

Executive Summary

The University of the Fraser Valley understands and embraces its position of environmental leadership, not just to meeting its legislative requirements under the Greenhouse Gas Reduction Targets Act, but to inspire environmental awareness and change within our university communities. As a signatory to the University and College Presidents' Climate Change Statement of Action, UFV continues, "... sharing knowledge, research and best practices about climate change with our students and the public..." Reporting on the year 2009, UFV maintained its sustainability focus in four key areas, operations, capital projects, curriculum, and community outreach. All aspects of our operations, including facilities services, procurement, and information technology, our mission is to achieve continuous improvement, disciplined by economically sound investment principles. Our capital projects are disciplined to achieve a sustainability metric of LEED gold (or equivalent). Contained in this report are highlights of the more notable achievements.

UFV recognizes our students as our community's ultimate sustainability investment, and actively supports student engagement and leadership in its sustainability initiatives. Building on this ethos of student engagement, in 2009 Facilities Services implemented a student sustainability coordinator assistant position. This part time position is held from year to year by a senior student actively involved in sustainability issues and initiatives.

In 2009, UFV also benefited from active student club participation in sustainability matters. The Student Society continued building on the recently implemented U-pass system, encouraging alternative transportation to campus and carpooling. In early 2009, the Students for Sustainability club hosted a well attended province-wide conference on sustainable campuses. Among the more notable matters over this past year, the club has also continued working with Facilities Services to maintain the beverage container recycling programs on campus. More recently students have taken on a campaign to promote water stations as an alternative to purchasing bottled water.

UFV students are also engaged with the goBeyond project, a program dedicated to support climate action initiatives in the post-secondary sector. With a campus coordinator work study position, this program has inspired student and faculty participation from varying disciplines to help raise awareness about climate change.

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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 12/31/09)	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	0	% of vehicles are fuel- efficient models	Evaluation of efficient replacement regime given university needs, available technologies, and replacement costs	Continuing ongoing replacement of fleet capital as economically possible	2011	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	Evaluation of efficient replacement regime given university needs, available technologies, and replacement costs	Continuing ongoing replacement of fleet capital as economically possible	2011	No End Date (Continuous)
Perform regular fleet maintenance to improve fuel-efficiency	Complete	100	% of vehicles are subject to regular maintenance for fuel efficiency	Regular maintenance practices maintained	Regular maintenance practices planned	2000	No End Date (Continuous)
Replace small maintenance vehicles with more fuel-efficient models	Ongoing/In Progress	0	% of small maintenance vehicles are fuel-efficient	Evaluation of efficient replacement regime given university needs, available technologies, and replacement costs	Continuing ongoing replacement of fleet capital as economically possible	2000	No End Date (Continuous)
Behaviour change program							
Provide fleet driver training to reduce fuel use	Ongoing/In Progress	100	% of current drivers are trained	No new drivers hired in 2009	planned maintenance of current policy	2000	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	100	Anti-Idling	No Idle signs located in service vehicle areas.	planned maintenance of current policy	2000	No End Date (Continuous)
Encourage carpooling in fleet vehicles	Complete			Carpooling in effect for 10 years.		2000	No End Date (Continuous)
Stationary Fuel Combustion, Electricity and Fugitive Emissions (Buildings)							
Planning/management							
Enrol in a building energy benchmarking program (e.g., GREEN UP)	In Development				Benchmarking is a key element in the planned energy management in 2010 and beyond	2010	No End Date (Continuous)
Reduce office space (square meters) per employee	Complete	11	is the current average rentable square meters per employee	Our current standard for office space allocation applies to all current office space and future development.		2000	No End Date (Continuous)
Install a real time metering system (e.g. Pulse, Reliable Controls, Houle Controls)	In Development				An energy manager will be hired in 2010 and it is expected that active energy consumption monitoring will result	2010	No End Date (Continuous)
Owned buildings							
Establish energy performance baseline for owned buildings	In Development				The energy manager is expected to establish baselines for each building on the Abbotsford campus.	2010	No End Date (Continuous)
Achieve LEED NC Gold certification at a minimum for new construction or major renovations	Ongoing/In Progress	7	% of owned buildings are certified LEED NC Gold or LEED NC Platinum	Our most recent capital project involved reusing half of an existing industrial facility to build a new academic building for Visual Arts and the School of Business and it achieved LEED Gold equivalence.	We are in progress with the development of a new campus in Chilliwack that will achieve LEED Gold Certification and will be utilizing the latest technology in heating/cooling for an energy efficient operation. The design is focussed on creating livable spaces with lots of natural light.	2007	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
Incorporate integrated design process into new construction or during renovations of owned buildings	Ongoing/In Progress	27	% of buildings built or renovated since start year indicated used the integrated design process	The Integrated Design Process challenges all disciplines to bring the latest in real-world technologies and best practices to our projects with a goal of leading our institution in continuous improvement. The integrated design process has been adopted for the last 4 capital projects, including the C/B Capital Project and the CEP Phase 2 (1090) project in Chilliwack.	The integrated design process is inherent to all future capital projects.	2006	No End Date (Continuous)
Incorporate a refrigerant management strategy into regular building management/maintenance to reduce fugitive emissions	Complete			Active monitoring of CFC recovery system.		1998	No End Date (Continuous)
Complete energy retrofits on existing, owned buildings	Ongoing/In Progress	27	% of owned buildings have undergone energy retrofits since start year indicated	The reused portion of building C was completely retrofitted, renewing its life-cycle for another 30 years and portions of building B were retrofitted with new lighting and control systems.	Continue to retrofit portions of buildings to conjunction with major renovations and reuse a former military building (1090) as part of our capital project in Chilliwack.	1998	No End Date (Continuous)
Retrofitting owned buildings							
Upgrade mechanical systems (heating, cooling, ventilation) during retrofits	Ongoing/In Progress	25	% of retrofits (captured above) had heating, cooling, and ventilation systems upgrades	Building C was completely retrofitted with a new heating/cooling system.	Retrofit building A/B cooling system. The CEP Phase 2 project at the Chilliwack campus involves a former military buiding (1090) to be reused as part of the campus development. That project will involve a complete retrofit of the heating/cooling systems.	2008	No End Date (Continuous)
Upgrade lighting systems during retrofits	Ongoing/In Progress	75	% of retrofits (captured above) had lighting systems upgrades	Building C was completely retrofitted with new lighting and portions of Building B.	The CEP Phase 2 (1090) project will also involve a complete lighting system retrofit.	2008	No End Date (Continuous)
Upgrade/adjust control systems during retrofits	Ongoing/In Progress	75	% of retrofits (captured above) had control system upgrades or adjustments	Building C, and portions of Building B were completely retrofitted with building controls.	The CEP Phase 2 (1090) project will also involve a complete control system retrofit.	2005	No End Date (Continuous)
Improve building insulation (including windows) during retrofits	Ongoing/In Progress	25	% of retrofits (captured above) had insulation improvements	Most of building C's windows and envelope was replaced in the capital project.	The CEP Phase 2 (1090) project will also involve a complete window and envelope retrofit with both energy rated windows and envelope.	2008	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	Engineering consultations were initiated	A geo-thermal energy system is planned for the campus development project in Chilliwack.	2008	2012
IT power management							
Implement server virtualization	Ongoing/In Progress	30	% of servers have been virtualized since start year indicated	Already in place. We are already heavily invested in virtualization through Vm Ware Infrastructure and SUN Solaris Zones. Two additional Vm Ware hosts added in 2009 and several PC based servers converted from physical to virtual on the infrastructure. Approximately twenty-five virtual machines deployed in 2009.	Addition of at least four additional Vm Ware hosts. Upgrade to Vm Ware Vsphere 4. Full implementation of one or more SUN servers with several virtual severs running in Solaris zones.	2008	No End Date (Continuous)
Apply auto-sleep settings on computer monitors and CPUs	In Development			Certain labs use a timed auto-shutdown for power saving, implemented through use of Deepfreeze software.	Wider implementation under study	2007	No End Date (Continuous)
Remove stand-alone printers, copiers, and/or fax machines and install multi-function devices	Ongoing/In Progress	20	% reduction in printers, copiers, and/or fax machines since start year indicated	Replaced analog and digital copiers with 67 multi funtion devices	Planned reduction of 30% of printers and 100% of fax machines.	2009	2011
Apply auto-sleep settings on printers, copiers, fax machines, and/or multi-function devices	Ongoing/In Progress	25	% of devices have auto-sleep settings applied	Use power save settings with a time-out on MFD's	All MFD's replacing other devices will have power save enabled by default.	2009	2011

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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
Replace computers with ENERGY STAR models during regular computer upgrades	Ongoing/In Progress	25	% of computers are ENERGY STAR rated	The newest PC's being deployed as part of the on-going refresh cycle are ENERGY STAR rated.	Continued renewal through the refresh cycle. The bulk of PC's (faculty/staff and lab workstations) should be ENERGY STAR rated in 3 years.	2009	2012
Appliances and electronic devices							
Replace refrigerators with ENERGY STAR models or source ENERGY STAR models for future purchases	Ongoing/In Progress	75	% of fridges are ENERGY STAR rated	Replacements are energy star rated where possible	Replacements will be Energy Star rated	2009	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	25	% of other appliances are ENERGY STAR rated	Replacements are energy star rated where possible	Replacements will 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	15	%Desk lamps upgraded	Replacements are CFL where possible	Replacements will be CFL where possible	2009	No End Date (Continuous)
Behaviour change program							
Help staff reduce personal energy use through "workstation tune-ups"	In Development			A sustainability coordinator assistant has been hired to develop behavioural change programs	These "soft-path" energy conservation measures are an expected element of the work of the energy manager with implementation programs carried out by the sustainability coordinator assistant.	2010	No End Date (Continuous)
Ask staff to unplug electrical equipment or switch off power bars when not in use	In Development				Previous comment applies		
Ask staff to close blinds at end of work day to reduce heating/cooling demands	In Development				Previous comment applies	2010	No End Date (Continuous)
Provide tips to staff on saving energy in the office while working outside of regular business hours	In Development				Previous comment applies	2010	No End Date (Continuous)
Encourage use of stairs instead of elevators	In Development				Previous comment applies	2010	No End Date (Continuous)
Provide reminders for turning off lights (e.g., signs, stickers, messages)	In Development				Previous comment applies	2010	No End Date (Continuous)
Promote hot water conservation	In Development				Previous comment applies	2010	No End Date (Continuous)
Supplies (Paper)							
Paper Type							
Purchase 30% post-consumer recycled paper	Complete	90	% of total paper purchased contains 30% recycled content	100% of hand paper towel; UFV currently purchases all economically available paper rated with 30% PC waste.	planned goal to achieve 100% of fine paper purchases having a minimum 30% post-consumer waste	2004	2012
Purchase 100% post-consumer recycled paper	Ongoing/In Progress	2	% of total paper purchased contains 100% recycled content	New products and suppliers are constantly investigated and evaluated.	3% paper- 100% PC waste	2004	2012
Printer/document settings							
Switch networked printers and photocopiers to automatic double-sided	Ongoing/In Progress	10	% of network printers or photocopiers are set to automatic double-sided	10% of network printers or photocopiers are set to automatic double-sided.	25% will be set to automatic double- sided	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 "print and hold" settings to networked printers to eliminate unclaimed print jobs	Ongoing/In Progress	25	% of network printers have 'print and hold' settings applied	25% of network printers have 'print and hold' settings applied	100% will have 'print and hold' settings applied	2009	No End Date (Continuous)
Electronic media in place of paper							
Use electronic document library for filing common documents	Ongoing/In Progress			Established practice in some activities; constantly in development;	Continued adoption is expected	1990	No End Date (Continuous)
Post materials online that were previously printed	Ongoing/In Progress			Established practice in some activities; constantly in development;	Continued adoption is expected	1990	No End Date (Continuous)
Switch to an electronic payroll notification system in place of paper pay stubs	Complete			Information accessed from Myufv platform, employee information tab		2008	No End Date (Continuous)
Behaviour change program							
Train staff to use collaborative software for electronic editing (e.g. SharePoint, Groove, etc.)	Ongoing/In Progress	5	% of staff currently have received collaborative software training		10% of staff will have received collaborative software training	2009	No End Date (Continuous)
Encourage re-use of scrap paper	In Development			Printer Services recycles scrap paper for other use	Referred to Institutional Sustainability Committee for further development	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							
Behaviour change program							
Encourage carpooling to meetings	Complete			in place and governed by mileage claim policy		1990	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			A washroom conversion plan is in place utilizing water conserving and hands free fixtures	The washroom conversion program depends on adequate capital funding for building upgrades	2006	No End Date (Continuous)
Introduce a stormwater management landscape strategy (e.g., vegetated roofs, permeable paving, rain gardens, bioswales)	Ongoing/In Progress			Design guidelines adopted	Construction of future parking lot will be a permeable surface.	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			Contracted recycling services for bottle and can recycling. Paper recycling efforts underway.	Purchase and installation of on site filtered water dispensers to reduce student dependence on purchased bottled water	2010	No End Date (Continuous)
Implement a hazardous waste reduction and disposal strategy	Complete			Hazardous materials disposal management is ongoing		1990	No End Date (Continuous)
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.)	Ongoing/In Progress	75	% of Toner, Writing Instruments have recycled content	Encourage all staff to purchase remanufactured toner and pens	Encourage all staff to purchase remanufactured toner and pens		
Implement sustainable purchasing program for cleaning products, disposable paper products and trash bags	Ongoing/In Progress	10	% of cleaning and disposable paper products and trash bags contain recycled materials or are produced through "greening" measures	In Place and ongoing through testing/ evaluating products as they become available on the market	As green products are tested and become available they are being introduced to the University.	1998	No End Date (Continuous)
Commuting to and from home							
Provide shower or locker facilities for staff/students who commute by foot or by bicycle	Ongoing/In Progress			Locker/shower facilities are available for staff and students who commute by foot or bicycle.	Demand monitoring for maintenance and stock adjustments	2009	No End Date (Continuous)
Provide secure bicycle storage	Ongoing/In Progress			We currently have 50 bicycle lockers available as well as bike racks.	Demand monitoring for maintenance and stock adjustments	1990	No End Date (Continuous)
Modify parking fees or parking availability for staff/students	Ongoing/In Progress			Free parking offered to carpooling students on event nights	Increased publicity programs planned	2009	No End Date (Continuous)