



2011 Carbon Neutral Action Report



Submitted under the Carbon Neutral Government Regulation of the
BC Greenhouse Gas Reduction Targets Act

A handwritten signature in black ink, appearing to read "D. Callbeck", written over a horizontal line.

Doug Callbeck
VP Administration and CFO

Executive Summary

In the fall of 2011, Vancouver Community College (VCC) launched a new three-year Strategic Plan with a vision to create an accessible urban college that engages with the many diverse communities within the Vancouver area to provide learning opportunities that change lives. This vision is expressed through shared values, one of which is that VCC respects the environment and seeks to reduce its environmental impact.

To realize this vision, seven initiatives were established, one of which is to build and implement a college-wide environmental sustainability plan. This initiative has three objectives:

- Bring sustainability principles into the thinking, actions, culture and everyday operations of VCC.
- Demonstrate our respect for the environment as we educate students, staff and faculty about environmental stewardship.
- Seek innovations and improved practices that reduce our carbon footprint.

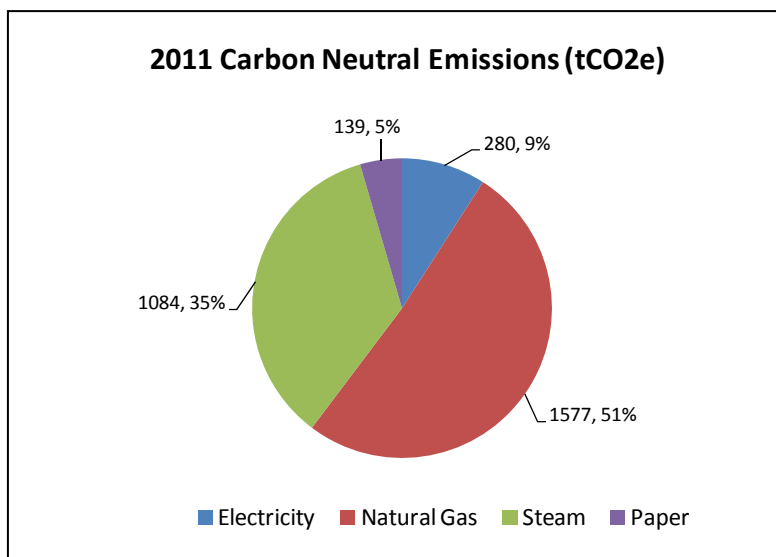
To demonstrate its commitment to achieving these objectives, VCC has resourced a new position at the College of Manager of Environment & Sustainability with a mandate to guide the College in integrating sustainability values and practices into VCC's strategic and operation planning processes, the management of its resources and operations, facilities planning and design, research activities and curriculum.

Through these actions, VCC will engage and empower our students, faculty, staff and the local community to help realize a sustainable future.

2011 Greenhouse Gas Emissions

In 2011, VCC emitted 3,080 tonnes of carbon dioxide equivalent (tCO₂e)¹ from sources covered under the Carbon Neutral Government Regulation (see Figure One). Of these emissions, 95% come from heating, cooling and lighting our buildings and the remaining 5% come from the use of paper. VCC does not own any vehicles.

It was estimated that stationary fugitive emissions from cooling do



¹ Tonnes of carbon dioxide equivalent (tCO₂e) is a standard unit of measure in which all types greenhouse gases are expressed based on their global warming potential relative to carbon dioxide.

not comprise more than 0.01% of VCC's total emissions and to collect data for emissions from this source was not feasible. For this reason, emissions from this source have not been included in VCC's total greenhouse gas emissions profile.

Offsets Applied to Become Carbon Neutral in 2011

VCC has purchased 3,080 tonnes of carbon offsets from the Pacific Carbon Trust at a cost of \$77,000 (\$25 per tonne) to achieve carbon neutrality, as required by the Greenhouse Gas Reduction Targets Act. More information on the Pacific Carbon Trust and offset projects can be found at www.pacificcarbontrust.com.

Emissions Reduction Activities

Actions Taken to Reduce Greenhouse Gas Emissions in 2011

VCC is working to understand and reduce our energy use at both our Broadway Campus and our Downtown Campus. The design for new chillers for Building A at the Broadway Campus has been completed and includes energy efficiency considerations. DDC (Direct Digital Controls) have been installed in selected floors at the Downtown Campus, enabling heating and cooling functions to be automatically controlled in order to achieve greater energy efficiency.

In 2011, reminder stickers were placed on all light switches to remind people to turn out the lights. In addition, stickers were placed on the paper towel dispensers encouraging people to use them wisely.

The Information Technology (IT) department has implemented server virtualization across both campuses. Computers and monitors are set with automatic power down functions. Using these power management programs, VCC has saved over 550,000 kilowatt hours (kWh) of electricity over the past two years. This is enough electricity to power 50 homes for a year.



VCC is also taking steps to reduce our use of paper. Most stand alone printers have been removed and replaced with multi-function units which have been set to print double-sided as the default. The Library has instituted a print-and-hold procedure for printing which has reduced the amount of unnecessary printing. Overall, VCC has reduced paper use by 35% over the past year.

Plans to Continue Reducing Greenhouse Gas Emissions 2012 – 2014

As part of the implementation of VCC's Strategic Plan, an Environment & Sustainability Plan for the college will be created in 2012 to both engage and educate the VCC family (staff, students

Over the next three years, VCC will continue to identify and take advantage of opportunities to cost-effectively reduce energy use. Working with both BC Hydro and Fortis BC, VCC will undertake energy audits to identify potential savings. New chillers are planned for the Broadway Campus and further installation of DDC at the Downtown Campus will help realize energy savings.

Actions to Reduce Provincial Emissions and Improve Sustainability

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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)							
This section is either not applicable, not yet evaluated, or was completed before 2011							
Stationary Fuel Combustion, Electricity and Fugitive Emissions (Buildings)							
Owned buildings							
Establish energy performance baseline for owned buildings	In Development			Gathering baseline consumption information.	Develop a baseline energy performance.	2010	2013
Incorporate integrated design process into new construction or during renovations of owned buildings	Ongoing/In Progress			As per policy in the procurement and awarding of new contracts, integrated design process incorporated into new construction and renovations.	Continue to implement procurement policies.	2011	No End Date (Continuous)
Retrofitting owned buildings							
Upgrade mechanical systems (heating, cooling, ventilation) during retrofits	Ongoing/In Progress			Completed design for installation of new chillers at Broadway Building A.	Install new chillers; install new fume hoods in Science Department.	2011	2013
Upgrade lighting systems during retrofits	In Development				Lighting system retrofits at Broadway Building A; investigating upgrading lighting systems in parking lot at Broadway Campus.	2012	2012
Upgrade/adjust control systems during retrofits	Ongoing/In Progress			Installation of DDC systems at Downtown Campus.	Ongoing installation of DDC systems at both Campuses.	2011	No End Date (Continuous)
IT power management							
Implement server virtualization	Ongoing/In Progress	95	% of servers have been virtualized since start year indicated	New servers configured are virtualized provided the application allows that type of configuration.	Continue with new server virtualization.	2010	No End Date (Continuous)
Remove stand-alone printers, copiers, and/or fax machines and install multi-function devices	Completed in 2011			All stand alone printers have been removed. Any new printers are multi-function devices.		2010	2011
Apply auto-sleep settings on printers, copiers, fax machines, and/or multi-function devices	Completed in 2011	100	% of devices have auto-sleep settings applied	All printing and multi-function devices are configured to auto-sleep.		2010	2011
Appliances and electronic devices							
Replace refrigerators with ENERGY STAR models or source ENERGY STAR models for future purchases	In Development				Replacement of water chilled refridgerators with air chilled at the Broadway Campus.	2012	2012
Replace other appliances or electronic devices with ENERGY STAR models or source ENERGY STAR models for future purchases	Ongoing/In Progress			Procurement policy requires consideration of energy efficiency and ENERGY STAR rating.	Procurement policy requires consideration of energy efficiency and ENERGY STAR rating.	2011	No End Date (Continuous)
Behaviour change program							
Ask staff to unplug electrical equipment or switch off power bars when not in use	Ongoing/In Progress			General communication from IT to staff with the message to reduce consumption by turning off devices when not in use.	Continue to communicate to staff.	2010	No End Date (Continuous)
Provide reminders for turning off lights (e.g., signs, stickers, messages)	Completed in 2011			Posted stickers on light switches throughout both campuses to remind people to turn lights off in unused rooms.		2011	2011

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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
Supplies (Paper)							
Paper Type							
Purchase 30% post-consumer recycled paper	Completed in 2011	100	% of total paper purchased contains 30% recycled content	In 2010, 90% of the paper purchased contained 30% recycled content and 10% of the paper purchased contained 0% recycled content. In 2011, 100% of the paper purchased contained 30% recycled content. From 2010 to 2011 there was a 35% reduction in overall paper use.		2010	No End Date (Continuous)
Printer/document settings							
Switch networked printers and photocopiers to automatic double-sided	Completed in 2011	100	% of network printers or photocopiers are set to automatic double-sided	All network printers and photocopiers set to automatic double-sided.		2010	2011
Apply "print and hold" settings to networked printers to eliminate unclaimed print jobs	Ongoing/In Progress			Print and hold function along with charging for printing established in library resulted in an 80% reduction of printing.	Print and hold function being evaluated for other locations on Campus.	2011	No End Date (Continuous)
Electronic media in place of paper							
Install collaborative software for electronic editing (e.g. SharePoint, Groove, etc.)	In Development	10	% of staff workstations with software installed	Software installed on an as-needed basis; 25% of Administrators now have SharePoint.	Continue to deploy SharePoint as appropriate for business needs.	2011	No End Date (Continuous)
Post materials online that were previously printed	Ongoing/In Progress			Increase of materials posted on-line at myvcc.ca, the intranet site for VCC faculty, staff and students.	Continue to post materials on myvcc.ca as appropriate.	2011	No End Date (Continuous)
Behaviour change program							
Train staff to use collaborative software for electronic editing (e.g. SharePoint, Groove, etc.)	Ongoing/In Progress			Training is provided as needed. On-line training available. VCC is a member of the Microsoft IT Academy Program.	Continue to offer training as needed in on-line applications wherever possible.	2010	No End Date (Continuous)
Encourage staff to hold paperless meetings or presentations (i.e., no handouts)	In Development				Promotion of paperless meetings in 2012. iPads being provided to Leadership Council, VCC Board and Education Council including applications to manage content in order to encourage paperless meetings. Expansion to other College board and committees under consideration.	2012	2014

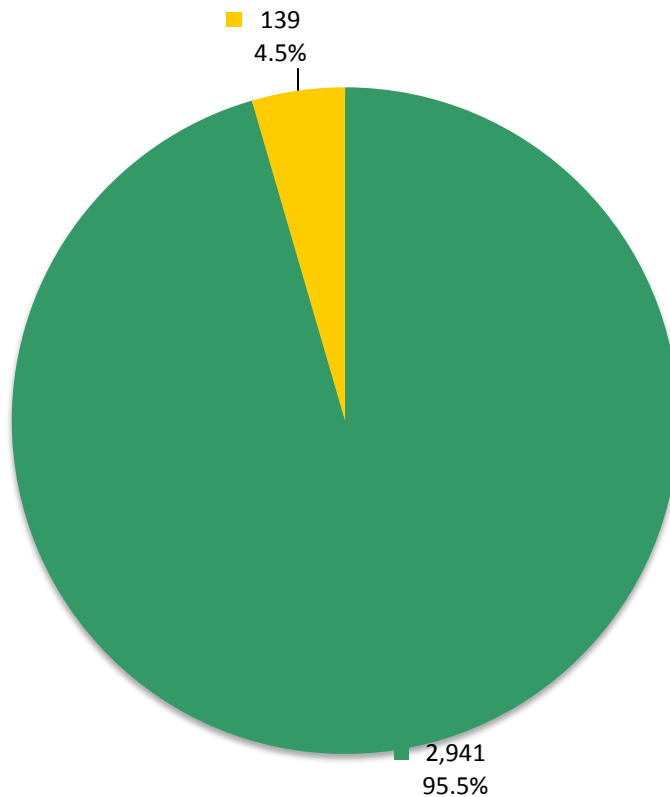
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Actions to Reduce Provincial Emissions and Improve Sustainability							
The actions listed below contribute to a reduction in greenhouse gas emissions from sources that fall outside of the reporting requirements defined in the carbon neutral government 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							
Virtual meeting technology							
Install web-conferencing software (e.g., Live Meeting, Elluminate, etc.)	Ongoing/In Progress	30	% of computers have web-conferencing software installed	Live Meeting installed on all computers. Microphones and headsets provided on an as-needed basis.	Continue to provide microphones and head-sets as required based on business needs.	2010	No End Date (Continuous)
Make desktop web-cameras available to staff	In Development	5	% of staff have access to a desktop web-camera	Web-cameras available to staff if there is a business need. Adobe WebConnect provided for educational delivery of programs.	Continue to provide web cameras as required based on business needs.	2010	No End Date (Continuous)
Install video-conferencing units in meeting rooms or provide mobile video-conferencing units	In Development				Video-conferencing units planned for installation in selected meeting rooms in Fiscal 2012/13.	2012	2013
Behaviour change program							
Train staff in web-conferencing	Ongoing/In Progress			Ad hoc training when requested.	Ad hoc training when requested.	2010	No End Date (Continuous)
Train staff in video-conferencing or provide technical support for video-conferencing set-up	In Development				Training program to be provided as video-conferecing units are installed.	2012	2013
Encourage staff to consider virtual attendance/presentation at events where possible	Ongoing/In Progress			Training and presentations provided on-line whenever possible.	Continue to provide on-line training and presentations whenever possible.	2010	No End Date (Continuous)
Education, Awareness, and Engagement							
Team-building							
Create Green, Sustainability, Energy Conservation, or Climate Action Teams with executive endorsement	In Development			Postion of Manager, Environment & Sustainability created and staffed in November 2011. Part of job entails support for engaging the VCC family (staff, students and faculty) in greening initiatives	Establish Green Teams in all Faculties of the College. Support the creation of an Environmental Club with the Student Union of VCC.	2012	No End Date (Continuous)
Provide resources and/or dedicated staff to support teams	In Development			Postion of Manager, Environment & Sustainability created and staffed in November 2011. Part of job entails support for engaging the VCC family (staff, students and faculty) in greening initiatives	Provide resources to support the actions of VCC Green teams.	2012	No End Date (Continuous)
Providing behaviour change education/training to teams (e.g., community-based social marketing)	In Development			Postion of Manager, Environment & Sustainability created and staffed in November 2011. Part of job entails support for engaging the VCC family (staff, students and faculty) in greening initiatives	Provide training to Green Teams.	2012	No End Date (Continuous)
Staff Professional Development							
Support green professional development (e.g., workshops, conferences, training)	Ongoing/In Progress			Session held at VCC Day in October, 2011.	Green Team development planned for 2012-2014 including training.	2012	No End Date (Continuous)
Staff awareness/education							
Provide education to staff about the conservation of water, energy, and raw materials	In Development				Develop and implement an environmental awareness campaign to engage the VCC family in reducing our environmental footprint.	2012	No End Date (Continuous)

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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 green tips on staff website or in newsletters	In Development			Environmental web page created for staff, faculty and students with green tips and information. GreenVCC twitter account created to share information.	Expand information on environment page.	2012	2014
Provide sustainability education during new staff orientation	In Development			Environmental web page created for staff, faculty and students with green tips and information. GreenVCC twitter account created to share information.	Add sustainability and environmental information to staff orientation package. Expand on-line information for staff and students.	2012	No End Date (Continuous)
Client/public awareness/education							
Provide education to clients/public about the science of climate change	In Development				Develop and implement an environmental awareness campaign to engage the VCC family in reducing our environmental footprint.	2012	2014
Provide education to clients/public about the conservation of water, energy, and raw materials	In Development				Develop and implement an environmental awareness campaign to engage the VCC family in reducing our environmental footprint.	2012	2014
Provide green tips on client/public website or in newsletters	In Development			Environmental web page created for staff, faculty and students with green tips and information. GreenVCC twitter account created to share information.	Develop and implement an environmental awareness campaign to engage the VCC family in reducing our environmental footprint.	2012	2014
Other Education, Awareness, and Engagement Actions							
Green VCC Scavenger Hunt	Ongoing/In Progress				Conduct a Green VCC Scavenger Hunt using Facebook and Twitter as part of new student welcome activities in January 2012.	2011	2012
Pocket Markets	Completed in 2011			Two pocket farmer's markets held in July 2011 at the Broadway campus to bring locally produced and organic produce to staff and students.	Investigate hosting more pocket markets for both campuses.	2012	2012
Green 365 Green Living Fair	In Development				Two green living fairs planned for March 2012 (one at each campus) to support VCC staff and students in reducing their environmental footprint and living a greener lifestyle.	2012	2012
Campus City Collective	Ongoing/In Progress			Participating in an initiative to bring together the City of Vancouver, Vancouver Economic Commission (VEC) and six post-secondary institutions to work together towards the City's green economy targets.	Exploring synergies in the areas of food sciences and the local food movement that are compatible with our culinary programs.	2011	No End Date (Continuous)
Other Sustainability Actions							
Commuting to and from home							
Introduce telework/work from home policy	Ongoing/In Progress			No formal policy in place but technology to support teleworking has been in place since 2010. Many faculty work from home.	Ongoing technological support for teleworking.	2010	No End Date (Continuous)
Provide secure bicycle storage	Ongoing/In Progress			Secure bicycle storage available for staff/faculty.	Assess bicycle facilities for students.	2012	2012
Other Sustainability Actions							
U-pass Program Launched	Completed in 2011			The Student's Union at VCC began working on a campaign with other lower mainland colleges to obtain a U-Pass for students in the Lower Mainland, not just UBC and SFU students. In June 2010 the Provincial Government announced the U-Pass BC Program at the VCC Broadway Campus and in March 2011, after a student referendum, VCC began implementing the U-Pass system.			

**Vancouver Community College
Greenhouse Gas Emissions by Source
for the 2011 Calendar Year (tCO₂e*)**



Total Emissions: 3,080

■ Stationary Fuel Combustion (Building Heating and Generators) and Electricity

■ Supplies (Paper)

Offsets Applied to Become Carbon Neutral in 2011 (Generated May 18, 2012 11:29 AM)

Total offsets required: **3,080**. Total offset investment: **\$77,000**. 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.