

Vancouver Community College - 2010 Carbon Neutral Action Report

Executive Summary

Vancouver Community College is pleased to submit its Carbon Neutral Action Report in support of the Provincial initiative to reduce Greenhouse Gas Emissions.

Overview

Actions Taken to Reduce Greenhouse Gas Emissions in 2010

- The College is nearing completion of significant upgrades of its older campus buildings through the use of funding provided through the Federal and Provincial Knowledge Infrastructure Program.
- Replacement of the atrium glass and skylights of its Downtown Campus with high-efficiency glass.
- Upgrades to the building envelope at its Broadway Campus to reduce heat loss and improve energy efficiency.
- Replacing the boilers at its Broadway campus with high-efficiency units.
- Upgrade of the domestic hot water system at the Downtown Campus in order to reduce energy and water consumption.
- Continued Direct Digital Control (DDC) upgrades at the Broadway Campus to improve heating and ventilation and reduce energy consumption.
- The Students Union voted to enter into an agreement to implement a universal U-pass (public transit) program at VCC. The U-pass program became effective the first of March 2011.

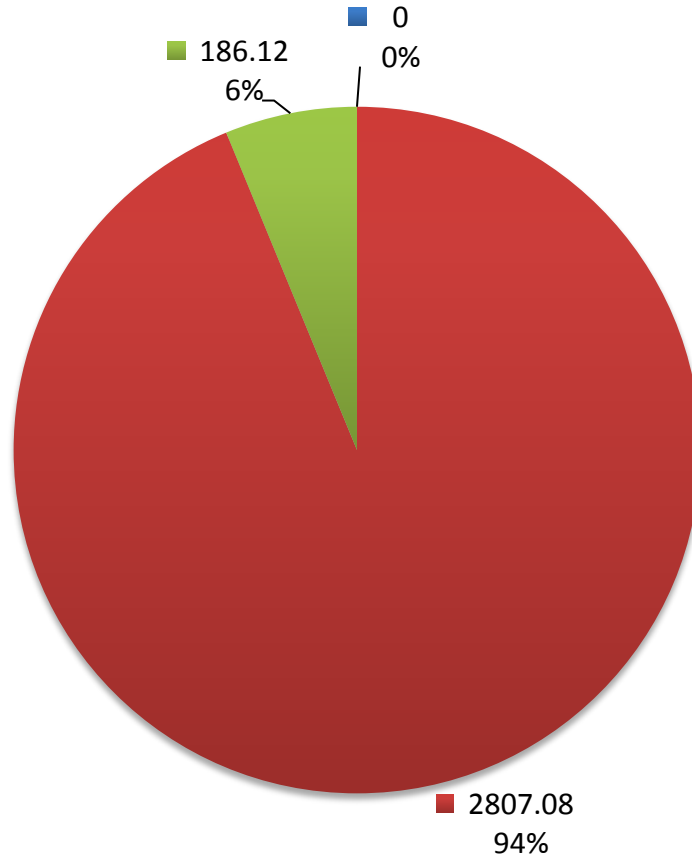
Operational Changes in 2010

The College continues to review its operating procedures in order to reduce emissions. During 2010, the College completed its shift to automated shutdown of electronic equipment such as copiers. It also continued to replace older copiers, equipment and appliances with more modern energy efficient units.

Plans to Continue Reducing Greenhouse Gas Emissions 2011 – 2013

- Continued replacement of regular computers, appliances and other electronic devices with ENERGY STAR models.
- Continued upgrades of washrooms in order to reduce water consumption.
- Planning phased replacement of parking lot lighting systems with high efficiency fixtures.
- Implement strategy to install DDC controls at the Downtown Campus to reduce energy usage.
- Programs to increase awareness and change behaviours related to power and paper consumption.
- Replacement of older less-efficient chillers at the Broadway Campus with higher efficiency units.
- Continued improvements to the Broadway Campus building envelope.
- Review of purchasing practices to encourage the use of more environmentally friendly products and reduce packaging waste.
- Strategy to increase the use of collaborative editing software.
- Increase the use of video conferencing as an alternative to travel.

Vancouver Community College Greenhouse Gas Emissions by Source for the 2010 Calendar Year (tCO₂e*)



Total Emissions: 2993.2

- Mobile Fuel Combustion (Fleet and other mobile equipment)
- Stationary Fuel Combustion and Electricity (Buildings)
- Supplies (Paper)

Offsets Applied to Become Carbon Neutral in 2010

Total offsets purchased: **2993.2**. Total offset investment: **\$74,830.00**. 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.

Vancouver Community College - 2010 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 *Greenhouse Gas Reduction Targets Act*.

Action	Status (as of 12/31/10)	Performance to Date (as of 12/31/10)	Steps Taken in 2010	Steps Planned for 2011 -2013	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 2010						
Stationary Fuel Combustion, Electricity and Fugitive Emissions (Buildings)						
Owned buildings						
Establish energy performance baseline for owned buildings	In Development	0 % of owned buildings have an established energy performance baseline	Started baseline development and gathering of consumption statistics	To develop a baseline energy performance	2010	No End Date (Continuous)
Complete energy retrofits on existing, owned buildings	Ongoing/In Progress	50 % of owned buildings have undergone energy retrofits since start year indicated	Complete lighting retrofit as well as installation of new boilers	Continue with lighting retrofit projects	2008	No End Date (Continuous)
Retrofitting owned buildings						
Upgrade mechanical systems (heating, cooling, ventilation) during retrofits	Ongoing/In Progress	30 % of retrofits since start year indicated had heating, cooling, and ventilation systems upgrades	installation of new domestic hot water systems and new boilers	Replace old chillers	2009	No End Date (Continuous)
Upgrade lighting systems during retrofits	Ongoing/In Progress	50 % of retrofits since start year indicated had lighting systems upgrades	Complete lighting retrofit as well as installation of new boilers	Continue with lighting retrofit projects	2010	No End Date (Continuous)
Upgrade/adjust control systems during retrofits	Ongoing/In Progress	30 % of retrofits since start year indicated had control system upgrades or adjustments	Ongoing installation of lighting sensors and related DDC controls	Continue adding all new equipment to the DDC control systems	2007	No End Date (Continuous)
Improve building insulation (including windows) during retrofits	Ongoing/In Progress	20 % of retrofits since start year indicated had insulation improvements	Complete atrium glass replacement as well as partial building envelope retrofits	Continue building envelope construction.	2010	No End Date (Continuous)
IT power management						
Install power management software which shuts down computers outside of regular business hours	Completed in 2010	90 % of computers shut down automatically outside of regular business hours	Implemented auto shut down software where appropriate		2009	No End Date (Continuous)
Implement server virtualization	Ongoing/In Progress	90 % of servers have been virtualized since start year indicated	Ongoing Strategy for Virtualization	Ongoing Strategy for Virtualization	2008	No End Date (Continuous)
Remove stand-alone printers, copiers, and/or fax machines and install multi-function devices	Ongoing/In Progress	75 % reduction in printers, copiers, and/or fax machines since start year indicated	Continue to convert standalone devices to Multifunction	Continue to convert standalone devices to Multifunction	2009	No End Date (Continuous)
Apply auto-sleep settings on printers, copiers, fax machines, and/or multi-function devices	Ongoing/In Progress	75 % of devices have auto-sleep settings applied	Implement a standardized installation strategy towards machine settings	Cotinue a standardized installation strategy towards machine settings	2009	No End Date (Continuous)

Vancouver Community College - 2010 Carbon Neutral Action Report

Action	Status (as of 12/31/10)	Performance to Date (as of 12/31/10)		Steps Taken in 2010	Steps Planned for 2011 -2013	Start Year	End Year
Replace computers with ENERGY STAR models during regular computer upgrades	Ongoing/In Progress	95	% of computers are ENERGY STAR rated	All replacement computers are energy star rated	All replacement computers are energy star rated	2008	No End Date (Continuous)
Appliances and electronic devices							
Replace refrigerators with ENERGY STAR models or source ENERGY STAR models for future purchases	Ongoing/In Progress	30	% of fridges are ENERGY STAR rated	All refrigeraters replaced have been energy star rated	Continue to swap out old appliances and convert to Energy star products	2008	No End Date (Continuous)
Behaviour change program							
Help staff reduce personal energy use through "workstation tune-ups"	In Development	0	% of current staff have completed a workstation tune-up		Develop a workstation tune-up process	2010	No End Date (Continuous)
Ask staff to unplug electrical equipment or switch off power bars when not in use	Ongoing/In Progress			Implemented a energy awareness campaign	Expand the awareness campaign	2010	No End Date (Continuous)
Ask staff to close blinds at end of work day to reduce heating/cooling demands	In Development				Develop an awareness campaign	2010	No End Date (Continuous)
Encourage use of stairs instead of elevators	In Development				Develop an awareness plan	2010	No End Date (Continuous)
Provide reminders for turning off lights (e.g., signs, stickers, messages)	Ongoing/In Progress			Posted reminders regarding turning off lights and paper consumption Etc.	Continue the ongoing awareness plan	2009	No End Date (Continuous)
Promote hot water conservation	Ongoing/In Progress			Posted reminders regarding consumption and implemented reduction strategies in trades areas	Cotinue to work with departments to reduce consumption	2010	No End Date (Continuous)
Supplies (Paper)							
Paper Type							
Purchase 30% post-consumer recycled paper	Completed in 2010	100	% of total paper purchased contains 30% recycled content	All office paper purchased is 30% post consumer recycled paper		2009	No End Date (Continuous)
Purchase 100% post-consumer recycled paper	Ongoing/In Progress	5	% of total paper purchased contains 100% recycled content	Investgate moving toward higher recycled content paper	Investgate moving toward higher recycled content paper	2009	2013
Printer/document settings							
Switch networked printers and photocopiers to automatic double-sided	Completed in 2010	95	% of network printers or photocopiers are set to automatic double-sided	Implement a standard settings profile when a multi function device is deployed		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	20	% of staff workstations with software installed	Promote the use of electronic editing software	Promote the use of electronic editing software	2009	No End Date (Continuous)
Use electronic document library for filing common documents	Ongoing/In Progress			Greater use of common document sharing	Greater use of common document sharing	2009	No End Date (Continuous)
Post materials online that were previously printed	Ongoing/In Progress			Promote the use of electonic information distribution	Promote the use of electonic information distribution	2009	No End Date (Continuous)
Behaviour change program							

Vancouver Community College - 2010 Carbon Neutral Action Report

Action	Status (as of 12/31/10)	Performance to Date (as of 12/31/10)		Steps Taken in 2010	Steps Planned for 2011 -2013	Start Year	End Year
Train staff to use collaborative software for electronic editing (e.g. SharePoint, Groove, etc.)	Ongoing/In Progress	30	% of staff currently have received collaborative software training	Raised awareness and promoted the use of collaborative software tools	Continue to support and train on the use of collaborative software tools	2010	No End Date (Continuous)
Encourage staff to hold paperless meetings or presentations (i.e., no handouts)	In Development				Develop a strategy to encourage greater use of electronic information to decrease the consumption	2009	No End Date (Continuous)