



2009 Carbon Neutral Action Report

Executive Summary

To decrease greenhouse gases and energy for 2010, NWCC's planning revolved around the following:

- Continuing to re-envelope one dormitory building per year (pending ministry funding)
- Completing audits for submission to potential funding agencies to reduce energy use.
- Continuing to investigate ways to reduce fuel consumption.
- High level LEED Certification for renewal/renovation project in Smithers
- Planning for installation of composting unit for college and community groups.
- Pursuing lighting retrofits

Overviews

Actions taken to Reduce Greenhouse Gas Emissions in 2009

In the Year of 2009 the college reduced its carbon footprint by embarking on a number of projects such as:

- Replacing windows in the House of Spruce Building (windows were a vintage of 1968).
- Marketing dept. has ceased printing of course brochures and course calendars.
- Lighting retrofit and re-insulation of Kalum Lake Dormitory Building.
- More reliance on College website and portals for documentation and reporting.
- The above measures will certainly decrease our utility bills and subsequent offset costs at the end of 2010.

Plans to Continue Reducing Greenhouse Gas Emissions 2010-2012

- We are researching a biomass boiler arrangement for reducing natural gas consumption for heating at the Terrace Campus. We are also looking at tapping in with other public agencies for biomass heating at the Houston Campus.
- DDC Upgrades for two buildings: Daycare and Boilerhouse
- To reduce maintenance vehicle use, we are looking at purchasing a "work – tryke" which will be equipped with large tool basket. We will see reduced cost and consumption associated with this acquisition.
- Houston Campus: Lighting retrofit audit has been completed and we will investigate possible rebates for products and labour for this project.

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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)							
Vehicle fuel efficiency							
Replace vehicles with more fuel-efficient models	Ongoing/In Progress	10	% of vehicles are fuel- efficient models	No new vehicles were leased or purchased this year.	As leases come up for renewal or as vehicles need to be replaced, we are choosing more fuel efficient models	2008	No End Date (Continuous)
Replace larger vehicles with smaller models according to fleet "right-sizing" principles	Ongoing/In Progress	0	% of vehicles down-sized since start year indicated	No new vehicles were leased or purchased this year.	As leases come up for renewal or as vehicles need to be replaced, we are choosing more fuel efficient models with use of these principles.	2010	No End Date (Continuous)
Replace small maintenance vehicles with more fuel-efficient models	In Development	0			As small maintenance vehicles are retired, we will purchase or lease more fuel efficient models.	2011	No End Date (Continuous)
Behaviour change program							
Provide fleet driver training to reduce fuel use	In Development				To work with Continuing Education Dept. to develop a fleet driver training program.	2010	No End Date (Continuous)
Introduce anti-idling policy and/or raise anti-idling awareness for fleet drivers (e.g., signs, stickers, messages)	Ongoing/In Progress			Installed more posters and bumper stickers, campus wide	Continue to install signage where needed (EG: New buildings etc.)	2008	No End Date (Continuous)
Encourage carpooling in fleet vehicles	Ongoing/In Progress	80	% of people that carpool to events and/or meetings	In 2009, we used much stronger language in our reminders to people who are attending out of town meetings and gathering events.	For events this year, the NWCC president has implemented mandatory carpooling to events with use of rental charters and inhouse fleet buses.	2008	No End Date (Continuous)
Promote alternatives to fleet vehicle travel where possible (e.g., bicycles, public transit, walking)	Ongoing/In Progress			The Smithers construction project includes an installation of a shower so that staff can have a place to clean up after bicycling or walking to work.	If any new projects come to light, we will look at future showers or other LEED incentives to discourage use of motor vehicles.	2009	No End Date (Continuous)
Stationary Fuel Combustion, Electricity and Fugitive Emissions (Buildings)							
Owned buildings							
Register for performance labelling/certification for operations and maintenance of owned buildings (e.g., LEED EB:O&M)	Ongoing/In Progress	4	% of owned buildings have operations and maintenance labelling/certification	From 2004, the new Rupert campus design included LEED practices and products for example: Low flow toilets, waterless urinals etc.	Any new renovations or projects will incorporate LEED approved products and practices.	2004	No End Date (Continuous)
Achieve LEED NC Gold certification at a minimum for new construction or major renovations	Ongoing/In Progress	4	% of owned buildings are certified LEED NC Gold or LEED NC Platinum	In 2009 the Smithers renovation/renewal project incorporated LEED gold into the design.	If we embark on new projects during this time frame, we will strive for Gold LEED rating.	2009	No End Date (Continuous)
Incorporate a refrigerant management strategy into regular building management/maintenance to reduce fugitive emissions	Ongoing/In Progress			In 2009, we replaced water cooled condensers to air cooled ones. This reduces water consumption.	When a refrigeration unit requires replacement, we will continue to replace components with air cooling capability as well as environmentally sound refrigerant.	2009	No End Date (Continuous)
Complete energy retrofits on existing, owned buildings	In Development			Planning for DDC upgrades in two buildings.	Houston Campus - furnace replacement/biomass tap in.	2009	No End Date (Continuous)
Retrofitting owned buildings							

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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
Upgrade mechanical systems (heating, cooling, ventilation) during retrofits	Ongoing/In Progress	8	% of retrofits (captured above) had heating, cooling, and ventilation systems upgrades	Kalum Lake dormitory had newer more efficient exhaust fans installed in the shower washroom areas	We are investigating the feasibility of installing a biomass boiler for the Terrace Campus for heating.	2009	No End Date (Continuous)
Upgrade lighting systems during retrofits	Ongoing/In Progress	4	% of retrofits (captured above) had lighting systems upgrades	Kalum Lake dormitory received energy efficient lighting on the second floor as it was a code requirement.	The main floor of Kalum Lake Dormitory is planned for lighting retrofit as well as another dormitory lighting retrofit. BC Hydro powersmart reimbursed us for these lights now onsite but not yet installed.	2005	No End Date (Continuous)
Upgrade/adjust control systems during retrofits	Ongoing/In Progress	0	% of retrofits (captured above) had control system upgrades or adjustments	The Boilerhouse and Daycare DDC controls were scoped out for replacement.	DDC Controls for both Boilerhouse and Daycare are slated to be done in 2010.	2010	No End Date (Continuous)
Improve building insulation (including windows) during retrofits	Ongoing/In Progress	8	% of retrofits (captured above) had insulation improvements	In 2009, We replaced all the windows in the Spruce Building and we resided and reinsulated the Kalum Lake Dormitory Building.	If ministry funds permit, we will be carrying out re-envelopment projects on one dormitory building per year.	2009	No End Date (Continuous)
Install an on-site renewable energy demonstration project	Ongoing/In Progress	0	% of retrofits (captured above) had on-site renewable energy components	The Houston campus was slated as a possibility to be part of a biomass boiler project, along with other public institutions.	By end of 2010, feasibilities for the Houston Campus joint biomass arrangement and the separate Terrace Campus biomass boiler project; will be determined.	2009	No End Date (Continuous)
IT power management							
Install power management software which shuts down computers outside of regular business hours	In Development				IT department has developed a five-year plan to implement cost-saving practices, procedures and products.	2010	No End Date (Continuous)
Implement server virtualization	In Development				IT department has developed a five-year plan to implement cost-saving practices, procedures and products.	2010	No End Date (Continuous)
Apply auto-sleep settings on computer monitors and CPUs	In Development				IT department has developed a five-year plan to implement cost-saving practices, procedures and products.	2010	No End Date (Continuous)
Remove stand-alone printers, copiers, and/or fax machines and install multi-function devices	In Development				IT department has developed a five-year plan to implement cost-saving practices, procedures and products.	2010	No End Date (Continuous)
Apply auto-sleep settings on printers, copiers, fax machines, and/or multi-function devices	In Development	10			IT department has developed a five-year plan to implement cost-saving practices, procedures and products.	2010	No End Date (Continuous)
Replace computers with ENERGY STAR models during regular computer upgrades	Ongoing/In Progress	100	% of computers are ENERGY STAR rated	Continued replacement of computers that are more energy efficient.	ALL computers are that are replaced, even new laptops will be energy star rated.	2000	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	95	% of fridges are ENERGY STAR rated	Dormitory fridges purchased (Energy Star-rated)	ALL fridges that require replacement will be replaced with energy star rating - hopefully with BC Hydro's "buy-back program"	2005	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			Some items purchased in 2009 were energy-star rated.	Educate and pass on clear message that if any appliances are to be purchased, they shall be "energy star" rated.	2009	No End Date (Continuous)
Replace desk lamp incandescent bulbs with compact fluorescent (CFL) bulbs or source more efficient desk lamps for future purchases	Ongoing/In Progress			Some few bulbs have been overlooked and were changed out.	Soffit lighting to be converted to low-temp fluorescents in the dormitories and the fridges. We will assess low volume areas such as crawlspaces and fan rooms to change out fluorescents if not yet done.	2005	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
Behaviour change program							
Ask staff to unplug electrical equipment or switch off power bars when not in use	Ongoing/In Progress			Plans for "green reminders" for 2010.	Periodic reminders planned to educate and inform staff and students about shutting off lights, power bars etc.	2010	No End Date (Continuous)
Ask staff to close blinds at end of work day to reduce heating/cooling demands	Ongoing/In Progress			Although we don't specifically ask people to close blinds, we have a sign on every classroom door to instruct people to close windows before they leave.	Will implement reminder of window closing and incorporate closing of blinds before one leaves the classroom and/or office	2009	No End Date (Continuous)
Provide tips to staff on saving energy in the office while working outside of regular business hours	Ongoing/In Progress			This is part of "green reminder" process	Scheduled, periodic reminders.	2010	No End Date (Continuous)
Encourage use of stairs instead of elevators	Ongoing/In Progress			This is part of "green reminder" process	Scheduled, periodic reminders.	2010	No End Date (Continuous)
Provide reminders for turning off lights (e.g., signs, stickers, messages)	Ongoing/In Progress			This has started this year with reminders via email.	This will become part of periodic reminders.	2010	No End Date (Continuous)
Promote hot water conservation	Ongoing/In Progress			This part of "green reminder" process	Scheduled, periodic reminders.	2010	No End Date (Continuous)
Supplies (Paper)							
Paper Type							
Purchase 30% post-consumer recycled paper	Ongoing/In Progress	12	% of total paper purchased contains 30% recycled content	Coloured paper has become solely 30% recycled type.	Feasibility of using higher percentage recycled paper.	2008	No End Date (Continuous)
Purchase 100% post-consumer recycled paper	In Development	0			Looking at compatible 100% recycled paper to use in machines, it has been a challenge, but research will continue.	2010	No End Date (Continuous)
Printer/document settings							
Switch networked printers and photocopiers to automatic double-sided	In Development				This is part of the IT plan.	2010	No End Date (Continuous)
Electronic media in place of paper							
Use electronic document library for filing common documents	Ongoing/In Progress			Increased number of documents and forms available on the portal.	Looking at Time sheet installation via portal.	2003	No End Date (Continuous)
Post materials online that were previously printed	Ongoing/In Progress			Created a portal, just for OH & S	OH & S minutes are going to be going "paperless" as they will be available on the portal.	2009	No End Date (Continuous)
Switch to an electronic payroll notification system in place of paper pay stubs	Ongoing/In Progress			For expense reimbursements, "e-check" direct deposit now set-up so it's taking the place of standard paper cheques.	Broaden the expense direct-deposit for all employees with email capability.	2009	No End Date (Continuous)
Behaviour change program							
Train staff to use collaborative software for electronic editing (e.g. SharePoint, Groove, etc.)	In Development				This is part of the IT plan.	2010	No End Date (Continuous)
Encourage staff to hold paperless meetings or presentations (i.e., no handouts)	In Development				Management Operations Committee meetings are converting to paperless format this year (budget dependent).	2010	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.)	In Development			This action item will become part of IT five-year plan	2010	No End Date (Continuous)
Make desktop web-cameras available to staff	In Development			This action item will become part of IT five-year plan	2010	No End Date (Continuous)
Install video-conferencing units in meeting rooms or provide mobile video-conferencing units	Ongoing/In Progress	80 % of meeting rooms have access to video-conferencing equipment	Installed LCD in Rupert Campus classroom	To look at video-conferencing capability in Haida G'waii campuses	2008	No End Date (Continuous)
Behaviour change program						
Train staff in web-conferencing	Ongoing/In Progress		Adobe Live Meeting training sessions took place, end of 2009.	To increase number of people trained on this feature.	2009	2009
Train staff in video-conferencing or provide technical support for video-conferencing set-up	Ongoing/In Progress		Ongoing training in use of video-conferencing tool.	To increase number of people trained on this feature.	2008	No End Date (Continuous)
Encourage staff to consider virtual attendance/presentation at events where possible	Ongoing/In Progress		Continued use of video-conferencing for management meetings.	Look at video-conferencing capability on Haida G'waii campuses	2008	No End Date (Continuous)
Encourage carpooling to meetings	Ongoing/In Progress		As mentioned previously, stronger and more "firmer" language was used in carpooling reminders.	Carpooling to meetings out of town and within city limits will be a requirement.	2008	2010
Encourage alternative travel to meetings (e.g., bicycles, public transit, walking)	In Development			To assess transit schedules and encourage public transit. To incorporate use of Maintenance tricycle as a means for packing tools from building to building instead of using a truck.	2010	No End Date (Continuous)
Education, Awareness, and Engagement						
Team-building						
Create Green, Sustainability, Energy Conservation, or Climate Action Teams with executive endorsement	Ongoing/In Progress		Although team was developed in 2007, no further work this year has been done.	Resume "Green Team" activities	2007	No End Date (Continuous)
Provide resources and/or dedicated staff to support teams	Ongoing/In Progress		Budgets established for recycling programs.	Resume "Green Team" activities	2009	No End Date (Continuous)
Providing behaviour change education/training to teams (e.g., community-based social marketing)	Ongoing/In Progress		No Green Fair was held in 2009	Rekindle NWCC's annual Green Fair	2007	No End Date (Continuous)
Staff Professional Development						
Support green professional development (e.g., workshops, conferences, training)	Ongoing/In Progress		Green Fair was the perfect climate for these type of workshops.	Rekindle NWCC's annual Green Fair.	2007	No End Date (Continuous)
Staff awareness/education						

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Provide education to staff about the science of climate change	Ongoing/In Progress		NWCC Instructor, Dr. Gord Weary gave excellent presentations regarding the science of climate change and energy conservation.	Continue in-depth presentations	2009	No End Date (Continuous)
Provide education to staff about the conservation of water, energy, and raw materials	Ongoing/In Progress		NWCC Instructor, Dr. Gord Weary gave excellent presentations regarding the science of climate change and energy conservation.	Continue in-depth presentations	2009	No End Date (Continuous)
Provide green tips on staff website or in newsletters	Ongoing/In Progress		"Green" section of NWCC website has not been revised from 2008	Refresh NWCC's Green Mandate and use this portal	2008	No End Date (Continuous)
Provide sustainability education during new staff orientation	Ongoing/In Progress		Revised staff Orientation package	Increase scope of climate action items in orientation to include green tips and current recycling practices.	2009	No End Date (Continuous)
Client/public awareness/education						
Provide education to clients/public about the science of climate change	Ongoing/In Progress		Environmental Science program developed at NWCC	Increase exposure and success of this education program.	2009	No End Date (Continuous)
Provide education to clients/public about the conservation of water, energy, and raw materials	Ongoing/In Progress		Part of above, through education offering.	As above.	2009	No End Date (Continuous)
Provide green tips on client/public website or in newsletters	Ongoing/In Progress		"Green" section of NWCC website has not been revised from 2008	Refresh NWCC's Green Mandate and use this portal	2008	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		Plan in place in 2009	Develop a standard list to include water saving devices.	2009	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		Conversion to air-cooled condensers, One dormitory fitted with water-saving toilets and sinks.	In new construction or renovation, low-flow bathroom fixtures are to be installed.	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	Ongoing/In Progress		Plan for purchase a food composter for cafeteria waste.	Have composter fully operational by Winter Games event.	2009	2010
Procurement (non-paper supplies)						
Implement sustainable purchasing program for cleaning products, disposable paper products and trash bags	Ongoing/In Progress		In 2008, we started incorporating use of environmentally friendly cleaning products in our janitorial contracts. This year, we implemented new contracts for Terrace and Houston.	Revised contracts to be in place for Prince Rupert and Hazelton to reflect environmentally friendly cleaning products.	2008	No End Date (Continuous)
Indoor air quality						
Enforce a scent-free policy (e.g., no strong perfumes, deodorants, etc.)	Ongoing/In Progress		Scent-free policy has been in place now for a number of years now due to OH & S concerns.	Continue to replace or enhance signage to remind people of "No-Scent Zones"	2004	No End Date (Continuous)
Commuting to and from home						
Encourage commuting by foot, bicycle, carpool or public transit	Ongoing/In Progress		Carpooling to/from work is encouraged.	Continue to remind people the benefits of carpooling via NWCC green portal on website.	2009	No End Date (Continuous)
Provide shower or locker facilities for staff/students who commute by foot or by bicycle	Ongoing/In Progress		As mentioned previously, this is part of Smithers renewal/renovation project for LEED Qualification points.	Look at possibility of having showers available at Terrace campus for those who walk or ride bike to work.	2009	No End Date (Continuous)

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Provide secure bicycle storage	Ongoing/In Progress		No new bike racks installed this year.	Ensure that Smithers project includes bike rack, expand bike rack inventory at Terrace Campus.	1990	No End Date (Continuous)