



SUSTAINABILITY

GOAL 2: MAKE UBC A LIVING LABORATORY IN ENVIRONMENTAL AND SOCIAL SUSTAINABILITY BY INTEGRATING RESEARCH, LEARNING, OPERATIONS, AND INDUSTRIAL AND COMMUNITY PARTNERS

Greenhouse Gas Emissions

In 2010, UBC’s Vancouver campus committed to aggressive greenhouse gas (GHG) emission reduction targets to reduce emissions 33 per cent by 2015, 67 per cent by 2020, and 100 per cent by 2050, compared to 2007 levels. Three major projects, outlined in the Climate Action Plan, will achieve UBC Vancouver’s 2015 GHG reduction targets: the Bioenergy Research and Demonstration Facility, Academic District Energy System steam to hot water conversion, and Continuous Optimization. The UBC Okanagan campus’ commitment to achieving carbon neutral operations continues to center on its geo-exchange district energy system and energy retrofits to legacy campus buildings, combined with building occupant engagement through the “Power of You” program.

Under the Greenhouse Gas Reductions Target Act, UBC is also required to submit a Carbon Neutral Action Report to the province each year on emissions and actions taken to reduce emissions. As required by provincial legislation, UBC has purchased offsets for its GHG emissions each year since 2010 to become carbon neutral.

In 2013, UBC continued to demonstrate progress towards achieving our climate action commitments, reducing offsettable GHG emissions by 11 per cent against a 2007 baseline, despite a 16 per cent increase in floor space and 22 per cent increase in student enrollment; relative to student enrolment, we have reduced GHG emissions per full-time equivalent (FTE) student by 27 per cent. For more information and to read the full report, visit <http://sustain.ubc.ca/our-commitment/plans-policies-reports>.

2013 UBC Absolute and Relative Offsettable GHG Emissions, Compared to 2007 Baseline

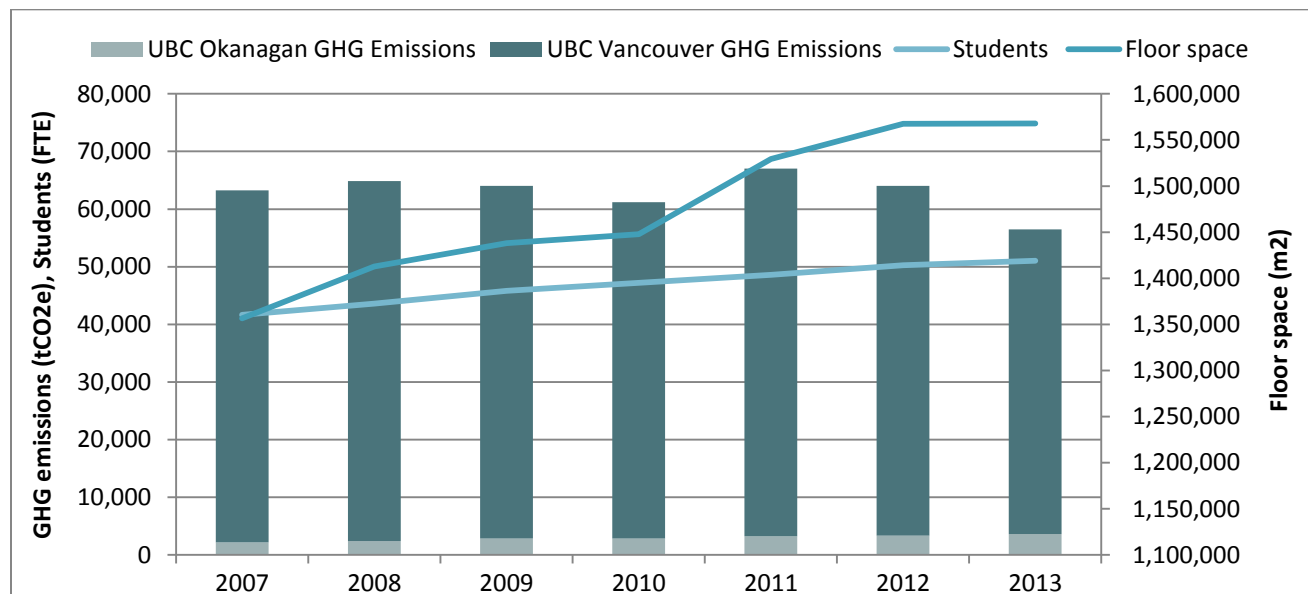
Metric	Okanagan ¹			Vancouver ²			UBC ¹		
	2007	2013	% Change from 2007 ³	2007	2013	% Change from 2007	2007	2013	% Change from 2007
GHG Emissions (tCO ₂ e)	2,186	3,629	+66%	61,082	52,832	-14%	63,268	56,461	-11%
GHG Emissions per student (tCO ₂ e/FTE)	0.53	0.49	-8%	1.62	1.21	-26%	1.52	1.11	-27%

¹ Prior to 2010, emissions data for UBC’s Okanagan campus is available for buildings only. Thus, while 2007 data represented in the above table includes buildings emissions only, 2013 data includes emissions from all in-scope sources.

² UBC’s Vancouver campus reports emissions for core and ancillary buildings, fleet, paper, and 1/11th of TRIUMF.

³ UBC’s Okanagan campus has undergone significant growth since 2007; floor space has increased by 90 per cent and student enrolment has increased by 81 per cent.

UBC Offsettable Emissions and Growth, 2007 to 2013



Teaching, Learning and Research

These metrics provide a snapshot of UBC academic activity related to sustainability.

Metric	2013/14	
	Okanagan	Vancouver
Sustainability Focused Courses	29	110
Sustainability Related Courses	89	399
Total Sustainability Courses	118	509

Note, methodology for course identification is currently under review

By identifying the sustainability focused and related curriculum, UBC can ensure that more of its students have access to courses that will contribute to their developing the attributes they will need in order to understand and contribute to solutions for the complex sustainability issues and challenges faced by our society.

The UBC Sustainability Initiative (USI) asks faculty members annually to self-identify their sustainability-related and sustainability-focused courses. Results of the course review and the faculty consultation are compiled by the USI and made available to students and the general public on the UBC Sustainability website at <http://sustain.ubc.ca/courses-teaching/courses>.

Metric	2010/11	
	Okanagan	Vancouver
Number of faculty engaging in sustainability research	n/a	304
Per cent	n/a	14.5%

Most current data available; inventory currently being updated for 2014 STARS submission

This information comes from UBC's August 2011 STARS report. The Sustainability Tracking, Assessment & Rating System (STARS) is a transparent, self-reporting framework for colleges and universities to measure their sustainability performance.

By conducting research into sustainability issues and by refining theories and concepts, higher education institutions help advance the understanding of sustainability challenges and contribute to the development of new processes, strategies and technologies that address those challenges.

Living Laboratory

These metrics measure the commitment and degree to which UBC is transforming itself into a living laboratory.

Metric	2013/14	
	Okanagan	Vancouver
Number of Active Campus as a Living Lab Projects	3	6
Total Capital Expense for Campus as a Living Lab Projects	n/a	\$81M
UBC Capital Expense for Campus as a Living Lab Projects	n/a	\$21M
3rd Party funding for Campus as a Living Lab Projects	n/a	\$60M

Vancouver

In 2013, six Campus as a Living Lab projects were active (Centre for Interactive Research on Sustainability, Bioenergy Research and Demonstration Facility, Steam to Hot Water Conversion, Continuous Optimization, Energy Storage System, Electric Vehicle Experiment) and garnered a total capital investment of \$81M. UBC's investment in these projects was leveraged with \$60M – a leverage of 3.8x. Leveraging support was provided by the project partners, provincial and federal governments and non-profit agencies.

Okanagan

In 2013, the Okanagan campus renewed its participation in the Campus as a Living Lab initiative in progress on the Vancouver campus. Charged with identifying an appropriate longer-term administrative structure, and initiating pilot projects demonstrating the feasibility of Okanagan campus participation in the Campus as Living Lab initiative, three pilot projects were developed in 2013. The focus of completed and ongoing Campus as a Living Lab projects includes green roof performance, ecological landscaping and campus water systems.

For more information about UBC's sustainability plans, initiatives and reports please visit:

<http://sustain.ubc.ca/our-commitment/plans-policies-reports>

<http://www.ubc.ca/okanagan/sustainability/reports.html>