



2013

**Carbon Neutral
Action Report**



CAMOSUN
COLLEGE

Executive Summary

Camosun is focused on building a sustainable organization. In 2013, the newly formed Office of Environmental Sustainability began the development of a Sustainability Plan for the College, carrying forward the intention from our strategic pillar of *Sustainable Results*. The Sustainability Plan provides a framework for embedding sustainability into operations as well as teaching and learning. Climate and Energy are recognized as impact areas within our plan, and this formalizes our commitment to Carbon Neutrality and the importance of energy management within our organization.

We are taking our commitment to sustainability one step further with the goal of creating a “Living Lab” institution which strives to place students and their learning experience at the heart of our carbon footprint reduction and sustainability innovation efforts through cross-disciplinary partnerships. Our commitments to alternative transportation are continual and growing and we are encouraged by positive trends in our bi-annual transportation “Getting Here” survey. Furthermore, our third annual President’s Fund supported several creative environmental sustainability projects including a solar powered charging station comprised of 4 KW Solar Photovoltaic (PV) array to offset the charging of electric vehicles, electric bikes/scooters and electric grounds keeping tools.

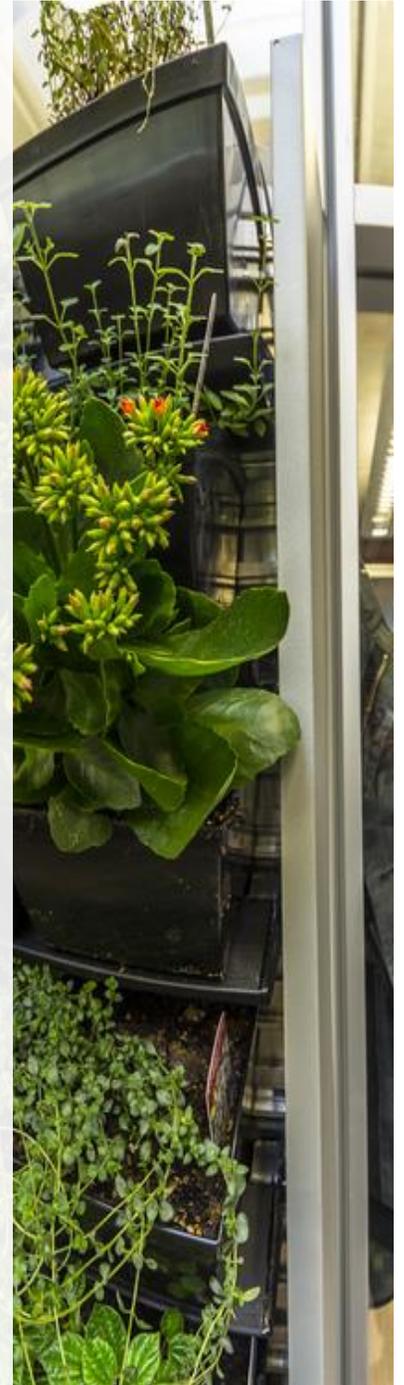
We have seen the results of a very successful five-year energy management plan which concluded on March 31st 2013. Camosun greatly exceeded its targets and our actions contributed over \$2.7 million to the fiscal bottom line. This outcome clearly demonstrated how our commitment to energy conservation within our organization can enhance operating budgets while maintaining alignment to our core responsibility of providing life-changing learning opportunities to our students.

Looking forward, in 2014 we will begin construction on our new Centre for Trades Education and Innovation which will be built to LEED Gold standards. As the largest trades and technology institution on Vancouver Island, Camosun will be providing learners with a living laboratory experience which will set them up to provide for the demand of green trades and technologies in the future. Our 2014 Presidents funds were awarded to various environmental sustainability projects including: “Counselling Services Going Green (paperless)” as well as “Weaving the Mat: Inviting International threads on health, climate change and water.”

We are focused on continual improvement when it comes to our Carbon Neutrality goals and are pleased with the dedication and enthusiasm of our campus community in making this a reality.



Peter Lockie
Vice President, Administration and Chief Financial Officer



2013 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 1772 tCO₂e for the 2013 calendar year. From 2012 to 2013, Camosun saw a 4% reduction in total emissions. These emissions are roughly shared across the Interurban and Lansdowne campuses. A breakdown of emissions by source and comparison with 2012 levels is provided below.

SOURCE	2012 tCO ₂ e	2013 tCO ₂ e	Percent Change
Buildings	1758	1671	(-5%)
Mobile Combustion Fleet	28	24	(-14%)
Office Supplies	57	77	(+35%)
Carbon Neutral Exempt	-1	-1	0
Total Emissions	1843	1771	-4%
		+Prior Year adjustment (19 tCO ₂)	

Offsets Applied to Become Carbon Neutral in 2013

Total emissions for Camosun in 2013 consisted of 1772 tonnes. With 1 tonne of exempt emissions, and 19 tonnes for a prior year adjustment total emissions offset of 1790 of CO₂ equivalents has been applied by way of an investment in the Pacific Carbon Trust of \$44,275.



Actions Towards Carbon Neutrality

Camosun's impressive carbon reductions this year can be attributed to a variety of efforts and initiatives.

Buildings & Energy

Camosun's five-year Energy Plan concluded on a high note March 31st 2013, greatly exceeding its targets and contributing over \$2.7 Million to the fiscal bottom line in avoided costs and new equipment/infrastructure. In 2013, there was a decrease in emissions from 1758 tCO₂ in 2012 to 1671 tCO₂ in 2013 which is an impressive 5% reduction. This can be attributed to a variety of factors, most dramatically would be the five major buildings at the Interurban campus which were enrolled in the BC Hydro Continuous Optimization program to ensure ongoing efficiency of operations. Furthermore, boilers were replaced with newer much more efficient models in two buildings at Camosun; one at Lansdowne and one at Interurban.

Fleet

Camosun College's fleet is small; however, continued improvements happen each year which lead to greater efficiency. In 2013, a larger engine size vehicle was replaced with a smaller more efficient engine vehicle. Furthermore, route planning was conducted which resulted in deliveries and pick-ups being consolidated under one route and moved to a more efficient newer (purchased in 2012) vehicle. These small but effective changes saw a reduction 4 tonnes of CO₂ over 2012 numbers.

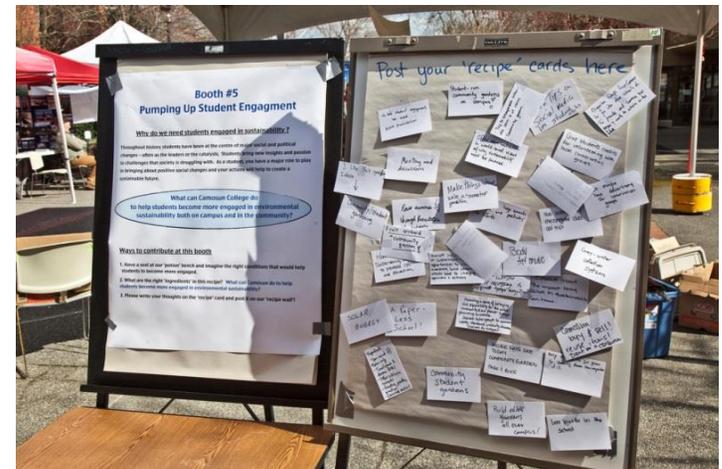
Paper (Office Supplies)

From 2012 to 2013, carbon emissions from paper increased despite various efforts to increase efficiency. Some of these efforts include nearly 100% of Camosun printers are set to print double-side, using 100% post-consumer recycled paper where possible and recycling paper waste or re-using scrap trimmings for staff notepads.

Actions to Reduce Emissions and Improve Sustainability

Office of Environmental Sustainability

In 2013, Camosun College's one year old Office of Environmental Sustainability started to build momentum in support of Camosun's strategic pillar: *Sustainable Results*. In late 2012, Camosun College embarked upon the development of their first Sustainability Plan to achieve Camosun's strategic goal of becoming a leader in environmentally sustainable practices. From November 2012 to August 2013, the Office of Environmental Sustainability conducted extensive research and consultation with members of the campus community.



The Sustainability Plan planning process included:

- An inventory of Camosun sustainability initiatives
- Best practice research highlights from the Post-Secondary Education sector
- Student open house and consultation
- Student and employee survey
- Sustainability leaders discussion
- Focused interviews and meetings with Executive leaders, staff, and faculty
- Two workshops, with invitations to representatives from all departments and schools
- Consultation with the Environmental Sustainability Council
- The development of an Advisory Committee for Integrating Sustainability into Teaching and Learning.

The following two long-term goals were identified:

- By 2025, Camosun will integrate sustainability into all teaching and learning. We will embed sustainability throughout the student learning experience. Relevant and applied learning (in the classroom, lab, shop, practicum and community) equips students with the knowledge, tools and desire to change things for the better in their future careers, workplaces and personal lives.
- By 2025, Camosun will be a college that excels in environmental sustainability innovation – Our governance, operations, educational practices, and applied research and technologies are a "test bed and showcase" that inspire sustainability innovation, engage employees, and provide on-site learning for students, employees, and partners (community, industry and government).



The Office of Sustainability continues to promote and support a culture of sustainability at Camosun College that is:

- Defined in a college-wide strategy
- Action-oriented, measureable, and achievable
- Integrated throughout the college's many business areas, departments and functions
- Engages students, staff and the broader community
- Positions Camosun as a leading Canadian educational institution in sustainability

Some existing commitments such as carbon neutrality and transportation and parking management also fall under the Office of Environmental Sustainability and continue to be priorities for the college.

Operations and Services

Grounds & Maintenance

Grounds maintenance staff at Camosun College has adopted sustainable practices as a core principle. They have almost completely eliminated the use of chemical pesticides. To reduce water use, they chose native plant species that are adapted to Victoria's dry summers, including Dogwood trees and Labrador Tea.

Custodial staff also practices environmental responsibility in their day-to-day work such as using Green Seal certified products and/or microfiber cloths (to reduce the need for cleaning products).

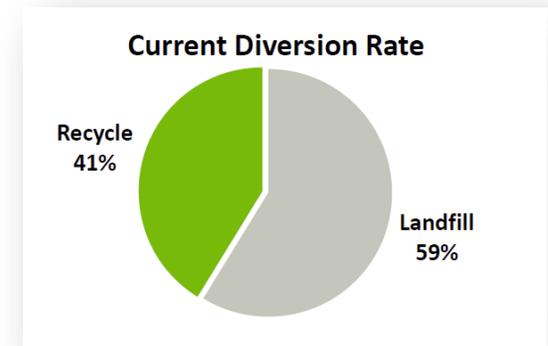
Composting, Recycling & Food Services

Composting and Recycling:

In Fiscal 2012-13 Camosun College undertook its first ever waste audit, the results found a diversion rate of 34%. Our second waste audit was completed for fiscal 2013-14 with a 7% increase in diversion rate which now places us at 41% waste diverted from landfill.

Within 2013 a number of initiatives occurred to the increase the diversion rate these include:

- Paper Towel Composting Program: starting in 2013, paper towel is collected from most of the larger buildings on campus to be composted.
- Ready, Set, Solve: A program hosted by the Capital Regional District (CRD), with support from BC Hydro to match teams of students with organizations to solve local sustainability challenges. In 2013, Camosun sponsored a student team who developed marketing material for waste, recycling and composting bins to minimize contamination issues and increase utilization. Signs for the bins designed by the student teams were approved and are now used in most of the facilities at the College.
- Central Collection: Camosun now has over 80 common area recycling/compost/waste stations at each campus. With multiple streams, the ability to put collection containers in every classroom is not a possibility, so instead the focus has been on increasing the amount available in central areas to increase source separation.
- Cigarette Butts –The program through TerraCycle collects used cigarette butts on campus and donates them to TerraCycle who uses them to produce goods and furthermore, donates \$1.00 for every pound of waste collected to be used toward and environmental process such as planting trees.



Food Services:

Camosun aims to offer affordable and healthy food options which minimize impact on the environment and local community. Some highlights include:

- *Aramark*: In fiscal 12-13, 29% of the BC produce was Island grown (this number has increased year over year). All shell eggs are Island sourced and liquid eggs are BC cage free. Nearly 100% of cleaning products for dishwashing and surfaces are Green Seal certified, and packaging is compostable and biodegradable.
- *Culinary Arts and Professional Cook Programs* maximize food use and compost any remaining kitchen waste and leftover food. Fats, oils and grease are recycled through GREASEcycle. Take-out containers are compostable.

Bookstore:

The Camosun College bookstore has partnered with Better World Books since 2006; the used books go to Better World Books and are either recycled or used in support of non-profit literacy programs around the world. For fiscal 2013-14 there were a total 2,075 books ReUsed or Recycled in this program.

President's Funds Projects to Improve Sustainability

President's Funds are designed to foster innovation and creativity in all employees. Employees are invited to apply to funds in the areas of innovation, interdisciplinary, environmental sustainability, conferences, and student success.

Solar Powered Charging Station and Tools

With funding from 2013 President's Funds as well as UPASS funds, the College installed a 4 KW Solar Photovoltaic (PV) array at the Interurban Campus to offset the charging of electric vehicles, bikes/scooters and grounds keeping golf carts and battery powered hand tools. The energy provided by the array, which feeds power directly into Camosun's electrical grid, along with the energy consumed by the various charging stations is fully monitored. After a year of operation, the goal is to show that the sun's energy provides more energy than is required by all the charging stations. The array was installed by Electrical Apprentice students under the guidance of Home Energy Solutions, the solar array provider. The array's performance will be monitored by Electronics and Mechanical Engineering Technology students over the course of the year. A second part of this project is an eBike charging station. Electronics students will be designing and building the eBike chargers as part of their final capstone project, and completion should occur in 2014.

Transportation**Three Year Plan**

Camosun College's first three year Transportation and Parking Implementation Plan concluded in March of 2013. Some of the highlights include: Biannual modal split survey; Biannual Getting Here survey; Improved cycling infrastructure, initiatives and resources; Improved transportation and parking policies and Regional engagement

Alternative Transportation

As part of its 2013 – 2016 Transportation Demand Management Plan, Camosun is dedicated to reducing the use of single occupancy vehicles coming to campus.

Some highlights from 2013 include:

Alternative Transportation Campaign: increasing awareness and promoting alternative travel choices such as cycling, transit, walking or carpooling.

- **Camosun Express Pilot:** In 2013 a planning process to roll out an intercampus shuttle program was completed, the pilot running January – March 2014.
- **Transit Appreciation Week:** To celebrate those who make transit a part of their commute and engage the college community, celebration stations, Instagram photo contest occurred in collaboration with BC Transit.
- **“Nasty November” Cycling Challenge:** two weeks, six teams, 84 riders, and a total of 8,637.8 kilometres logged.
- **Bike to Work:** celebrations and support for Bike to Work Day and Bike to Work Week.
- **Videoconferencing:** with two campuses, Camosun employees make active use of videoconferencing to reduce travel time and GHGs.



Transportation Survey

A *Getting Here* survey is conducted every two years at Camosun to determine how students, staff and faculty are getting to campus and what would motivate them to choose alternative modes of travel. The 2013 *Getting Here* survey showed that fewer people are driving to campus. From 2010-13, vehicle counts dropped 7% (from 56% to 49%) as a proportion of total mode shares. This is even more significant when compared to 2008 vehicle use (63%). Most significantly, both Interurban and Lansdowne showed a decrease in single occupancy vehicle traffic (down 3.8% and 5.4% respectively from the 2010 to the 2012 mode split counts).



Clean Energy Vehicles

In 2013, Camosun installed a publicly available Electric Vehicle Charging station at the Interurban campus funded, in part, by the Province of BC through the Community Charging Infrastructure Fund. In addition, the Automotive Trades program has also began to use this as training and learning tool, looking at the maintenance and operations of electric vehicle engines.

Plans to Continue Reducing Greenhouse Gas Emissions 2014-2015

Energy Plan – Phase II

Camosun plans to continue with a program of energy management, setting new goals and targets for the future. The college will continue to identify energy performance, factors and trends. Our focus will be on identifying energy savings retrofit opportunities, new building developments (such as the Centre for Trades Education and Innovation) and Power Smart incentive opportunities. The Continuous Optimization program will continue with ongoing “coaching” to help maintain the savings happening quarterly, to be completed in 2014.

Finally, we will be looking for ways to proactively ingrain an energy conservation culture at Camosun.

Transportation & Parking Management – Phase II

Building on the work from the first three-year plan (2010 – 2013), Camosun will continue with its transportation and parking management program. To achieve the 2009 goal of a 20 - 40% reduction in vehicles on campus by 2020, an overall *annual* reduction of 5 to 10% in SOVs is required.

In 2014, the third Bi-Annual Modal Split Count will be completed which will identify the reduction of SOVs coming to campus and provide a good indicator of the College’s parking and transportation situation over time.

The Camosun Express intercampus shuttle pilot project will occur (January – March 2014) with the potential to continue full time if successful. The purpose of the intercampus shuttle is to reduce single occupancy vehicle (SOV) intercampus travel, parking congestion, particularly at Interurban and improve shared ride service to Camosun employees and students living in the West Shore. All three of these purposes contribute to reducing carbon gas emissions and addressing overall Camosun environmental goals



Centre for Trades Education & Innovation

Camosun's new 80,000 square foot training facility will be built to LEED Gold standards and is set to be completed by 2015. It will offer modern, well-equipped spaces including a new marine and metal-trades centre and a new mechanical trades centre. The project also includes repurposing existing trades shops to create a revitalized sustainable construction and renewable energy trades facility and a new technology and innovation centre to house Camosun's applied research and technology capabilities for local industry including: product prototyping, research, technical consultation and design.

Phase one of the project began in January 2013 and aims to limit the environmental impact of the project. With the exception of toxic materials, most of the wood, metal and cement scraps from the aged facility will be recycled.



2013 Carbon Neutral Action Report (CNAR) - Part 2 ACTIONS

Created Tuesday, February 04, 2014

Updated Friday, May 30, 2014

<https://fluidsurveys.com/surveys/cas-z/2013-cnar-form-bps-actions/5ed55d11adb9ae19f485a814e6687080/>

Page 1

Please complete the following sections of the 2013 Carbon Neutral Action Report form. Save your work frequently to prevent it from being lost. You can also save a copy for your own use as either a WORD or PDF file using the buttons at the bottom of each page.

This is Part 2 of the Carbon Neutral Action Report form. This section reports on actions taken to reduce emissions during the 2013 calendar year. This information will be included in your final Carbon Neutral Action Report posted on the Ministry of Environment website.

When the form is complete press the submit button on the last page to automatically submit the information to the Climate Action Secretariat (CAS). Do not press submit before you are ready – this may result in a loss of work.

In addition to completing this survey (Part 1 2), you are required to submit your completed Overview (Executive Summary) and Self-Certification Checklist. The 2013 Overview template was included in the email sent and can also be found on the LiveSmart leaders Community.

Please ensure you meet the following reporting deadlines:

A DRAFT 2013 CNAR is due to CAS by March 31, 2014. The draft is comprised of the Overview ONLY (no executive sign-off required).

The FINAL 2013 CNAR is due to CAS by May 30, 2014. The final 2013 CNAR includes Part 1 Part 2 survey form and Overview.

The Self-Certification Checklist is due to CAS by May 15, 2014.

For more information about the Carbon Neutral Government process, please refer to *Becoming Carbon Neutral 2013*, or should you have any questions please contact climateactionsecretariat@gov.bc.ca.

Organization Name

Camosun College

Actions Taken to Reduce Emissions

1) Stationary Fuel Combustion, Electricity (Buildings):

Indicate which actions were taken in 2013:

Performed energy retrofits on existing buildings

Yes

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

No

Undertook an evaluation of overall building energy use.

No

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

Boilers were replaced with more modern efficient machines in two buildings, and in cooperation with BC Hydro the continuous optimization project was undertaken on five buildings with ongoing coaching.

2) Mobile Fleet Combustion (Fleet and other vehicles):

Indicate which actions were taken in 2013:

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:

Consolidated deliveries and pickups under a route taken by a more efficient vehicle. Replaced larger engine sized vehicle with smaller.

3) Supplies (Paper):

Indicate which actions were taken in 2013:

Used less paper than previous year

No

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:

We use completely 100% recycled paper in all the multifunctional devices (printers and copiers) around campus. In our campus Printshop we use 100% recycled whenever possible, but it cannot be accommodated depending on the production requirements of the

client. We recycle all scrap paper, plastic wrappers and toner containers. We are looking into using alternative source paper, but the cost has been a stumbling block.

Actions Taken to Reduce Emissions - continued

Explain how you plan to continue minimizing emissions in 2014 and future years:

As part of Camosun College's Sustainability Plan the college has identified integrating sustainability into operations and governance as a priority area. Over the next three years, the college will be assessing its current operations and services to identify baselines and set targets for continuous improvement in areas of environmental impact including CO2 emissions. More specifically, the college will look for ways of reducing its energy and material consumption, generation of waste and emissions generated from the number of single occupant vehicles commuting to the campus.

Specific projects include continuing our energy plan, setting new goals and targets for the future. Focus will be on identifying energy saving retrofit opportunities, new building development and Power Smart incentives. As well as looking to ingrain an energy conservation culture at Camosun.

Our transportation and parking management program is heading into phase two, we are hoping to achieve the 2009 goal of 20-40% reduction in vehicles on campus by 2020 and an overall annual reduction of 5-10% in SOVs is require. We will be conducting our third bi-annual modal split count. We will also be piloting an intercampus shuttle program.

Camosun is building our Centre for Trades Education and Innovation in 2014 which will be built to LEED gold standards.

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

Yes

Actions to Promote Sustainability and Conservation - Optional

The 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 Travel

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

No

Virtual Meeting Technology

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

Yes

Made desktop web-cameras available to staff

Yes

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

Yes

Encourage carpooling to meetings

Yes

Education and Awareness

Have 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

Yes

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

Yes

Planning for Climate Change

Have 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

Yes

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

Yes

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

Yes

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.)

Yes

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.

President's Funds, a program designed to foster innovation and creativity in employees, was established in 2010 and offers up to \$5000 in support of employee-initiated projects in four areas including environmental sustainability. President's Funds' projects relating to environmental sustainability in 2013 have included the development of solar power charging station (4 KW Solar Photovoltaic array) to charge electric vehicles, bike/scooters and grounds keeping staff golf carts and battery powered hand tools.

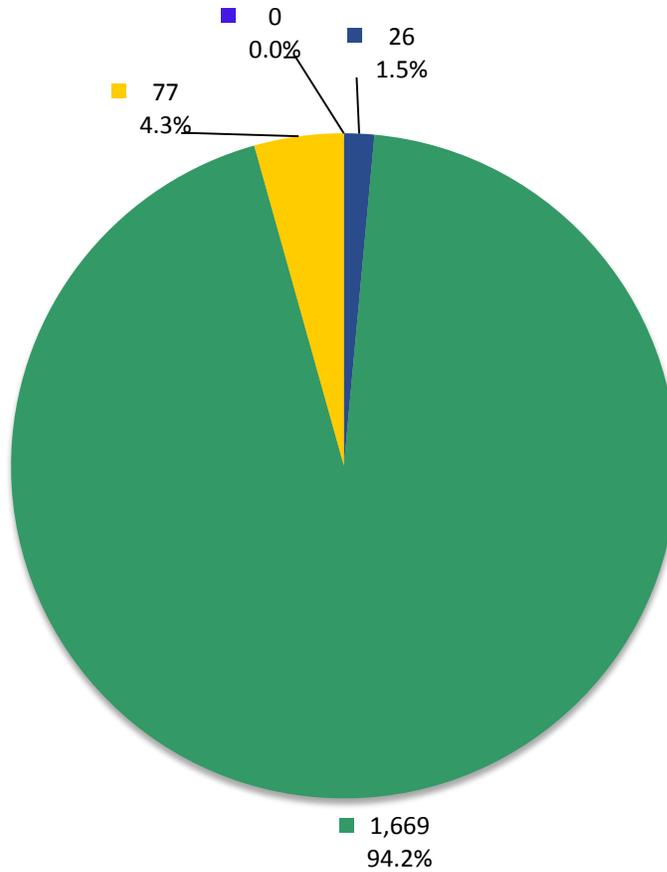
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You can also save your own copy as a WORD or PDF file.

Once you click the submit button, the Climate Action Secretariat will create a PDF summary of these actions to append to your final CNAR Overview when it is submitted. Together, these will be posted on the Ministry of Environment website by June 30, 2014 as your final report for 2013.

**Camosun College
Greenhouse Gas Emissions by Source
for the 2013 Calendar Year (tCO₂e*)**



Total Emissions: 1,772

- 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 2013 (Generated May 21, 2014 2:31 PM)

Total offsets required: **1,771**. Total offset investment: **\$44,275**. Emissions which do not require offsets: **1** **

*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.