

Vancouver Community College - 2009 Carbon Neutral Action Report

Executive Summary

Vancouver Community College is pleased to submit its Carbon Neutral Action Report to the Government of British Columbia. The College supports the Provincial initiative to reduce Greenhouse Gas Emissions and is looking forward to working with Government further in this regard.

Management provides regular updates to the Board of Governors with respect to conservation and sustainability efforts. The College put in place an Environmental Sustainability Advisory Group. This group has taken on the task of providing advice to College administration on issues and initiatives related to conservation and sustainability. Membership includes a cross section of stakeholders, including Executive, Students, Faculty, Staff, Management and Volunteers. This group is responsible for providing policy advice to management on related issues.

College –wide initiatives are outlined in the following report. Notable achievements include the installation of energy-efficient hot water tanks at the College’s new building at the Downtown Campus, participation in the BC Hydro Power Smart Study, completion of an energy efficient lighting retrofit project at the Broadway Campus, and providing employees with alternative transportation options. Other college wide initiatives include ongoing modernization each year to replace existing washroom fixtures with new water reducing fixtures, ensuring that over 80% of all paper products purchased are 30% recycled, implementation of online document management system called Sharepoint for all employees, introduction of electronic community college newsletter and implementation of electronic vendor payments.

Overviews

Actions Taken to Reduce Greenhouse Gas Emissions in 2009

- Began the installation of energy-efficient hot water tanks in the Downtown Campus.
- Completed lighting retrofit for the entire Broadway Campus using more energy efficient equipment, T8’s, electronic ballasts, occupation sensors and LED emergency exit lights.
- Installed approximately 75 new bicycle security racks in 2009.
- Encouraged employee participation in Translink’s Employer Pass Program, a fare reduction initiative provided by VCC and provided 2 parking lot spaces for the use of “Zip” cars as an alternative to driving a personal vehicle.

Operational Changes in 2009

In January 2009, the College commissioned 130,000 square foot of new additional educational space in the form of a high energy- efficient Health Sciences building, and thereby increasing the overall GHG emission.

Plans to Continue Reducing Greenhouse Gas Emissions 2010 – 2012

- Apply auto-sleep settings on printers, copiers, fax machines, and/or multi-function devices.
- Replace computers with ENERGY STAR models during regular computer upgrades and replace other appliances or electronic devices with ENERGY STAR models or source ENERGY STAR models for future purchases.
- Complete Direct Digital Control (DDC) installation at the Broadway Campus to improve heating and ventilation and reduce energy consumption.
- Replace the Downtown Campus atrium and library roof glass to improve customer comfort level.
- Replace large sections of the Broadway Campus building envelope to improve insulation properties of building and to improve energy consumption.
- Plan to modernize approximately 7 washrooms each year to reduce water consumption.
- Install high efficiency boilers at the Broadway Campus to decrease consumption of natural gas.
- Implement strategy to install DDC controls at the Downtown Campus by approximately 15% annually.

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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 *Greenhouse Gas Reduction Targets Act*.

| Action | Status (as of 12/31/09) | Performance to Date (as of 12/31/09) | Steps Taken in 2009 | Steps Planned for 2010 -2012 | Start Year | End Year |
|---|----------------------------|---|--|--|------------|--------------------------|
| Mobile Fuel Combustion (Fleet and other mobile equipment) | | | | | | |
| This section is not applicable to this organization | | | | | | |
| Stationary Fuel Combustion, Electricity and Fugitive Emissions (Buildings) | | | | | | |
| Planning/management | | | | | | |
| Install a real time metering system (e.g. Pulse, Reliable Controls, Houle Controls) | In Development | | | Attending a workshop for pulse management day to day energy monitoring systems | 2010 | No End Date (Continuous) |
| Owned buildings | | | | | | |
| Incorporate integrated design process into new construction or during renovations of owned buildings | Ongoing/In Progress | | Integrated design process for new health sciences building | Complete. | 2007 | 2009 |
| Incorporate a refrigerant management strategy into regular building management/maintenance to reduce fugitive emissions | Ongoing/In Progress | | Measurements of fugitive emissions are taken each year | Continue taking measurements and improving refrigeration equipment preventive maintenance programs accordingly. | 2009 | No End Date (Continuous) |
| Complete energy retrofits on existing, owned buildings | Ongoing/In Progress | | Lighting retrofit at the Broadway Campus and the installation of high efficiency hot water tanks were started in 2009 and completed in 2010 | Energy efficient boilers are currently being installed in the Broadway Campus | 2009 | 2010 |
| Retrofitting owned buildings | | | | | | |
| Upgrade mechanical systems (heating, cooling, ventilation) during retrofits | Ongoing/In Progress | | High efficiency hot water tanks in the Downtown Campus were started in 2009 | High efficiency hot water tanks in the Downtown Campus were completed in 2010 | 2009 | 2010 |
| Upgrade lighting systems during retrofits | Ongoing/In Progress | | Began complete lighting retrofit at the Broadway Campus | Completed the lighting retrofit at the Broadway Campus | 2009 | 2010 |
| Upgrade/adjust control systems during retrofits | Ongoing/In Progress | | Complete DDC installation at the Broadway Campus was completed in 2009. | A further 15% conversion to DDC controls in the Downtown Campus is planned to be carried out each year until conversion is complete approximately 2013 | 2008 | No End Date (Continuous) |
| Improve building insulation (including windows) during retrofits | Ongoing/In Progress | | The planning to replace the Downtown Campus atrium and library glass and the replacement of large sections of the Broadway Campus building envelope were carried out in 2009 | The completion of the Downtown Campus atrium and library glass and Broadway building envelope projects are scheduled to be completed in 2010 | 2009 | 2010 |
| IT power management | | | | | | |
| Install power management software which shuts down computers outside of regular business hours | Complete | | Planning and budgeting for energy saving software completed in 2009 | The installation of energy saving software was completed in 2010- | 2009 | 2010 |
| Apply auto-sleep settings on computer monitors and CPUs | Complete | | Planning and budgeting for energy saving software completed in 2009 | The installation of energy saving software was completed in 2010- | 2009 | 2010 |
| Remove stand-alone printers, copiers, and/or fax machines and install multi-function devices | Ongoing/In Progress | | All copiers now being replaced by energy star multi functional devices | All copiers now being replaced by energy star multi functional devices | 2009 | No End Date (Continuous) |

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| Action | Status (as of 12/31/09) | Performance to Date (as of 12/31/09) | Steps Taken in 2009 | Steps Planned for 2010 -2012 | Start Year | End Year |
|--|----------------------------|---|--|--|------------|-----------------------------|
| Apply auto-sleep settings on printers, copiers, fax machines, and/or multi-function devices | Ongoing/In Progress | | All copiers now being replaced by energy star multi functional devices and have auto sleep functions | All copiers now being replaced by energy star multi functional devices and have auto sleep functions | 2008 | No End Date (Continuous) |
| Replace computers with ENERGY STAR models during regular computer upgrades | Ongoing/In Progress | | All new computers that were installed are energy star rated | All new computers that will be installed 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 | | All new refrigerators that were installed are energy star rated | All new refrigerators that will be installed are energy star rated | 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 | | All new microwaves that were installed are energy star rated | All new microwaves that will be installed are energy star rated | 2009 | 2010 |
| Behaviour change program | | | | | | |
| Promote hot water conservation | In Development | | None | Evaluating hot water usage in our commercial size dishwashers. | 2010 | No End Date (Continuous) |
| Supplies (Paper) | | | | | | |
| Paper Type | | | | | | |
| Purchase 30% post-consumer recycled paper | Ongoing/In Progress | | over 80% of all paper products purchased are 30% recycled | Currently under review to purchase more recycled paper | 2008 | No End Date (Continuous) |
| Electronic media in place of paper | | | | | | |
| Install collaborative software for electronic editing (e.g. SharePoint, Groove, etc.) | Complete | | Share Point made available to all VCC staff | Plans to increase usage for electronic filing and project management functions | 2008 | No End Date (Continuous) |
| Post materials online that were previously printed | Ongoing/In Progress | | Introduce electronic community college news letter | To continue looking for other similar opportunities | 2009 | No End Date (Continuous) |
| Switch to an electronic payroll notification system in place of paper pay stubs | Complete | | Completed some years ago | | 2001 | No End Date (Continuous) |
| Behaviour change program | | | | | | |
| Train staff to use collaborative software for electronic editing (e.g. SharePoint, Groove, etc.) | Ongoing/In Progress | | Finance first users for budget process | Planning for rollout for all other departments | 2008 | No End Date (Continuous) |
| Encourage re-use of scrap paper | Ongoing/In Progress | | Encourage use of scrap paper | Ongoing | 1990 | No End Date (Continuous) |

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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 *Greenhouse Gas Reduction Targets Act*. 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 12/31/09) | Performance to Date (as of 12/31/09) | Steps Taken in 2009 | Steps Planned for 2010 -2012 | Start Year | End Year |
|---|----------------------------|---|---|---|------------|-----------------------------|
| Business Travel | | | | | | |
| Virtual meeting technology | | | | | | |
| Install web-conferencing software (e.g., Live Meeting, Elluminate, etc.) | Complete | | 100% of admin staff computers now have this function | | 2009 | 2010 |
| Behaviour change program | | | | | | |
| Encourage staff to consider virtual attendance/presentation at events where possible | Ongoing/In Progress | | Encouraged Webinars | Continue to encourage | 2009 | No End Date (Continuous) |
| Encourage carpooling to meetings | Ongoing/In Progress | | When travelling between campuses, encourage carpooling or skytrain/transit | Continue to encourage | 1990 | No End Date (Continuous) |
| Encourage alternative travel to meetings (e.g., bicycles, public transit, walking) | Ongoing/In Progress | | Campuses exist on transit routes. VCC has the highest transit use in the Lower Mainland. | Continue to encourage | 1990 | No End Date (Continuous) |
| Education, Awareness, and Engagement | | | | | | |
| Team-building | | | | | | |
| Create Green, Sustainability, Energy Conservation, or Climate Action Teams with executive endorsement | Complete | | Created Environmental Sustainability Advisory Group (ESAG). The ESAG advises the College's Executive Team on matters of environmental responsibility and generate ideas for initiatives that promote and support environmental responsibility within the College and the College community. | Ongoing. Reports to Operations Council and Board Finance Committee. | 2009 | No End Date (Continuous) |
| Provide resources and/or dedicated staff to support teams | Complete | | The ESAG is made of representatives from various constituency groups (faculty, support staff, student) as well from Executive and administration. | Ongoing. | 2009 | No End Date (Continuous) |
| Providing behaviour change education/training to teams (e.g., community-based social marketing) | Complete | | Sustainability Fair for the Community. | Ongoing. | 2009 | No End Date (Continuous) |
| Staff awareness/education | | | | | | |
| Provide sustainability education during new staff orientation | In Development | | Provide information on transit, Zipcar program, and Employer Pass Program (Translink) | Ongoing. | 2009 | No End Date (Continuous) |
| Other Education, Awareness, and Engagement Actions | | | | | | |

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|--|----------------------------|---|---|--|------------|-----------------------------|
| All automotive students receive ongoing training on how they can ensure autos are run to the highest fuel efficiency. | Ongoing/In Progress | | Objectives. Educating automotive students about alternative fuels. Ensuring anti-freeze and oil products are recycled and using environmentally friendly de-greasers and hand cleaners. Replacing water faucets with low flow types. Preserving habitat and species by increasing landscaped area's within all campus grounds. Participating in an effective recycling program. Committing to a campus wide tobacco free environment in participation with Fraser Health using posters designed by VCC Graphic Arts students and by implementing a VCC smoke-free policy in 2008. Adapting purchasing practices which utilize environment friendly renewable/re-usable materials such as all paper products, janitorial cleaning products and re-cycled paper plates. | Ongoing | 2005 | 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 | | Ongoing renovations each year to replace existing washroom fixtures with new water reducing fixtures | Plan to renovate approximately 7 washrooms each year | 2008 | No End Date (Continuous) |
| 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 | | Ongoing renovations each year to replace existing washroom fixtures with new water reducing fixtures | Plan to renovate approximately 7 washrooms each year | 2008 | No End Date (Continuous) |
| Waste reduction/diversion | | | | | | |
| Put in place an operations policy to facilitate the reduction and diversion of building occupant waste from landfills or incineration facilities | In Development | | Looking at organic waste disposal opportunities. | Ongoing. | 2008 | No End Date (Continuous) |
| Implement a hazardous waste reduction and disposal strategy | In Development | | | Currently reviewing Waste Disposal contract | 2010 | 2011 |
| 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 | | Cafeteria takeout containers are post-consumer waste. | Continue to encourage the use of post consumer waste takeout containers. | 2008 | No End Date (Continuous) |
| Establish green standards for goods that are replaced infrequently and/or may require capital funds to purchase (e.g., office furniture, carpeting, etc.) | In Development | | Photocopiers are environmentally de-constructed. | Continue to utilize environmentally de-constructed photocopiers. | 2009 | No End Date (Continuous) |
| Implement sustainable purchasing program for cleaning products, disposable paper products and trash bags | Ongoing/In Progress | | Cleaning vendor uses environmentally chemical cleaning products. | Continue to encourage the use of environmental friendly chemical cleaning products. VCC is also looking at adding/expanding the use of environmentally sustainable floor maintenance products. | 2008 | No End Date (Continuous) |
| Building construction, renovation, and leasing | | | | | | |
| Establish a policy to reuse materials where possible and divert construction and demolition debris from landfills and incineration facilities | Ongoing/In Progress | | Reuse some building materials where appropriate such as doors, door frames, windows, ceiling tiles. | Investigate opportunities for continued and expanded use recycled building materials. | 2005 | No End Date (Continuous) |
| Indoor air quality | | | | | | |

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|---|----------------------------|---|--|---|------------|-----------------------------|
| Incorporate low volatile organic compounds (VOCs) standards into procurement policy for products such as paints, carpets, and furniture | Ongoing/In Progress | | Use of eco-lab paints - Low-Voc paints | Completed conversion to eco-lab paints and ongoing commitment to continue to utilize eco-friendly products where available. | 2007 | No End Date (Continuous) |
| Commuting to and from home | | | | | | |
| Introduce telework/work from home policy | In Development | | Under review. | Ongoing discussions with various constitutents group regarding telework issues. | 2009 | No End Date (Continuous) |
| Offer staff a compressed work week | Complete | | Office staff and faculty work compressed work week per collective agreement. | Collective agreements are under review and will be discussed under the context of c ollective bargaining. | 1990 | No End Date (Continuous) |
| Encourage commuting by foot, bicycle, carpool or public transit | Ongoing/In Progress | | Translink annual discount passes are being promoted and issued. Provide 2 parking lot spaces for the use of "Zip" cars as an alternative to owning a personal vehicle. | Continue promoting translink discount packages | 2009 | No End Date (Continuous) |
| Provide shower or locker facilities for staff/students who commute by foot or by bicycle | Complete | | Provided at both campuses. | The College will continue to provide and encourage the use of these facilities. | 1990 | No End Date (Continuous) |
| Provide secure bicycle storage | Complete | | Secure caged cycling spaces were built and opened in 2009 | Continue to review space requirements if # of cyclist increases | 2009 | No End Date (Continuous) |
| Modify parking fees or parking availability for staff/students | Ongoing/In Progress | | Evaluated parking fees. | The College will continue to evaluate market conditions relative to parking rates. | 2009 | No End Date (Continuous) |