000	2008	~58,000	~1,350,000	~14,500	2009	~55,000	~1,350,000	~14,500	2010	~52,000	~1,350,000	~14,500	2011	~65,000	~1,400,000	~15,000	2012	60,715	~1,450,000	~15,500	2015 (Target)	39,875 (33% reduction)	~1,500,000	~16,000
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Goals & Targets	2012-13 Highlights	2012-13 Performance	Trends
<p>Water: The goal & target are currently under development, as part of the Water Conservation Action Plan.</p>	<ul style="list-style-type: none"> Purchased 5 electric-drive Smart cars and 2 e-bikes for central fleet <p>Energy Supply:</p> <ul style="list-style-type: none"> Opened the new Bioenergy Research and Demonstration Facility Signed an agreement with FortisBC to purchase renewable natural gas Completed Phases 2 and 3 of the Academic District Energy System steam to hot water conversion project <ul style="list-style-type: none"> Added new water efficiency provisions for residential construction Initiated replacement of once through cooling equipment in 3 water-intensive labs Completed a 5-year building retrofit and update schedule for student housing water fixtures 	<p>Campus Energy Sources by GJ: see chart</p> <p>Absolute water use: 2,978,620 m³</p> <p>Water use intensity: 69.5 m³/ student FTE</p>	<p>Campus Energy Sources by GJ (2012)</p>  <p>Absolute Water Use</p> 

Goals & Targets

2012-13 Highlights

2012-13 Performance

Trends

Materials & Waste:

Reduce waste disposal, helping UBC transform into a zero waste community.

Target: [DRAFT]
Increase UBC's overall waste diversion rate to 70 per cent by 2016.

Materials & Products Selection

- Launched UBC BuySmart
- Launched UBC Sustainable Food Guide
- Finalized the Green Cleaning Program

Waste Diversion

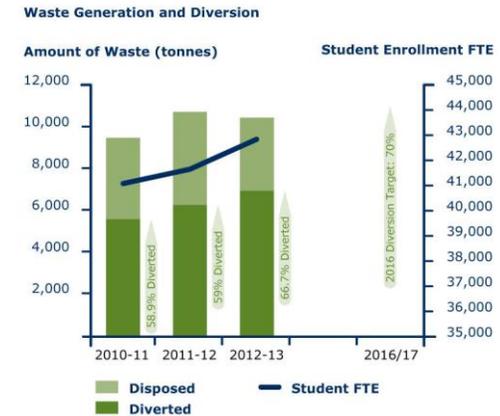
- Conducted Zero Waste pilot projects
- Reduced total hazardous waste generation by 8 per cent through the Green Research Program
- Developing the Sort it Out program

Total waste generated:
10,414 tonnes

Total waste generated per student:
0.24 tonnes/ student FTE

Overall diversion rate:
67%

Total Waste Generated & Diversion Rate



Commuting & Getting Around Campus:

Reduce automobile trips to and from campus and ensure UBC is a pedestrian and cycling friendly campus.

Target: New targets are currently under development as part of the new Transportation Plan.

Driving

- Removed 199 parking spaces
- Implemented traffic calming and safety improvement measures on 16th Ave

Transit

- Optimized a revised community shuttle route
- Continued to promote advancement of rapid transit to UBC
- 89% of all eligible students were issued a U-Pass

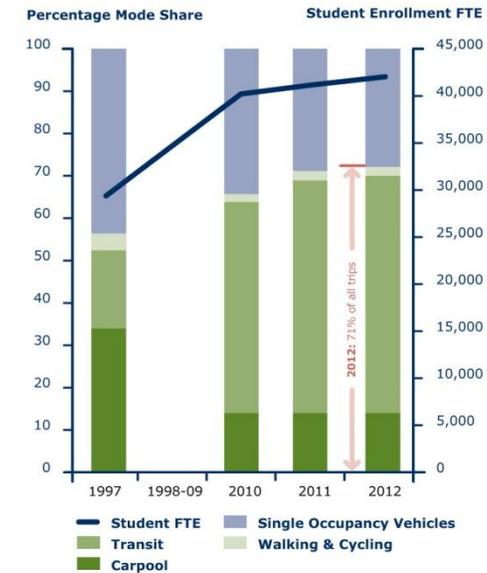
Walking & Cycling

- Opened the new Chemistry/Physics secure bike parking facility

Mode share:

71% of trips by SOV, transit, carpool, cycle & walking

Mode Share



Goals & Targets	2012-13 Highlights	2012-13 Performance	Trends
	<ul style="list-style-type: none"> Continued implementation of the campus pedestrianization plan Launched the UTown@UBC Walk'n Roll to School Program 		

Housing & Amenities	Housing	2012-13 Performance	Trends																		
<p>Increase housing choice and affordability on campus and provide quality amenities.</p> <p><u>Targets:</u> (aspirational maximums)</p> <p>Student Housing: Aspire to provide capacity to house up to 50% of full time students.</p> <p>Faculty & Staff Housing: Aspire to build up to 30 per cent of all new housing on campus as rental, subject to market demand.</p>	<p>Housing</p> <ul style="list-style-type: none"> Approved the Housing Action Plan and the Gage Precinct Plan Completed Phase 1 of Ponderosa Commons, adding 600 new student beds Initiated implementation of several Housing Action Plan actions <p>Amenities</p> <ul style="list-style-type: none"> New childcare facilities are under construction on campus, adding 41 more childcare spaces Completed 2 new parks and a children's play area in neighbourhoods Opened the first campus skatepark in North America Opened the newly relocated and expanded University Hill Secondary School 	<p>Student beds: 9,432 beds, providing capacity for 28% of 2010 full time students</p> <p>Rental units: 21.6% of neighbourhood units</p> <p>Amenity space: 44.3 m² per capita - academic and neighbourhood population combined</p> <p>Child care: 573 UBC-run child care spaces</p>	<p>Student Housing</p> <table border="1"> <caption>Student Beds (% of 2010 F/T Students)</caption> <thead> <tr> <th>Year</th> <th>Percentage</th> </tr> </thead> <tbody> <tr> <td>2010</td> <td>~25%</td> </tr> <tr> <td>2011</td> <td>~26%</td> </tr> <tr> <td>2012</td> <td>28%</td> </tr> <tr> <td>Aspirational Target</td> <td>50%</td> </tr> </tbody> </table> <p>Neighbourhood Housing</p> <table border="1"> <caption>Percentage of Neighbourhood Units</caption> <thead> <tr> <th>Year</th> <th>Percentage</th> </tr> </thead> <tbody> <tr> <td>2010</td> <td>~20%</td> </tr> <tr> <td>2011</td> <td>~19%</td> </tr> <tr> <td>2012</td> <td>21.6%</td> </tr> </tbody> </table>	Year	Percentage	2010	~25%	2011	~26%	2012	28%	Aspirational Target	50%	Year	Percentage	2010	~20%	2011	~19%	2012	21.6%
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Goals & Targets	2012-13 Highlights	2012-13 Performance	Trends
Communications & Engagement			
<p>Communications</p> <p>Extend understanding of UBC as a world leader in sustainability.</p> <p>Empower the UBC community to tell the University's sustainability stories.</p> <p>Link target audiences with sustainability resources and opportunities.</p>	<ul style="list-style-type: none"> • Recognized with 14 provincial, national and international awards • 48 feature stories appeared in local, national and international media outlets • Delivered 37 international, national and local presentations • Involved with the International Baccalaureate Summer Conference • Organized a 2-day Regenerative Neighborhoods Summit • Provided over 85 tours of CIRS, the BRDF and UBC sustainability locations • Created a visual identity for sustainability across the university • Upgraded the UBC Sustainability website 	Not applicable	Not applicable

Goals & Targets	2012-13 Highlights	2012-13 Performance	Trends																				
<p>Engagement Programs</p> <p>Foster a culture of sustainability across campus and encourage high impact resource conservation behaviours.</p> <ul style="list-style-type: none"> Ongoing development of Campus Sustainability Engagement Strategy Engaged more than 3,100 first year students in the 3rd annual Do it in the Dark competition Trained 13 new staff Sustainability Coordinators and awarded 6 departmental sustainability grants Engaged researchers in 3 energy-intensive lab buildings in the 3rd annual Shut the Sash competition Completed the 13th year of the SEEDS program 			<p>Campus Engagement Programs</p> <table border="1"> <thead> <tr> <th></th> <th>2009/10</th> <th>2010/11</th> <th>2011/12</th> <th>2012/13</th> </tr> </thead> <tbody> <tr> <td># of staff Sustainability Coordinators</td> <td>150</td> <td>150</td> <td>110</td> <td>80</td> </tr> <tr> <td># of SEEDS program participants (students, staff, faculty)</td> <td>627</td> <td>610</td> <td>503</td> <td>507</td> </tr> <tr> <td># of SEEDS program projects</td> <td></td> <td>80</td> <td></td> <td>74</td> </tr> </tbody> </table> <p>Note: The Methodology for tracking these numbers changed in 2012/13 and is more reliable than previous years.</p>		2009/10	2010/11	2011/12	2012/13	# of staff Sustainability Coordinators	150	150	110	80	# of SEEDS program participants (students, staff, faculty)	627	610	503	507	# of SEEDS program projects		80		74
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Integration			
<p>Integration</p> <p>Transform the campus into a living laboratory for sustainability to demonstrate at scale, replicable sustainable practices and technologies.</p> <p>Become a sustainability leader beyond the campus to facilitate dialogue and foster partnerships between the University, industry, government and NGOs.</p>	<ul style="list-style-type: none"> Grew the Campus as a Living Laboratory (CLL) initiative Consolidated a process for developing interdisciplinary research projects Moved several projects from the pilot phase into full implementation CLL initiative expanded a pipeline process to include more detailed net-benefit and risk analyses Expanded research projects through strategic partnerships with industry 	<p>Active CLL projects: 4</p> <p>Total capital expenses for CLL projects: \$76 million</p> <p>UBC capital expenses for CLL projects: \$20 million</p> <p>3rd party funding for CLL projects: \$56 million</p>	<p>Campus As A Living Lab Projects</p> <p>n/a (this is the first year this data was collected)</p>

Context (Vancouver Campus)

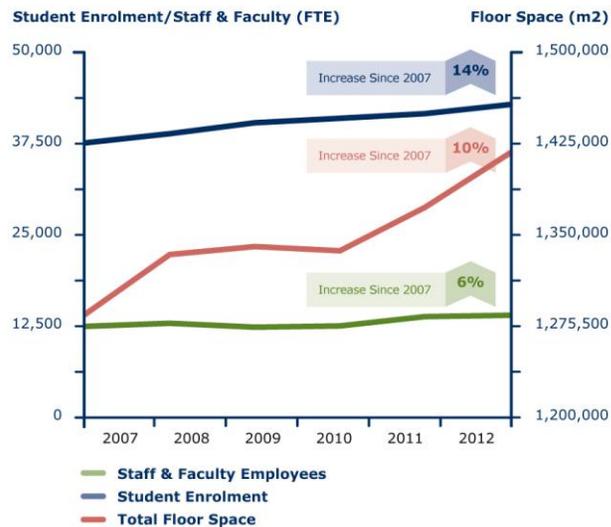
Student, Staff, Faculty & Floor Space

2012-13 Performance

Staff and faculty employees: 13,206 FTE

Student enrolment: 42,848 FTE

Floor space: 1,418,833 m²

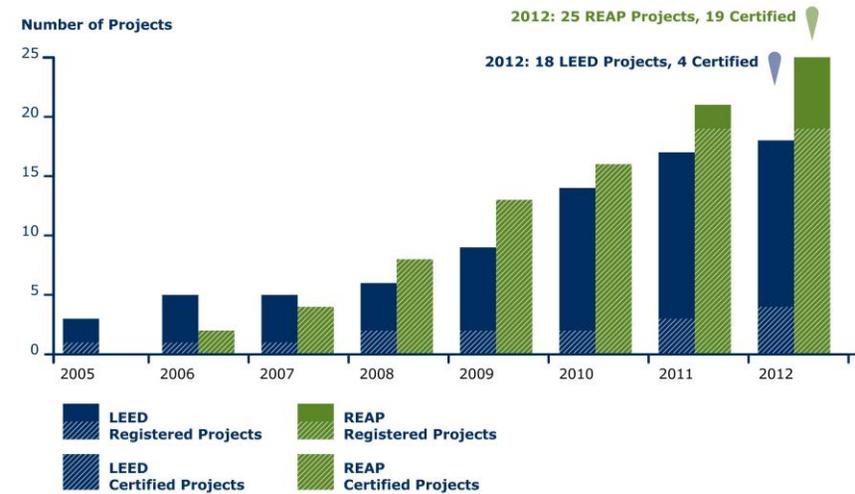


Green Buildings

2012 Performance

Total LEED¹ registered and certified projects: 18
(4 certified, all LEED Gold)

Total REAP² registered and certified projects: 25
(19 certified)



¹ [Leadership in Energy and Environmental Design \(LEED\)](#) is a comprehensive third-party green building rating system. All new construction and major renovations for institutional buildings at UBC must achieve a minimum of LEED Gold certification.

² The [Residential Environmental Assessment Program \(REAP\)](#) is a comprehensive, UBC-specific green building rating system for mandatory application to all residential construction on campus. All new residential buildings at UBC must achieve a minimum of REAP Gold certification.

3. ISCN Charter Alignment

As a signatory to the [ISCN-GULF Sustainable Campus Charter](#), UBC is committed to implementing the Charter's three principles, setting sustainability targets, and reporting regularly to the ISCN on our progress. The following provides a summary of UBC's Management Approach for meeting the ISCN-GULF Charter Principles along with a supporting table that outlines how UBC's sustainability priorities, as reported in the [UBC Sustainability Annual Report](#), correspond to the ISCN Charter Principles.

Principle 1 – Sustainability Performance of Buildings on Campus

Principle 1: To demonstrate respect for nature and society, sustainability considerations should be an integral part of planning, construction, renovation, and operation of buildings on campus.

Building Design & Commissioning

Campus + Community Planning (C+CP) provides regulatory administration for the design and construction of the building on UBC's campus lands. The design of new buildings and major renovations of University-owned institutional buildings is led by Infrastructure Development. Campus Sustainability (CS), Building Operations and Student Housing & Hospitality Services (SHHS) also play key roles. Our green building policies and guidelines for University-owned institutional buildings are included as part of UBC's [Technical Guidelines](#) and [UBC Vancouver Campus Plan Design Guidelines](#). UBC also has a [Residential Environmental Assessment Program \(REAP\)](#) which are guidelines for residential developments at UBC. The green building policies and guidelines are revised on an as needed basis to ensure continual improvement in green building design and construction.

Building Systems Performance

UBC institutional buildings are maintained and operated by Building Operations and student residences are managed by SHHS. Both units are committed to optimizing the performance of building systems on campus. This includes implementing operations and controls strategies, mechanical and water system upgrades and repairs along with preventative maintenance. CS provides advisory support to these units by assisting with the planning and piloting of new initiatives.

Green IT

UBC IT is implementing initiatives that reduce energy demand associated with the operation of IT infrastructure and equipment, identifying ways to promote purchasing of environmentally preferable products as well as reduce paper consumption and e-waste. CS provides advisory support to UBC IT by assisting with the planning of new sustainability initiatives and leading efforts to promote sustainable purchasing of computers and power management.

Materials & Waste

The purchasing of materials and products on campus is not centralized. Payment & Procurement Services (PPS) provides expertise and advice when purchasing goods and services to the campus community. PPS with the support of CS are currently identifying ways to increase purchasing of materials and products that are low carbon, energy efficient, non-toxic, reusable, renewable and/or recyclable. UBC's waste collection is managed by Building Operations. CS works closely with Building Operations and SHHS in planning new sustainability initiatives. The mandate and direction for taking action on what UBC purchases and how we manage waste on campus is defined in UBC's draft [Zero Waste Action Plan](#), which will be completed in 2014.

Engagement Programs

UBC delivers award-winning engagement programs to build awareness and enable individuals to exemplify sustainable practices and behaviours on campus. Key programs include: [Sustainability Ambassadors](#), [Sustainability Coordinator Program](#), [Sustainability in Residence](#), [Green Research Program](#) and the [UBC SEEDS Program](#). CS, SHHS, Risk Management Services and PPS play key roles in implementing these programs. UBC is developing a Campus Sustainability Engagement Strategy that will inform how our engagement programs can encourage high-impact resource conservation behaviours which will be completed in 2013.

Principle 2 – Campus Wide Master Planning and Target Setting

Principle 2: To ensure long-term sustainable campus development, campus-wide master planning and target-setting should include environmental and social goals.

Master Planning

C+CP provides the regulatory structure for buildings, infrastructure and spaces on campus lands. UBC's Strategic Plan, [Place and Promise: The UBC Plan](#), together with the [Vancouver Campus Plan](#), [UBC Land Use Plan](#), [Public Realm Plan](#), guide the physical planning of UBC Vancouver and provide the foundation for developing and evaluating proposed physical changes, and help shape the University's form, character, and landscape. UBC's [Development and Building Regulations](#) provide a municipal-like regulatory structure for the development of institutional and non-institutional lands at UBC Vancouver. The [UBC Development Handbook](#) establishes regulations that support the [UBC Vancouver Campus' Neighbourhood Plans](#) by balancing public objectives and development interests.

Energy & Emissions

In 2010, UBC announced our [Climate Action Plan](#), committing the University to aggressive reduction targets for campus-wide greenhouse gas (GHG) emissions – by 33 per cent reduction by 2015, 67 per cent by 2020, and 100 percent reduction by 2050, compared to 2007 levels. Several operating units are responsible for implementing the plan. UBC is investing \$117 million in three major projects that will achieve our target of reducing GHG emissions by 33 per cent by 2015:

- Converting the district heating system from [steam to hot water](#) will reduce emissions by 22 per cent.
- Optimizing academic building performance and improving behaviour change programs through the [Building Tune-Up program](#) will reduce emissions by 10 per cent.
- Generating clean heat and electricity through the [Bioenergy Research and Demonstration Facility](#) will reduce emissions by 9 per cent.

To track progress towards achieving our GHG targets, CS produces an annual [Climate Action Plan Report](#) which includes a detailed GHG inventory. UBC is also developing a [Community Energy and Emissions Plan](#) to identify solutions to reduce emissions from UBC’s residential community.

UBC’s Energy Management Plan is designed to maintain energy savings and identify further electricity and natural gas conservation opportunities and efficiencies. CS and Building Operations update the university’s Energy Management Plan on an annual basis. This plan reviews the current status of energy use and operating costs, sets targets, assess the opportunities, and identifies priority energy conservation initiatives.

Transportation

Transportation Planning works to reduce automobile trips to and from UBC, by promoting more sustainable modes of transportation including transit, carpooling, walking and cycling. The [Strategic Transportation Plan \(STP\)](#) is the guiding document for transportation objectives and initiatives on campus. Moving forward, the updated Transportation Plan (to be complete in 2014) will replace the Strategic Transportation Plan. UBC’s Strategic Transportation Plan in turn informs the development of other transportation related plans, policies and projects.

Principle 3 – Integration of Facilities, Research, and Education

Principle 3: To align the organization’s core mission with sustainable development, facilities, research, and education should be linked to create a “living laboratory” for sustainability.

UBC Sustainability Initiative

UBC has committed, at the corporate level, to the deep integration of our operational and academic efforts in sustainability. The [UBC Sustainability Initiative \(USI\)](#), established in 2010, is the University’s agent in this innovation. USI fosters partnerships and collaborations that extend beyond traditional boundaries of disciplines, sectors and geographies to address the critical issues of our time. The initiative’s work is carried out under two cross-cutting themes: [campus as a living laboratory](#) and the University as an [agent of change](#).

The USI is led by the Associate Provost, Sustainability for the UBC Vancouver campus, and reports directly to a Steering Committee composed of UBC’s Vice President Finance, Resources and Operations; Vice President Research and International; Provost and Vice President

Academic; Dean, Faculty of Applied Science; Dean, Faculty of Science; and a student representative.

The USI is comprised of four groups:

- A central office that oversees all USI efforts including communications and engagement activities and the work of the Centre for Interactive Research on Sustainability.
- A [Teaching & Learning](#) Office that works to leverage and build capacity to enhance sustainability learning opportunities for all UBC students.
- A Research & Partnerships Office responsible, in part, for the Centre for Interactive Research on Sustainability [research](#) program and [partnerships](#).
- A Communications and Community Engagement Office responsible for catalyzing communications and community engagement activities for UBC in the sustainability arena.

The USI is supported by four advisory groups, representing staff, students, faculty and the external community respectively:

- An Operational Management Group comprised of senior administrators from Campus + Community Planning, Infrastructure Development, Building Operations, Payment & Procurement Services, Student Housing & Hospitality Services, and Risk Management Services who come together to address sustainability.
- A [Student Advisory Council](#), with representatives from the undergraduate and graduate student societies, and several of the key sustainability-oriented student groups.
- The six USI Teaching and Learning Fellows and three Research and Partnership Fellows form an informal advisory group on faculty issues.
- A [Regional Sustainability Council](#), consisting of 21 sustainability champions and representatives from private, public and NGO sector organization in the external community.

Within Campus + Community Planning, [Campus Sustainability](#) works closely with the USI, and coordinates UBC's numerous operational sustainability initiatives. USI and Campus Sustainability are co-located in the CIRS building, which provides a central hub on the Vancouver campus to engage with the campus community and facilitate operational sustainability learning and practice.

UBC Sustainability Priorities and ISCN Charter Alignment

The table below illustrates how UBC's sustainability priorities, as organized in the UBC Sustainability Annual Report, correspond to the [ISCN Charter Principles](#). Refer to the Summary Report section for the corresponding details on the 2012-13 achievements and performance.

Priorities	ISCN Charter Principles		
	1) Buildings	2) Planning & Targets	3) Integration
Energy & Emissions			
Buildings	♦	♦	♦
Operational Fleet & Travel		♦	♦
Energy Supply	♦	♦	♦
Water			
The priorities for water are currently under development, as part of the Water Conservation Action Plan.	♦	♦	♦
Materials & Waste			
Materials & Product Selection	♦	♦	♦
Waste Reduction & Reuse	♦	♦	♦
Waste Diversion	♦	♦	♦
Commuting & Getting Around Campus			
Driving		♦	
Transit		♦	♦
Walking & Cycling		♦	♦
Housing & Amenities			
Housing	♦	♦	♦
Amenities	♦	♦	
Engagement			
Engagement Programs	♦		
UBC SEEDS Program	♦	♦	♦
Integration			
Campus as a Living Lab	♦	♦	♦
Community Partnerships			♦