



2014

Carbon Neutral Action Report



Executive Summary

Camosun has reduced greenhouse gas emissions in 2014 by 18.67% and has achieved a 29% reduction compared to 2010 numbers.

The College has made significant strides to reduce emissions from buildings in 2014 through retrofits of boilers and windows and with our B.C. Hydro Continuous Optimization project, which concluded in 2014. As part of this project and in conjunction with commensurate technology upgrades, we have begun to closely monitor our building energy use at Interurban Campus, and respond with energy saving actions.

In 2014, construction started on our new LEED Gold Centre for Trades Education and Innovation. This project also includes re-purposing the Jack White/John Drysdale Trades Buildings towards a Sustainable Construction and Renewable Energy Innovation Centre, housing Electrical, Pipe Trades, and future Renewable Energy programs.

Camosun has continued to work with the campus community to reduce emissions through behaviour change activities including our “Cut the Carbon Campaign” – details of which are highlighted in this report.

Declaration Statement

This *Carbon Neutral Action Report* for the period January 1st to December 31st, 2014 summarizes our emissions profile, the amount of offsets purchased to reach net zero emissions, the actions we

have taken in 2014 to reduce our greenhouse gas emissions, and our plans to continue reducing emissions in 2015 and beyond.

By June 30, Camosun College’s final *Carbon Neutral Action Report* will be posted to our website at www.Camosun.ca/Sustainability

Camosun College GHG Emissions and Offsets for 2014

GHG Emissions created in Calendar Year 2014

Total Emissions (tCO ₂ e)	1443
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Total Offsets (tCO ₂ e)	1442
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Adjustments to GHG Emissions Reported in Prior Years

Total Emissions (tCO ₂ e)	11
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Total Offsets (tCO ₂ e)	12
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Total Emissions for Offset for the 2014 Reporting Year

Total Offsets (tCO ₂ e)	1454
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Dr. Tom Roemer
VP Strategic Development

May 22, 2015

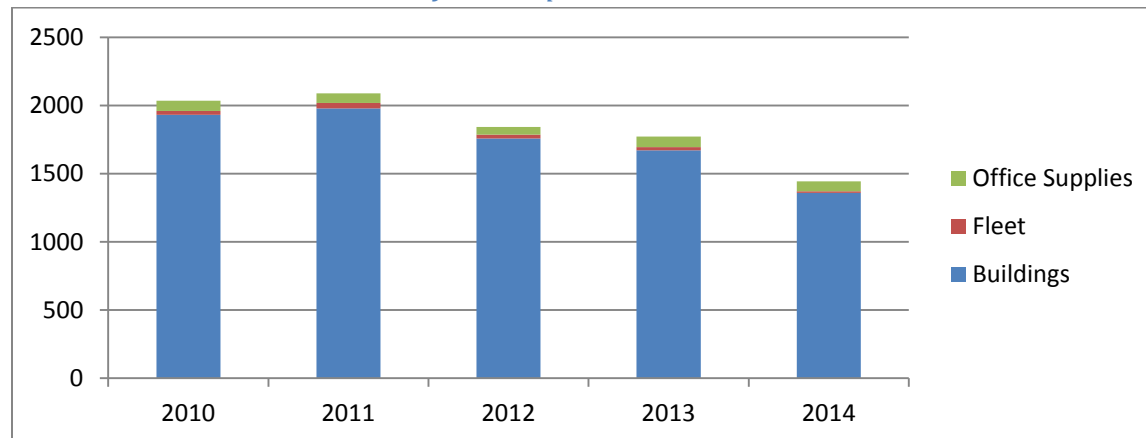
2014 Greenhouse Gas Emissions

Camosun College's greenhouse gas (GHG) emission calculations include emissions from both the Lansdowne and Interurban campuses. The total GHG emissions for the College are 1442 tCO₂e for the 2014 calendar year. From 2013 to 2014, Camosun saw an 18.58% reduction in total emissions, and a 29.11% reduction from 2010 (*baseline used as start of Camosun Energy Project*).

A breakdown of emissions by source and comparison from 2010 levels is provided below.

SOURCE	2010 tCO ₂ e	2011 tCO ₂ e	2012 tCO ₂ e	2013 tCO ₂ e	2014 tCO ₂ e	Percent Change (2013-2014)
Buildings	1932	1978	1758	1671	1359	(18.67%)
Mobile Combustion Fleet	28	39	28	24	12	(50.00%)
Office Supplies	75	72	57	77	72	(6.49%)
Carbon Neutral Exempt	-1	-1	-1	-1	-1	
Total Emissions	2034	2084	1843	1771	1442	(18.58%)
	<i>-Prior Year adjustment (-4 tCO₂)</i>			<i>+Prior Year adjustment (19 tCO₂)</i>		

Tonnes of CO₂ equivalent, 2010 - 2014



Actions toward Carbon Neutrality in 2014

- **Buildings.** In 2014, Camosun saw nearly a 19% reduction in emissions from buildings. One of the biggest contributing factors to this was the detailed energy analysis, monitoring and management of buildings at Interurban (see detail below). Other actions Camosun took to reduce GHG emissions for buildings include:
 - At Lansdowne:
 - The boiler in Fisher building was replaced with high efficiency Condensate Boiler
 - Windows in the Fisher building were replaced with high efficiency windows
 - At Interurban:
 - Camosun concluded the BC Hydro Continuous Optimization Program at the Interurban Campus. Included in this was a building automation system (Direct Digital Control (DDC)) and HVAC hardware and software/programming upgrade to the five main buildings. All buildings have Power Metering Equipment that are now interfaced with the DDC system in five major buildings. These buildings are part of a monthly energy report which reviews usage and provides actions for greater energy efficiency for the next month.
 - We began construction on our 7,432 square metre Centre for Trades Education and Innovation (CTEI) which will be built to LEED GOLD standards and will house a marine and metal trades program.
 - Contributing to building energy consumption at both campuses, both Print Services and the Information Technology Department (ITS) have stipulated that new machinery must be Energy Star compliant.
- **Fleet.** In 2014, Camosun saw its fleet emissions reduced by half. Camosun has a small fleet and, in 2014, two of our most used vehicles for receiving purposes were replaced with smaller, more efficient models.
- **Paper.** Print Services at Camosun College is committed to using recycled products whenever possible for all of its services. Across the college, we have been using and supplying 100% recycled copy paper for several years (due in large part to a 2006 referendum held by the Student Society in which students each pay \$0.15 per month to offset the cost of recycled paper). Today, 94% of Camosun College's office paper is 100% recycled content. Furthermore, 100% of Camosun printers are set to print double-side as default. Efforts to shift from paper-based to digital copies of forms are being made across departments. For example, in 2014 the bookstore cashier at Interurban reduced its paper usage by switching over the way it processed receipts. Additionally, through Print Services, all production waste is evaluated for its reusable possibilities. Reusable items may be repurposed for scratch pads and provided to staff and students free of charge, and paper from non-confidential printing error is shared with Childcare Services for their use as scratch /colouring paper.

Other Actions to Reduce Emissions and Improve Sustainability in 2014

- **Sustainability Plan.** Camosun finalized its first three-year *Sustainability Plan (2014 - 2017)*. The plan will guide Camosun's institution-wide sustainability approach for the next three years. It focuses on integrating sustainability into all teaching and learning, reducing its environmental impacts of the college's operations and governance (including energy conservation and carbon reduction), and engaging students in real-life experiences in sustainability innovation.
- **The 2014 "Cut the Carbon" Campaign** focused on educating staff, students and faculty on ways they can help the college reduce its environmental impact and inspire them to participate in sustainability initiatives on campus including alternative transportation, recycling and energy conservation. Activities included:
 - Launch and implementation of the Camosun Express, a convenient shuttle service operating between the West Shore communities, Interurban, and Lansdowne campuses. Since then, the shuttle has been reliably delivering faculty, employees, and students in an environmentally friendly and efficient way to where they need to go!
 - Recycling Heroes Month: Rampage our Chargers Athletics mascot found recycling heroes throughout the college either reusing their mugs, recycling their paper and plastics, and composting their food scraps and compostable plates and cutlery. Informative tabling demonstrations and prizes were also part of this month.
 - The Nasty November Cycling Challenge marked the fourth year of this initiative to motivate staff and students to ride their bikes as a carbon-friendly travel mode. Rain and wind failed to deter 97 of cyclists from riding more than 9,000 kilometres throughout the month as part of the challenge.
- **Transportation biannual modal split.** The third biannual modal split analysis was completed October 2014, providing the college with essential information to assess the achievement of alternative transportation objectives. Most notable was an increase by 5% of transit mode share from the previous count.
- **Waste reduction.** A multi-year waste reduction project was initiated to increase the college's waste diversion rates. As part of this project, waste audits, education, outreach and a management plan will be developed.

Plans to Continue Reducing Greenhouse Gas Emissions in 2015

- Buildings at Lansdowne have Power Meter Equipment that are interfaced to the DDC system. Currently energy reports are not run on the buildings at the Lansdowne Campus, but this will be initiated in 2015.
- LED lighting upgrade of all parking and pathway lighting at Lansdowne Campus
- We will continue our “Cut the Carbon Campaign” which includes RideShare Month (January); Energy Awareness Month (February), which includes Sweater Day; Walk to Camosun Week (March), and finally, Bike To Work Week in May.
- Association for the Advancement of Sustainability in Higher Education (AASHE) Sustainability Tracking Assessment and Rating System (STARS) project to rank Camosun’s achievement of sustainability based on internationally recognized best practices.
- Facilities and Office of Environmental Sustainability will conduct waste audits, education/information sessions about proper waste sorting, launch a recycling champion office program, and further develop a waste management plan.



2014 Carbon Neutral Action Report (CNAR)

- Part 2 ACTIONS

Organization Name

Camosun College

Actions Taken to Reduce Emissions

1) Stationary Fuel Combustion, Electricity (Buildings): Indicate which actions were taken in 2014:

Performed energy retrofits on existing buildings

Yes

Built or are building new LEED Gold or other "Green" buildings.

Yes

Undertook an evaluation of overall building energy use.

No

Please list any other actions taken to reduce emissions from Buildings:

- a. Boiler replacement in Fisher Building (upgrade to more efficient condensate boiler.)
- b. Fisher windows replacement
- c. DDC Energy reporting and continual actions to reduce emissions at Interurban
- d. Air Filter upgrade in Fisher Building (to MERV 13 rating) uses less energy overall, more efficient system.

2) Mobile Fleet Combustion (Fleet and other vehicles):Indicate which actions were taken in 2014:

Do you have a fleet?

Yes

Replaced existing vehicles with more fuel efficient vehicles (gas/diesel)

Yes

Replaced existing vehicles with hybrid or electric vehicles

No

Reduced the overall number of fleet vehicles

No

Took steps to drive less than last year

Yes

Please list any other actions taken to reduce emission from fleet:

Camosun has a small fleet and, in 2014, two of our most used vehicles for receiving purposes were replaced with smaller, more efficient models.

3) Supplies (Paper):Indicate which actions were taken in 2014:

Used less paper than previous year

Yes

Used only 100% recycled paper

No

Used some recycled paper

Yes

Used alternate source paper (Bamboo, hemp, etc.)

No

Please list any other actions taken to reduce emissions from paper use:

Print Services at Camosun College is committed to using recycled products whenever possible for all of its services. Across the college, we have been using and supplying 100% recycled copy paper for several years (due in large part to a 2006 referendum held by the Student Society in which students each pay \$0.15 per month to offset the cost of recycled paper). Today, 94% of Camosun College's office paper is 100% recycled content. Furthermore, 100% of Camosun printers are set to print double-side as default. Efforts to shift from paper-based to digital copies of forms are being made across departments. For example, in 2014 the bookstore cashier at Interurban reduced its paper usage by switching over the way it processed receipts. Additionally, through Print Services, all production waste is evaluated for its reusable possibilities. Reusable items may be repurposed for scratch pads and provided to staff and students free of charge, and paper from non-confidential printing error is shared with Childcare Services for their use as scratch /colouring paper.

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Actions Taken to Reduce Emissions - continued

Explain how you plan to continue minimizing emissions in 2015 and future years:

- Buildings at Lansdowne have Power Meter Equipment that are interfaced to the DDC system. Currently energy reports are not run on the buildings at the Lansdowne Campus, but this will be initiated in 2015.
- LED lighting upgrade of all parking and pathway lighting at Lansdowne Campus
- We will continue our "Cut the Carbon Campaign" which includes RideShare Month (January); Energy Awareness Month (February), which includes Sweater Day; Walk to Camosun Week (March), and finally, Bike To Work Week in May.
- Association for the Advancement of Sustainability in Higher Education (AASHE) Sustainability Tracking Assessment and Rating System (STARS) project to rank Camosun's achievement of sustainability based on internationally recognized best practices.

- Facilities and Office of Environmental Sustainability will conduct waste audits, education/information sessions about proper waste sorting, launch a recycling champion office program, and further develop a waste management plan.
- Continued and improved energy monitoring with DDC system
- Potential for boiler replacement in other buildings on campus including the Paul Building at Lansdowne

If you wish to list any other "sustainability actions" outside of buildings, fleet, paper and travel check "yes". This reporting is optional.

Yes

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Actions to Promote Sustainability and Conservation - OptionalThe following are actions that fall outside the scope of the Carbon Neutral Government Regulation, but which many organizations still undertake and may wish to report on. This section is optional for reporting.

Business TravelCreated a low-carbon travel policy or travel reduction goal (Low-carbon: Lowest emission of greenhouse gases per kilometre per passenger)

Yes

Virtual Meeting TechnologyInstalled web-conferencing software (e.g., Live Meeting, Elluminate, etc.)

No

Made desktop web-cameras available to staff

No

Encourage alternative travel to meetings (e.g., bicycles, public transit, walking)

Yes

Encourage carpooling to meetings

Yes

Education and AwarenessHave created Green, Sustainability, Energy Conservation, or Climate Action Teams.

No

Provided resources and/or dedicated staff to support these teams

No

Provided behaviour change education/training for these teams (e.g., community-based social marketing)

No

Established a sustainability/green awards or recognition program

No

Support green professional development (e.g., workshops, conferences, training)

Yes

Planning for Cimate ChangeHave assessed whether extreme weather events and/or long term changes in climate will affect our organization's business areas

No

Long term changes in climate have been incorporated into our organization's decision making.

No

Actions to Promote Sustainability and Conservation - Optional (continued)

Staff Awareness and Education Provided education to staff about the science of climate change

No

Provided education to staff about the conservation of water, energy, and raw materials

No

Provided green tips on staff website or in newsletters

Yes

Alternate Work/Commuting Options Allow for telework/working from home

No

Staff have the option of a compressed work week

Yes

Commuting by foot, bicycle, carpool or public transit is encouraged

Yes

Shower or locker facilities are provided for staff/students who commute by foot or by bicycle

Yes

Secure bicycle storage is provided

Yes

Other Sustainability Actions Establish a water conservation strategy which includes a plan or policy for replacing water fixtures with efficient models

No

Put in place a potable water management strategy to reduce potable water demand of building-level uses such as cooling tower equipment, toilet fixtures, etc. and landscape features

No

Have put in place an operations policy to facilitate the reduction and diversion of building occupant waste from landfills or incineration facilities

No

Have implemented a hazardous waste reduction and disposal strategy (Hazardous Waste: E.g., electronics including computer parts and monitors, batteries, paints, fluorescent bulbs)

No

Have incorporated minimum recycled content standards into procurement policy for consumable, non-paper supplies (e.g., writing instruments, binders, toner cartridges, etc.)

No

Established green standards for goods that are replaced infrequently and/or may require capital funds to purchase (e.g., office furniture, carpeting, etc.)

No

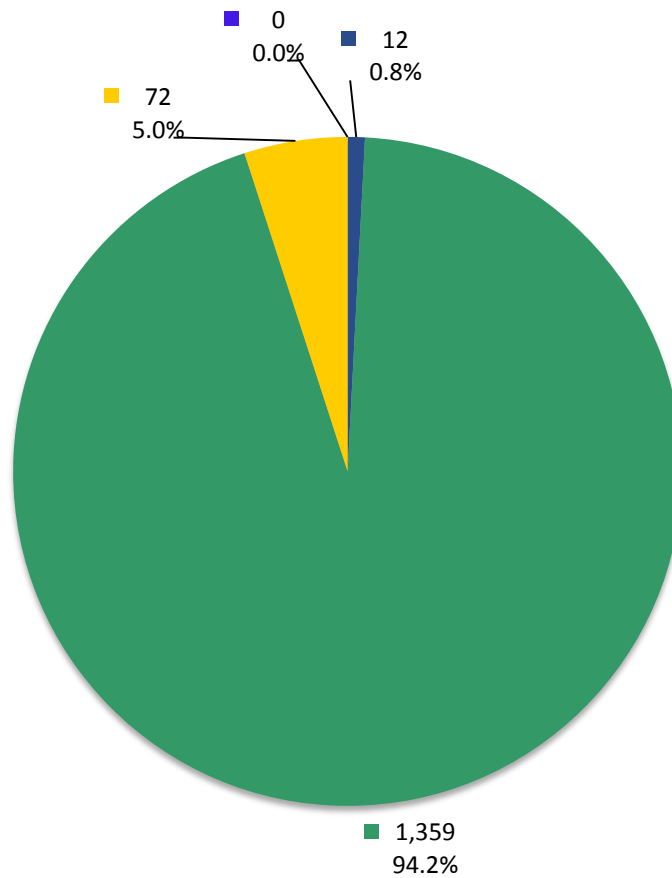
Incorporated lifecycle costing into new construction or renovations

Yes

Please list and other sustainability actions you wish to report not included in the previous list.

In 2014 Camosun College launched and implementation the Camosun Express, a convenient shuttle service operating between the West Shore communities, Interurban, and Lansdowne campuses. Since then, the shuttle has been reliably delivering faculty, employees, and students in an environmentally friendly and efficient way to where they need to go!

**Camosun College
Greenhouse Gas Emissions by Source
for the 2014 Calendar Year (tCO₂e*)**



Total Emissions: 1,443

- Mobile Fuel Combustion (Fleet and other mobile equipment)
- Stationary Fuel Combustion (Building Heating and Generators) and Electricity
- Supplies (Paper)
- Fugitive Sources

Offsets Applied to Become Carbon Neutral in 2014 (Generated June 23, 2015 3:57 PM)

Total offsets required: **1,442**. Total offset investment: **\$36,050**. Emissions which do not require offsets: **0** **

*Tonnes of carbon dioxide equivalent (tCO₂e) 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.