

# Camosun College – 2011 Carbon Neutral Action Report

Camosun College is a comprehensive community college on the southwest coast of British Columbia's Vancouver Island. Since 1971, Camosun has helped more than 50,000 graduates on their way to amazing careers in every sector of our economy. Great instructors, small class sizes and comprehensive student support services ensure our students successfully achieve their education and career goals. With two campuses in Victoria, and numerous community education partners, Camosun offers over 160 degree, diploma and certificate programs in arts, sciences, business, health and human services, trades, technologies, sport education, Aboriginal studies and adult upgrading. More than 10,000 full-time equivalent credit students, plus another 3,000 part-time and 7,000 continuing education students enroll each year, including over 500 International and 900 Aboriginal, Inuit and Métis students from 50 nations. Nearly 90% of our graduates remain on Vancouver Island to live and work. As the college has grown and diversified, so too has its interest in, and commitment to sustainability and reducing the environmental impact of its operations, locally and globally.



## Executive Summary

Camosun College continues its planning and tactics to reduce greenhouse gas (GHG) emissions from its sizeable operations across two campuses in Victoria. 2011 marked the creation of Camosun's new strategic plan, Inspiring Lives, a plan that charts a new and challenging course for the College as we continue to lead the way in providing life-changing learning experiences to our students and help build healthy families and communities. One of four over-arching goals, or pillars, in the strategic plan focuses on Sustainable Results; building a sustainable organization and being a leader in environmentally sustainable practices. This year marked the third full operating year of our LEED Gold building, the Pacific Institute for Sport Excellence. Camosun continues its partnership with BC Hydro in reducing energy consumption in the fifth year of the Energy Manager project. In 2011 Camosun began the implementation of the Public Sector Energy Conservation Agreement (PSECA) funded Lansdowne energy project, which is expected to result in significant reduction of annual CO<sub>2</sub> emissions of 260 tonnes. Greater engagement and interest within all schools and departments at the college is helping to develop a conservation culture at Camosun, for example an active, cross-college Transportation and Parking Management steering committee which addresses sustainability issues in this area; a second-annual President's Environmental Sustainability Fund, which consist of five grants of up to \$5,000 each per annum in support of projects and initiatives that assist our environmental sustainability goals; and the college's Environmental Sustainability Council, formed in December 2010 to provide an open forum for the discussion of college-wide environmental initiatives, with the goal of improving and extending current environmental practices.



Peter Lockie,

Vice President, Administration & Chief Financial Officer

## 2011 Greenhouse Gas Emissions

Direct Emissions:	Greenhouse Gasses in Tonnes (tCO <sub>2</sub> e)
Buildings	1977.83
mobile combustion fleet	39.31
Optional Emissions:	
Office Supplies	71.83
Carbon Neutral Exempt	-1.00
Overpayment for 2010:	-4.00
<b>Totals for 2011</b>	<b>2083.97</b>

### Offsets Applied to Become Carbon Neutral in 2011

Total emissions for Camosun in 2011 consisted of 2089 tonnes. With 1 tonne of exempt emissions, a total emissions offset of 2088 tonnes of CO<sub>2</sub> equivalents has been applied by way of an investment in the Pacific Carbon Trust in the amount of \$58,352.

## Emissions Reductions Activities

### Actions Taken to Reduce Greenhouse Gas Emissions in 2011

The Transportation and Parking Management Steering committee mandate is to implement the college's transportation and parking management plan which includes encouraging the use of alternate forms of transportation, advocating for better provisioning of public transit, and seeking to address other transportation issues for students and employees. The committee consists of members from the college as well as the external community including the Municipality of Saanich, BC Transit and the Greater Victoria Cycling Coalition. One of the many outcomes has been the establishment of a secured bike storage facility at Lansdowne campus to complement the already existing secured storage facility at Interurban campus.

GHG emission reductions through actions taken in the fourth consecutive year of the Energy Manager program amounted to about 400 tonnes in 2009, and have more than doubled with the completion of the PSECA-funded Interurban energy project to an annual reduction of nearly 1000 tonnes of GHGs. Implementation of the PSECA-funded Lansdowne energy project is expected to add an additional reduction of 260 tonnes of GHG emissions with project completion targeted for spring of 2012. The five major buildings at Camosun's Interurban campus are enrolled in the BC Hydro Continuous Optimization program to ensure ongoing efficiency of existing operations. The Investigations Phase of this program at Interurban campus was completed in 2011 resulting in a list of energy conserving projects for future implementation.

Actions taken to reduce the consumption of paper and other goods and services include the continued use of 100% recycled paper; increasing the use of online activities; the use of green products in our operations; and procurement of "cradle to cradle" goods in our purchasing practices. The college ensures energy efficiency and sustainability criteria are included with every RFP/tender initiative, meaning new contract awards replace existing equipment with Energy Star-rated gear.

Other actions taken to reduce GHG emissions and promote sustainability in 2011 included the activities of a cross-college (staff, students, faculty) Environmental Sustainability Council; renewing and expanding recycling stations at both campuses to encourage increased use; further improved/expanded recycling measures; and the application of "triple bottom line" evaluation in vendor tender/RFP responses. Supported by the President's Fund and Camosun students, the composting program at Lansdowne was expanded to include common areas and hallways in every building on campus.





### **Plans to Continue Reducing Greenhouse Gas Emissions 2012-2014**

Completion of Camosun College's new strategic plan in 2011 leads the way for a focus on sustainability activities and sets a goal to become a leader in environmentally sustainable practices. Camosun continues to add sustainable business practices into operations, from expanded recycling programs to the implementation of producing bio-diesel on campus using inputs from campus operations, cafeteria waste oil and grease, for use in Camosun diesel vehicles and equipment.

As a Power Smart partner, Camosun will continue its partnership with BC Hydro in further developing its energy management program by continuing with a fifth consecutive year of the Energy Manager project. Camosun successfully received Public Sector Energy Conservation Agreement (PSECA) funding for its Lansdowne campus in late 2010. Completion of this project in spring of 2012 will result in additional significant reductions of CO<sub>2</sub> emissions. Project implementation of the findings of the Continuous Optimization investigations phase will further improve the energy efficiency of the Interurban Campus and add to the total greenhouse gas emission reduction already achieved.

Camosun has purchased and implemented full videoconferencing capability between campuses to reduce the amount of intercampus travel for meetings and will continue to look for ways to improve the technology as well as increase its use. As an educational institution with a focus on learning, professional development and training will be supported via targeted energy opportunity training for maintenance staff and through attendance at training sessions and education series.

The annual President's Fund will be supporting five new environmental projects in the areas of expansion of the organic waste diversion program at Interurban campus, purchase of a greenhouse to grow native plants for use on college grounds, establishing outdoor recycling bins on both Camosun campuses, a rainwater harvesting project and a worm composting project to support training & preparation programs.



Camosun College - 2011 Carbon Neutral Action Report

Actions Towards Carbon Neutrality							
The actions listed below contribute to a reduction in greenhouse gas emissions from sources for which public sector organizations are responsible under the carbon neutral government regulation of the <i>Greenhouse Gas Reduction Targets Act</i> .							
Action	Status (as of 12/31/11)	Performance to Date (as of 12/31/11)		Steps Taken in 2011	Steps Planned for 2012 -2014	Start Year	End Year
Mobile Fuel Combustion (Fleet and other mobile equipment)							
Vehicle fuel efficiency							
Replace vehicles with more fuel-efficient models	Ongoing/In Progress			No vehicles purchased.	As vehicles require replacement, more fuel efficient and, where appropriate, smaller vehicles are considered.	2007	No End Date (Continuous)
Replace larger vehicles with smaller models according to fleet "right-sizing" principles	Ongoing/In Progress			No vehicles purchased.	As vehicles require replacement, more fuel efficient and, where appropriate, smaller vehicles are considered.	2007	No End Date (Continuous)
Perform regular fleet maintenance specifically to improve fuel-efficiency	Ongoing/In Progress	100	% of vehicles are subject to regular maintenance for fuel efficiency	All vehicles receive regular maintenance.	Ongoing regular maintenance for all vehicles.	2009	No End Date (Continuous)
Replace small maintenance vehicles with more fuel-efficient models	Ongoing/In Progress	75	% of small maintenance vehicles are fuel-efficient	No specific steps taken in 2011.	As vehicles require replacement, more fuel efficient and, where appropriate, smaller vehicles are considered.	2006	No End Date (Continuous)
Other Mobile Fuel Combustion Actions							
Manufacture and use of bio-diesel	Ongoing/In Progress			Although biodiesel has been used for many years in our grounds maintenance vehicles, in 2010 we started the manufacture of our own bio-diesel generator. Waste fats from our cafeteria operations are used as raw materials. The resulting bio-diesel output is being used in college vehicles and equipment.	Manufacture of generator completed and is in use. The bio diesel plant is also used as a demonstration and teaching tool for students in programs such as Environmental Technology, Chemistry and Trades and Technology.	2010	No End Date (Continuous)
Stationary Fuel Combustion, Electricity and Fugitive Emissions (Buildings)							
Planning/management							
Enrol in a building energy benchmarking program (e.g., GREEN UP)	Ongoing/In Progress			Camosun is in its 5th year of BC Hydro sponsored Energy Manager program.	2012: Complete 5th year Energy Manager program requirements. 2013 Continue partnership with BC Hydro Energy Manager program.	2007	2013
Reduce office space (square meters) per employee	Ongoing/In Progress			A Space Mining Committee was established to explore maximizing the utilization of existing general purpose classroom space, labs and faculty office spaces.	Continue the work of the Space Mining Committee to maximize space use. Mandate of committee may be considered to include all space. Space scheduling software purchased.	2009	No End Date (Continuous)
Owned buildings							
Achieve LEED NC Gold certification at a minimum for new construction or major renovations	Ongoing/In Progress	9	% of owned buildings are certified LEED NC Gold or LEED NC Platinum	All new construction of commercial buildings will be to minimum LEED gold standard.	All new construction of commercial buildings will be to minimum LEED gold standard.	2008	No End Date (Continuous)
Incorporate integrated design process into new construction or during renovations of owned buildings	Ongoing/In Progress	9	% of buildings built or renovated since start year indicated used the integrated design process	All new construction of commercial buildings will be to minimum LEED gold standard.	All new construction of commercial buildings will use the integrated design process.	2005	No End Date (Continuous)
Incorporate a refrigerant management strategy into regular building management/maintenance to reduce fugitive emissions	Ongoing/In Progress			Refrigeration systems are upgraded on an ongoing basis to newer less harmful refrigerants.	Continuation of upgrades and replacement of outdated equipment where applicable.	2003	No End Date (Continuous)

Camosun College - 2011 Carbon Neutral Action Report

Action	Status (as of 12/31/11)	Performance to Date (as of 12/31/11)		Steps Taken in 2011	Steps Planned for 2012 -2014	Start Year	End Year
Perform energy retrofits on existing, owned buildings	Ongoing/In Progress	90	% of owned buildings have undergone energy retrofits since start year indicated	Implementation of the Energy Study through PSECA funding for buildings on Lansdowne campus was started in 2010.	Completion in 2012.	2010	2012
Retrofitting owned buildings							
Upgrade mechanical systems (heating, cooling, ventilation) during retrofits	Ongoing/In Progress			Implementation of above noted Energy Study for buildings on Lansdowne campus includes boiler and heat pump replacements, expansion of DDC controls and commissioning.	Completion in 2012.	2010	2012
Upgrade lighting systems during retrofits	Ongoing/In Progress			Implementation of above noted Energy Study for buildings on Lansdowne campus includes lighting system upgrades.	Completion in 2012.	2010	2012
Upgrade/adjust control systems during retrofits	Ongoing/In Progress			Implementation of above noted Energy Study for buildings on Lansdowne campus includes expansion of DDC control and commissioning.	Completion in 2012.	2010	2012
Improve building insulation (including windows) during retrofits	Ongoing/In Progress			Implementation of above noted Energy Study for buildings on Lansdowne campus includes mechanical and architectural insulation upgrades and door and window sealing.	Completion in 2012.	2010	2012
Appliances and electronic devices							
Replace refrigerators with ENERGY STAR models or source ENERGY STAR models for future purchases	Ongoing/In Progress			All new equipment purchases have been Energy Star where applicable.	Source Energy Star models for future purchases where available.	2008	No End Date (Continuous)
Replace other appliances or electronic devices with ENERGY STAR models or source ENERGY STAR models for future purchases	Ongoing/In Progress			Computers, monitors and printers set to energy save, sleep and power down modes.	Source Energy Star models for future purchases where available.	2008	No End Date (Continuous)
Supplies (Paper)							
Printer/document settings							
Apply "print and hold" settings to networked printers to eliminate unclaimed print jobs	Ongoing/In Progress	100	% of network printers have 'print and hold' settings applied	All networked printers have settings available. User selects.	No change planned.	2009	No End Date (Continuous)
Electronic media in place of paper							
Install collaborative software for electronic editing (e.g. SharePoint, Groove, etc.)	Ongoing/In Progress	100	% of staff workstations with software installed	SharePoint active at enterprise level. 100+ sites running	Continue growth in use of SharePoint	2010	No End Date (Continuous)
Use electronic document library for filing common documents	Ongoing/In Progress			SharePoint active at enterprise level. 100+ sites running	Continue growth in use of SharePoint	2010	No End Date (Continuous)
Post materials online that were previously printed	Ongoing/In Progress			SharePoint active at enterprise level. 100+ sites running	Continue growth in use of SharePoint	2010	No End Date (Continuous)
Switch to an electronic payroll notification system in place of paper pay stubs	Completed in 2011			Pay stubs, T4s, and T2202As are all online now.		2009	2011
Behaviour change program							
Train staff to use collaborative software for electronic editing (e.g. SharePoint, Groove, etc.)	Ongoing/In Progress	20	% of staff currently have received collaborative software training	Continue use of SharePoint.	Continue growth in use of SharePoint	2010	No End Date (Continuous)

Camosun College - 2011 Carbon Neutral Action Report

Action	Status (as of 12/31/11)	Performance to Date (as of 12/31/11)		Steps Taken in 2011	Steps Planned for 2012 -2014	Start Year	End Year
Encourage staff to hold paperless meetings or presentations (i.e., no handouts)	In Development				Encourage paperless meetings and use of electronic distribution of information for all meetings and presentations.	2007	No End Date (Continuous)

Camosun College - 2011 Carbon Neutral Action Report

Actions to Reduce Provincial Emissions and Improve Sustainability							
The actions listed below contribute to a reduction in greenhouse gas emissions from sources that fall outside of the reporting requirements defined in the carbon neutral government regulation of the <i>Greenhouse Gas Reduction Targets Act</i> . Public sector organizations can optionally use this section to report on actions that will help British Columbia meet its provincial greenhouse gas reduction targets, engage the public, and improve environmental sustainability across all aspects of their organization.							
Action	Status (as of 12/31/11)	Performance to Date (as of 12/31/11)		Steps Taken in 2011	Steps Planned for 2012 -2014	Start Year	End Year
Business Travel							
Policy and budgeting							
Create a low-carbon travel policy or travel reduction goal	In Development			Intercampus/local travel has been identified as an opportunity for reductions to meet objectives of the TPM plan. This travel is being tracked. Options have been explored for policy and goal setting.	Finalize goal and policy	2009	2012
Virtual meeting technology							
Install web-conferencing software (e.g., Live Meeting, Elluminate, etc.)	Completed in 2011	100	% of computers have web-conferencing software installed	Collaborate (previously Elluminate) licensed for use by up to 50 users.		2009	2011
Make desktop web-cameras available to staff	Ongoing/In Progress	25	% of staff have access to a desktop web-camera	All new laptop technology in use has built-in camera technology.	As part of the technology refresh and replacement program, approximately 20% of laptop users will gain access to web cameras each year.	2009	2013
Install video-conferencing units in meeting rooms or provide mobile video-conferencing units	Ongoing/In Progress	5	% of meeting rooms have access to video-conferencing equipment	Two mobile units (one at each campus) have been in use for 2 years.	Two or more additional fixed units are to be installed in 2012.	2009	No End Date (Continuous)
Behaviour change program							
Train staff in web-conferencing	In Development	5	% of staff are trained web-conferencing	Have 50 licenses for Collaborate.	Expand training program for staff.	2011	No End Date (Continuous)
Encourage staff to consider virtual attendance/presentation at events where possible	Ongoing/In Progress			Have seen over 100 meetings use VC this year.	Continue to encourage use of video conferencing equipment and virtual meeting attendance.	2009	No End Date (Continuous)
Encourage carpooling to meetings	Ongoing/In Progress			Informal process of carpooling to meetings in place.	Program to encourage carpooling to meetings launched and in place.	2011	2013
Encourage alternative travel to meetings (e.g., bicycles, public transit, walking)	In Development			Information gathered.	Program to encourage alternate travel to meetings launched and in place.	2011	2013
Education, Awareness, and Engagement							
Team-building							
Create Green, Sustainability, Energy Conservation, or Climate Action Teams with executive endorsement	Ongoing/In Progress			Council continues to champion various initiatives and has regular dialogue in order to stay abreast of developing events, practices, etc.	Council continues to champion various initiatives and has regular dialogue in order to stay abreast of developing events, practices, etc.	2010	No End Date (Continuous)
Staff Professional Development							
Support green professional development (e.g., workshops, conferences, training)	Ongoing/In Progress			The college supports training of staff to allow professional and personal development in sustainability and other areas.	The college will continue to support training and professional development which includes green topics.	Started before 1995	No End Date (Continuous)
Staff awareness/education							

Camosun College - 2011 Carbon Neutral Action Report

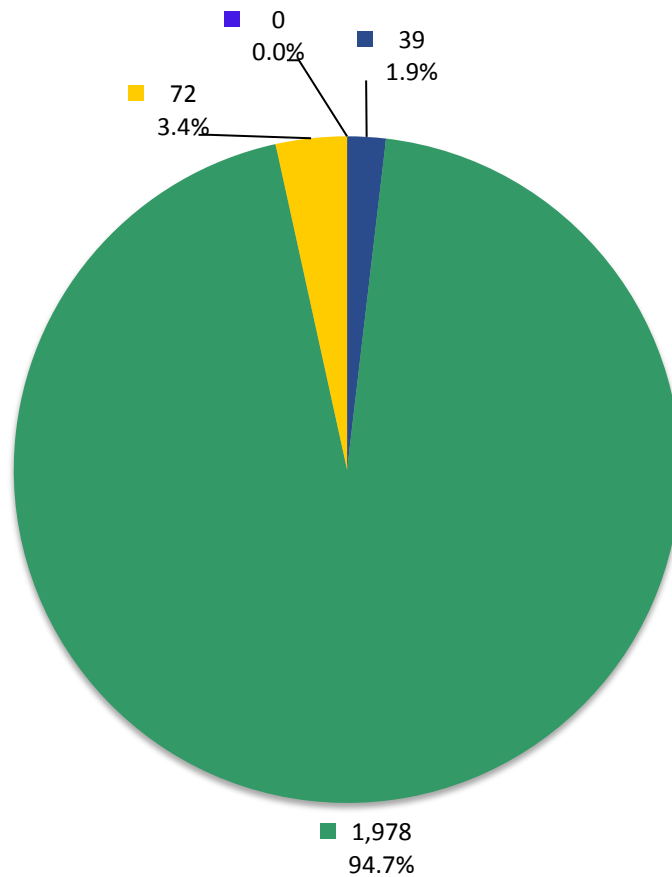
Action	Status (as of 12/31/11)	Performance to Date (as of 12/31/11)		Steps Taken in 2011	Steps Planned for 2012 -2014	Start Year	End Year
Provide education to staff about the conservation of water, energy, and raw materials	Ongoing/In Progress			Information through weekly e-mail newsletter and via Camosun's Green Page.	Continue information flow via e-mail and web page.	2008	No End Date (Continuous)
Provide green tips on staff website or in newsletters	Ongoing/In Progress			Camosun's Green Page has undergone extensive revisions. Sustainability news reported in weekly e-mail to all employees.	Continued development of website.	2009	No End Date (Continuous)
Provide sustainability education during new staff orientation	Ongoing/In Progress			New staff orientation included education about sustainability activities undertaken at Camosun.	Continue sustainability information/education at new staff orientations.	2008	No End Date (Continuous)
Client/public awareness/education							
Provide education to clients/public about the science of climate change	Ongoing/In Progress			Environmental Technology Program offered.	Environmental Technology Program offered.	Started before 1995	No End Date (Continuous)
Provide education to clients/public about the conservation of water, energy, and raw materials	Ongoing/In Progress			Environmental Technology Program offered; Camosun's Green Page regularly updated; information in staff weekly e-mail.	Environmental Technology Program offered; Camosun's Green Page regularly updated; information in staff weekly e-mail.	Started before 1995	No End Date (Continuous)
Provide green tips on client/public website or in newsletters	Ongoing/In Progress			Camosun's Green Page has undergone extensive revisions. Sustainability news reported in weekly e-mail to all employees.	Continued development of website.	2009	No End Date (Continuous)
Other Education, Awareness, and Engagement Actions							
Annual Sustainability Day event.	Ongoing/In Progress			Sustainability Day hosted March 2011 with excellent participation by employees and students.	Continue annual Sustainability Day event.	2009	No End Date (Continuous)
Other Sustainability Actions							
Water conservation							
Establish a water conservation strategy which includes a plan or policy for replacing water fixtures with efficient models	Ongoing/In Progress			Water fixtures are replaced with water efficient models on life cycle replacement.	Develop a policy and technical specification that defines use of specific water efficient models and develop a plan for water fixture replacement.	Started before 1995	2013
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	Ongoing/In Progress			Use of drought tolerant and native species in landscaping, use of drip and micro-irrigation systems, selective lawn irrigation to high priority areas only. Replacement of toilet fixtures is done with low flow fixtures.	Continue to look for opportunities to reduce building level potable water demand. Considering undertaking CRD water audit.	Started before 1995	No End Date (Continuous)
Introduce a storm water management landscape strategy (e.g., vegetated roofs, permeable paving, rain gardens, bio-swales)	Ongoing/In Progress			Exploration of additional storm water management strategies.	Introduce additional storm water management strategies.	Started before 1995	No End Date (Continuous)
Procurement (non-paper supplies)							
Incorporate minimum recycled content standards into procurement policy for consumable, non-paper supplies (e.g., writing instruments, binders, toner cartridges, etc.)	In Development			Supplier agreement includes requirement to provide a "green" list of office supply consumable list. No minimum recycled content is listed.	Consider including the requirement for use of a minimum recycled content.	2009	2013
Establish green standards for goods that are replaced infrequently and/or may require capital funds to purchase (e.g., office furniture, carpeting, etc.)	Ongoing/In Progress			The most recent RFP for furniture included a large (19%) energy/green component as part of the evaluation and all products selected have their own green standards for manufacturing, packaging and shipping. Carpeting specifications include requirements for low VOC, use of carpet tile where possible, and recycling of removed product.	Continue to expand energy/green components into other applicable areas of purchasing.	2008	No End Date (Continuous)
Indoor air quality							
Enforce a scent-free policy (e.g., no strong perfumes, deodorants, etc.)	Ongoing/In Progress			Continue to evaluate other opportunities for elimination of scented products.	Continue to evaluate other opportunities for elimination of scented products. Continue to raise awareness of issue.	2008	No End Date (Continuous)



Camosun College - 2011 Carbon Neutral Action Report

Action	Status (as of 12/31/11)	Performance to Date (as of 12/31/11)		Steps Taken in 2011	Steps Planned for 2012 -2014	Start Year	End Year
Commuting to and from home							
Introduce telework/work from home policy	In Development			Employees surveyed; policy in development.	Continue discussions with labour groups.	2010	2013
Encourage commuting by foot, bicycle, carpool or public transit	Ongoing/In Progress			Awareness campaign for students and employees. The number of people reportedly using these alternatives is measured bi-annually with baseline and targets in place.	Options for employees are being negotiated with employee groups; promotion and support for alternate modes is ongoing.	2009	No End Date (Continuous)
Provide secure bicycle storage	Ongoing/In Progress			Secure bicycle storage is provided on one campus. Funding for secure bicycle storage on second campus obtained; facility designed.	Complete secure bicycle storage on second campus	2004	2012
Modify parking fees or parking availability for staff/students	Ongoing/In Progress			Review and increase rates; regularly monitor availability.	Review and increase rates; regularly monitor availability.	2008	No End Date (Continuous)
Other Sustainability Actions							
President's Environmental Sustainability Fund	Ongoing/In Progress			President's Funds were created in 2010, one area of which is Environmental sustainability. Grants of up to \$5,000 are available in support of projects and initiatives that assist Camosun's environmental sustainability goals. Projects may relate to administrative, educational, or applied research initiatives with planned outcomes that will advance the College's sustainability profile. Grants awarded to three sustainability projects.	Grants are awarded on an annual basis. The number of applications is increasing each year.	2010	No End Date (Continuous)
Actions to facilitate the reduction and diversion of building occupant waste from landfills.	Ongoing/In Progress			Expansion of composting program to include common areas in all buildings on Lansdowne campus.	Further expansion of composting program to Interurban campus.	2011	2012

**Camosun College  
Greenhouse Gas Emissions by Source  
for the 2011 Calendar Year (tCO<sub>2</sub>e\*)**



**Total Emissions: 2,089**

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

**Offsets Applied to Become Carbon Neutral in 2011 (Generated May 18, 2012 11:05 AM)**

Total offsets required: **2,088**. Total offset investment: **\$52,200**. Emissions which do not require offsets: **1** \*\*

\*Tonnes of carbon dioxide equivalent (tCO<sub>2</sub>e) 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.