

Carbon Neutral Action Report Langara College

Executive Summary

Langara College has been working at reducing green house gases for many years beginning with the incentive programs developed by BC Hydro and subsequently with programs developed through the Office of Energy Efficiency, Natural Resources Canada and the Association of Canadian Community Colleges. The Energy Management Action Plan that Langara has been updating since 1999 shows the College's ongoing commitment. (see attached)

In recent years Langara has completed two major construction and renovation projects both built to LEED gold standard utilizing many innovative energy conserving construction features and geoexchange mechanical design.

Upgrades to the existing mechanical systems in the older buildings are being done to utilize the least amount of energy, Langara will have an Energy Manager who will focus on the continued development of the carbon neutrality program. In addition, consideration of including sustainability in curriculum is underway.

Objectives

Langara College has an Environmental Responsibility Policy that governs the College in addition to the to the key objective of reducing GHG emissions. (see attached)

Part 1: Actions Taken to Reduce Greenhouse Gas Emissions in 2008

Overview

Langara College's newest building occupied in September 2008 is built to LEED gold standards and has been designed to utilize 71% less energy than the base case allowed by the Model National Energy Code for Buildings. The 7,700 square metre library/classroom building utilizes geoexchange heating and cooling through radiant slab technology, and relies on low volume ventilation. The building uses natural lighting, energy efficient fixtures, water saving units and natural ventilation. Construction also began on retrofitting the old library building and a new Students' Union building which are also being built to LEED gold standards.

1.1 Mobile Fuel Combustion

Action	Action Taken	Outcome/Performance Measure	Notes Clarifying Action Taken
Encouraged use of public transit/active transportation	In Progress	Employees & students are encouraged to use public transit	All credit students have a TransLink Upass. Employees have access to the TransLink Employee Pass Program
Encouraged alternatives to travel in fleet vehicles – bicycles, scooters, electric carts	In Progress	Employees & students are encouraged to take alternate transportation	Free parking in many dedicated areas for bicycles & scooters plus a secure bicycle lock up areas and access to showers.

1.2 Stationary fuel combustion and electricity

Action	Action Taken	Outcome/Performance Measure	Notes Clarifying Action Taken
Replaced # computers with EnergyStar models	In Progress	As computers come up for renewal they are replaced with EnergyStar models	All new computers purchased are Energy Star certified, approximately 300/year.
Turned off lights in unused rooms	In Progress	Employees & students are encouraged to turn off lights	Most rooms have been equipped with motion sensors to automatically turn off lights
Replaced Refrigerators (EnergyStar rated appliance)	In Progress	Replace refrigerators with EnergyStar models when required	As refrigerators need replacing only EnergyStar units are selected.
Replaced other appliances (with EnergyStar rated appliance)	In Progress	Replace other appliances with EnergyStar models when required	When other appliances need replacing EnergyStar is selected if available.
Installed multi-function devices (and removed stand-alone printers/faxes)	In Progress	The College encourages multi-function devices	This is an ongoing program, photo copiers are being upgraded to provide all these functions.
Replaced standard bulbs with CFLs	In Progress	Employees are encouraged to replace personal lights with CFLs	All complete except for personal work station lamps.
Installed motion activated lights	In Progress	The College promotes motion activated lights	Done in most areas and added to where needed.
Undertaken lighting retrofit	Complete	Lighting retrofit to reduce energy consumption	Completed in 2001
Utilized desk-top power management settings on computer	In Progress	The College requires power management settings on all computers	All work stations and classrooms are set to shut down when not in use. All labs power down at 11:00 PM and all office computers are scheduled to be modified.
Undertaken building energy audit at LOCATION(s)	Complete	Energy audit to reduce energy consumption	Completed in 2000, new buildings are designed to be energy efficient.
Initiated or completed a building energy retrofit	Complete	Energy retrofit to reduce energy consumption	Completed in 2001, new buildings are constructed to be energy efficient.
Install vending miser on vending machines	Complete	All vending machines to have energy savings setting	Already in place on existing machines and installed with the new contract in 2008.

1.3 Supplies

Action	Action Taken	Outcome/Performance Measure	Notes Clarifying Action Taken
Committed to use 30% recycled paper	In Progress		All paper is at least 30% recycled

Developed document library (online and one printed copy) for large documents	In Progress	The College encourages online documents where possible	Many documents through Records Management are now scanned and retained on line for viewing only and the program is being expanded.
Used collaborative software to edit on-line	In Progress	The College encourages editing online where possible	Course packages are edited on line
Re-used non-confidential scrap paper	In Progress	Re-use of scrap paper is encouraged	The copier room makes up note pads from non-confidential paper scraps.
Actions on non-paper related supplies:			
Encouraged re-use of furniture and equipment	In Progress	Re-use of F & E is encouraged where practical	This is encouraged but limited to space and ergonomic requirements.
Office News letter online	Complete	Weekly newsletter is to be online only	The College news letter has been changed to online publication only.

1.5 Employee Engagement

Action	Action Taken	Outcome/Performance Measure	Notes Clarifying Action Taken
Provided climate change education	In Progress	To provide climate change education	Langara runs courses for employees that focus on climate change
Provided conservation education	In Progress	To provide conservation education	Langara runs courses for employees that focus on conservation
Developed Green Teams	In Progress	To encourage environmental issues	Participates annually in the City of Vancouver Bike to work competition
Supported Green Teams (resources)	In Progress	To support environmental committees	There are College Environmental, Sustainability and Transportation Demand committees that focus on environment issues and alternate

1.6 Sustainability Actions (others)

Action	Action Taken	Outcome/Performance Measure	Notes Clarifying Action Taken
Took water conservation measures – low flow showers or toilets, fix leaks	In Progress	Change to water saving devices with any renovations and new construction	New building occupied in 2008 has only low flow fixtures, waterless urinals etc.
Reduced/replaced bottled water with filtered or refrigerated water	In Progress	Move toward filtered water instead of bottled water	Done in some locations and considering others.
Improved recycling measures	In Progress	encourage recycling for all employees and students	Installed new receptacles in public hallways that are specific for bottles & tins, paper, and garbage.
Supported composting	In Progress	encourage composting where practical	Installed compost receptacles in dining room to add to existing worm composting from kitchen waste.

Purchased green cleaning products	Complete	Change to green cleaning products	All cleaning products are now green products
Used green (low-e paints)	Complete	Switch to low-e paints for all new work	All new construction only used Low-e paints as part of the LEED program and all new painting on campus has been done with low-e paint
Use of Formaldehyde free products	In Progress	Reduce the use of formaldehyde products	All plywood for project work is formaldehyde free
Use of Biodegradable products	Complete	Switch to biodegradable products in the cafeteria	The cafeteria has switched to all biodegradable products for plates, containers, cutlery etc

Part 2: Plans to Continue Reducing Greenhouse Gas Emissions 2009 -- 2011

Overview	The College is committed to reducing greenhouse gas emissions and has a track record of doing so. In order to move forward the College is partnering with BC Hydro in hiring an Energy Manager to work with the College towards meeting key measures outlined in the Energy Management Assessment and to help the College in increasing energy efficiency and reducing the College's carbon footprint.			
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2.1 Mobile Fuel Combustion

Establish anti-idling behaviour change program (e.g. signs, stickers, messages)	Planned	Reduce vehicle idling throughout the campus vehicle areas	The receiving area and drop off area are the main areas where idling takes place and will be posted with signs	Summer 2009
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2.2 Stationary Fuel Combustion (including electricity)

Action	Action Planned	Outcome/Performance Measure	Notes Clarifying Action Taken	Timeframe
Replace # computers with EnergyStar models	In Progress	All new computers to be EnergyStar models	Work station computers are replaced with used computers from classroom labs, all new computers are Energy Star models, approximately 300/year.	2010
Replace Refrigerators (EnergyStar rated appliance)	In Progress	All replacement refrigerators to be EnergyStar rated	When old fixtures need replacing it will be with EnergyStar	
Replace other appliances (with EnergyStar rated appliance)	In Progress	All other appliances to be EnergyStar rated when replaced	When old fixtures need replacing it will be with EnergyStar	
Install multi-function devices (and remove stand-alone printers/faxes)	In Progress	Move toward multi-function devices where practical	This is an ongoing program and will continue	
Replace standard bulbs with CFLs	In Progress	Stop using all standard bulbs and replace with CFLs	Personal desk top fixtures will be addressed next.	2009 - 2010

Utilize desk-top power management settings on computer	In Progress	All computers to utilize desk-top power management	Happening now and any new computers will operate the same.	
Initiate corporate computer shut-down/wake-up for maintenance	In Progress	All computer labs to utilize corporate shut-down/wake-up	Happening now on all existing computer labs and on new labs scheduled for 2009	2009
Hire an Energy Manager	Planned	Hire an Energy Manager	Through the BC Hydro program Langara has been authorized to hire an Energy Manager to implement many of the items indicated on this list as part of their mandate.	Summer 2009

2.3 Supplies

Action	Action Planned	Outcome/Performance Measure	Notes Clarifying Action Taken	Timeframe
Commit to use 30% recycled paper	In Progress	College to use 30% recycled paper	On going	
Re-use non-confidential scrap paper	In Progress	College to re-use scrap paper	On going	

2.4 Employee Engagement

Action	Action Planned	Outcome/Performance Measure	Notes Clarifying Action Taken	Timeframe
Provide climate change education	In Progress	Increase awareness through climate change programs	Continue to offer awareness programs	
Provide conservation education	In Progress	Increase awareness through conservation courses	Continue to offer conservation programs and courses	
Develop Green Teams	In Progress	Develop green teams	Green teams to be developed through Energy Manager	2009
Support Green Teams (resources)	In Progress	Provide support for green teams	Energy Manager and College will provide support to green teams	2009

2.6 Sustainability Actions (others)

Action	Action Planned	Outcome/Performance Measure	Notes Clarifying Action Taken	Timeframe
Take water conservation measures – low flow showers or toilets, fix leaks	In Progress	Increase water waste management	upgrade and replace fixtures as required to water conservation type and all new fixtures to be water conserving	
Reduce/replace bottled water with filtered or refrigerated water	In Progress	replace bottled water with filtered units where possible	Assess existing bottled water stations and convert to filtered where possible	2009 - 2010
Improve recycling measures	Planned	Increase recycling options	Install more recycling stations around campus and tender waste management to provide better recycling options	2010
Support composting	Planned	Increase composting options	Expand current worm composting to include coffee grounds and investigate commercial composting of biodegradable cafeteria products	2009-2010