



KWANTLEN  
POLYTECHNIC  
UNIVERSITY

# Carbon Neutral Action Report 2017





**Executive Summary**

As Kwantlen Polytechnic University (KPU) has evolved we've established a strong historical foundation of leadership in sustainability, as defined in our Vision Statement and embodied in our Mission & Mandate. In continuing to fulfill our commitment we have introduced new Degrees in Policy Studies, and Sustainable Agriculture. These add to the many programs we offer which serve the needs of our community.

A key element for fulfilling our commitment has been the Energy Management Action Plan 2011 and will continue to be fulfilled by the Strategic Energy Management Plan 2012.

**2011 Greenhouse Gas Emissions**

Kwantlen's 2011 total emissions from all sources as reported by SMARTTool are 2892 tCO<sub>2</sub>e, resulting in an increase of 16.7% from 2010 emission levels. This increase can be reasonably attributed to growth in Natural Gas and Electricity demand relating to higher student enrollment, addition of the Institute of Sustainable Horticulture research greenhouse, and colder comparative temperatures between the first three months of 2011 and 2010 (average 3°C colder in January, 3.5°C colder in February, & 0.9°C colder in March). Improvements in space utilization practices and building technology resulted in an increase in facility use efficiency, as illustrated by a 7% reduction from 9.48 to 8.81 m<sup>2</sup> per student FTE, and a 2% reduction from 1016 to 995, kWh electricity per student FTE. Continuous pursuit of improvement opportunities to maximize efficiency is an integral aspect of our organizational culture.

Mobile emissions totaling 25.80 tCO<sub>2</sub>e and representing less than 1% of our total emissions were generated by Kwantlen's seventeen assorted vehicles and a variety of outdoor-power equipment, and were reported in our total emissions as fleet emissions.

Annual Fugitive Emissions generated by refrigeration equipment are in minute quantities spread over many pieces of equipment, and there is difficulty gathering data. These emissions represent less than 1% of our total emissions and were not reported as permitted under regulatory guidelines.

**Offsets Applied to be Carbon Neutral in 2011**

Kwantlen has completed our Carbon Offset Purchase Order Form from Pacific Carbon Trust and purchased carbon offsets for total emissions as identified in SMARTTool for the total emissions calculated for 2011.

**Emission Reductions Activities****Actions Taken to Reduce Greenhouse Gas Emissions in 2011:**

- As part of Facilities Services continuous focus on reductions of GHG emissions and energy consumption, we've installed real time Earthright dashboards in 75% of our buildings, and plan to install them in the remaining 25% by the end of 2012. This will allow us to track and analyze energy consumption patterns more effectively, and enable us in identifying more opportunities for savings.

- Stickers have been installed in Kwantlen vehicles to remind drivers not to leave vehicles idling.
- Mechanical, Lighting and Control System were upgraded during the Langley West Administration wing, the Langley Science wing, & the Richmond Library renovation projects.
- Upgraded insulation at Langley campus executive suite (297 m<sup>2</sup>), and completed a five million dollar building envelope upgrade at Surrey campus involving Arbutus, Birch, Main, and Fir buildings (24,336 m<sup>2</sup>).
- All new computers purchased "80 plus" certified and monitors are "Energy Star" certified.
- The Board of Governors now receives their materials electronically and is setting a leadership example through this significant reduction in use of printed documents. Other areas have also begun this practice and are encouraged to minimize printing.
- Kwantlen's new Degree in Policy Studies focuses on sustainability.
- Established an intercampus shuttle between Surrey, Cloverdale, & Langley campuses, providing free service to all Kwantlen students, faculty & employees.

#### Plans to Continue Reducing Greenhouse Gas Emissions 2012 – 2014:

- CAHS renovation at Langley is targeted LEED Silver.
- Any new construction or major renovations will include LEED equivalent. All renovation and construction projects will use integrated design process.
- Strategic Energy Management Plan updated annually to identify further projects.
- Mechanical, Lighting, and Control systems are being upgraded during the CAHS renovation project in Langley.
- The Senate is exploring the possibility of transitioning to an all-electronic format for materials distribution. Some sub-committees have implemented the practice for 2012. Other opportunities will be explored throughout the organization.
- A new Bachelor of Applied Science in Sustainable Agriculture is being offered for intake in September 2012. Establishing these programs provides educational opportunities to both faculty and employees.
- The CAHS project at Langley campus will use water efficient toilets and plumbing fixtures. All new installations will use water efficient models. When existing fixtures reach end of life they will be replaced with more efficient models.

Kwantlen Polytechnic University remains fundamentally committed to leadership in sustainability and endeavors to provide progress opportunities to its stakeholders.

#### **Links to Kwantlen Documents with Publically Available Sustainability Information**

Further information about Kwantlen's plans and current initiatives in energy and environmental management, are available at the URL's below:

##### *Facilities Services*

<http://www.kwantlen.ca/facilities/sustainability.html>

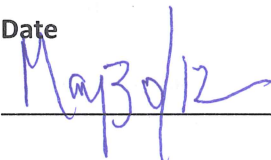
##### *Supply and Business Services*

Green Index: <http://kwantlen.ca/supply/green.html>

Signature

  
Gordon Lee – Vice President Administration & Finance

Date

  
May 30/12

Kwantlen Polytechnic University - 2011 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 <i>Greenhouse Gas Reduction Targets Act</i> .							
Action	Status (as of 12/31/11)	Performance to Date (as of 12/31/11)		Steps Taken in 2011	Steps Planned for 2012 -2014	Start Year	End Year
Mobile Fuel Combustion (Fleet and other mobile equipment)							
Vehicle fuel efficiency							
Replace vehicles with more fuel-efficient models	In Development			Planning initiated.	Develop replacement plan with fuel efficiency as a primary criteria.	2012	No End Date (Continuous)
Replace larger vehicles with smaller models according to fleet "right-sizing" principles	In Development	0	% of vehicles down-sized since start year indicated	Planning initiated.	Will be considered as part of replacement plan in development.	2012	No End Date (Continuous)
Perform regular fleet maintenance specifically to improve fuel-efficiency	Ongoing/In Progress	100	% of vehicles are subject to regular maintenance for fuel efficiency	All Vehicles undergo regular maintenance, with fuel efficiency as a desired outcome.	Continue process.	Started before 1995	No End Date (Continuous)
Replace small maintenance vehicles with more fuel-efficient models	In Development			Planning initiated.	Will be considered as part of replacement plan in development.	2012	No End Date (Continuous)
Behaviour change program							
Introduce anti-idling policy and/or raise anti-idling awareness for fleet drivers (e.g., signs, stickers, messages)	Ongoing/In Progress			Stickers have been installed in Kwantlen vehicles to remind drivers not to leave vehicles idling.	Continue process.	2010	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)	Ongoing/In Progress			Enrolled in APPA and FPI.	Continue process.	2010	No End Date (Continuous)
Reduce office space (square meters) per employee	In Development			No space is rented.	We are in the process of developing a plan, to further increase the use of efficient space utilization practices in allocation and designing renovations & new construction.	2011	No End Date (Continuous)
Install a real time metering system (e.g. Pulse, Reliable Controls, Houle Controls)	Ongoing/In Progress	75	% of buildings have a real time metering system installed	Installed real time Earthright dashboards in 75% of our buildings.	Our project is still in progress and will add the remaining 25% of buildings in 2012.	2007	No End Date (Continuous)
Owned buildings							
Establish energy performance baseline for owned buildings	Completed in 2011	100	% of owned buildings have an established energy performance baseline	Updated records from previous years to establish broader perspective.	Will continue process and monitor energy performance baseline.	2008	No End Date (Continuous)
Achieve LEED NC Gold certification at a minimum for new construction or major renovations	Ongoing/In Progress	25	% of owned buildings are certified LEED NC Gold or LEED NC Platinum	Langley West Administration wing renovation under review for LEED Silver. Surrey Library expansion has been confirmed at LEED Gold. Surrey Main building under review for LEED Gold. I.S.H. Under review for LEED Gold. CAHS renovation at Langley is targeted LEED Silver.	CAHS renovation at Langley is targeted LEED Silver. Any new construction or major renovations will include LEED equivalent.	2005	No End Date (Continuous)

Kwantlen Polytechnic University - 2011 Carbon Neutral Action Report

Action	Status (as of 12/31/11)	Performance to Date (as of 12/31/11)		Steps Taken in 2011	Steps Planned for 2012 -2014	Start Year	End Year
Incorporate integrated design process into new construction or during renovations of owned buildings	Ongoing/In Progress	100	% of buildings built or renovated since start year indicated used the integrated design process	All new buildings & renovated areas use integrated design process.	All renovation and construction projects will use integrated design process.	2004	No End Date (Continuous)
Incorporate a refrigerant management strategy into regular building management/maintenance to reduce fugitive emissions	Ongoing/In Progress			All equipment using refrigerant is maintained on a regular basis and refrigerant is recorded to meet regulatory requirements.	Continue process.	2000	No End Date (Continuous)
Perform energy retrofits on existing, owned buildings	Ongoing/In Progress	70	% of owned buildings have undergone energy retrofits since start year indicated	We maintain a program of continuous improvement and regularly implement energy efficiency projects. In 2011 we performed 8 projects.	SEMP updated annually to identify further projects.	2000	No End Date (Continuous)
Retrofitting owned buildings							
Upgrade mechanical systems (heating, cooling, ventilation) during retrofits	Ongoing/In Progress	100	% of retrofits since start year indicated had heating, cooling, and ventilation systems upgrades	We upgraded during the Langley West Administration wing, the Langley Science wing, & the Richmond Library projects.	We are upgrading during the Langley CAHS project and future projects will include upgrades.	Started before 1995	No End Date (Continuous)
Upgrade lighting systems during retrofits	Ongoing/In Progress	100	% of retrofits since start year indicated had lighting systems upgrades	We upgraded during the Langley Science wing project & the Richmond Library project.	We plan to upgrade during the Langley CAHS project and the Richmond refurbishment project.	Started before 1995	No End Date (Continuous)
Upgrade/adjust control systems during retrofits	Ongoing/In Progress	100	% of retrofits since start year indicated had control system upgrades or adjustments	We upgraded during the Langley Science wing project & the Richmond Library project.	We plan to upgrade during the Langley CAHS project and the Richmond refurbishment project.	Started before 1995	No End Date (Continuous)
Improve building insulation (including windows) during retrofits	Ongoing/In Progress			Upgraded insulation at Langley campus executive suite (297 sq. m.). Completed a five million dollar building envelope upgrade at Surrey campus involving Arbutus, Birch, Main, and Fir buildings (24,336 sq. m.).	Continue process.	2009	No End Date (Continuous)
IT power management							
Install power management software which shuts down computers outside of regular business hours	Ongoing/In Progress	90	% of computers shut down automatically outside of regular business hours	All our PC desktops are shut down automatically outside of regular business hours. We have converted 90% of the student PC Desktops with Thin Clients. Although Thin Clients are never shut down, a Thin Client power consumption is 85% less than a PC Desktop.	No Actions taken other than expanding the Thin Client implementation into the Staff areas which will cut the power consumption per computer by 85% of a standard computer.	2009	2013
Implement server virtualization	Ongoing/In Progress	60	% of servers have been virtualized since start year indicated	60% of new Servers provisioned in 2011 have been virtualized.	All new servers requested will be virtualized unless there is a requirement for a Hardware server.	2009	No End Date (Continuous)
Apply auto-sleep settings on computer monitors and CPUs	Ongoing/In Progress	50	% of computers have auto-sleep settings applied	100% of monitors are on screensavers and none of computers have auto sleep.	Expanded implementation of Thin Clients in staff areas with auto-sleep enabled which will bring the percentage up to 75%.	2009	2013
Remove stand-alone printers, copiers, and/or fax machines and install multi-function devices	Ongoing/In Progress	50	% reduction in printers, copiers, and/or fax machines since start year indicated	All department printers are multi-function devices. However, there are still a large amount of standalone network printers, estimated at approximately 40%.	Need to plan on removing standalone printers procured via departmental budgets, this is a problem!	2010	2013
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	All multi-function devices are delivered with this setting.	All multi-function devices are delivered with this setting.	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	All new computers purchased are "80 Plus" certified and Monitors are "Energy Star" certified.	Continue to purchase energy certified equipment.	2010	No End Date (Continuous)



Kwantlen Polytechnic University - 2011 Carbon Neutral Action Report

Action	Status (as of 12/31/11)	Performance to Date (as of 12/31/11)		Steps Taken in 2011	Steps Planned for 2012 -2014	Start Year	End Year
Behaviour change program							
Ask staff to close blinds at end of work day to reduce heating/cooling demands	Ongoing/In Progress			Blinds closed by security when security checks performed.	Continue process.	Started before 1995	No End Date (Continuous)
Provide reminders for turning off lights (e.g., signs, stickers, messages)	Ongoing/In Progress			Sent reminders to cleaners & security every 4 months.	Plan to add stickers to lights.	Started before 1995	No End Date (Continuous)
Promote hot water conservation	Ongoing/In Progress			Low flow aerators inspected routinely and replaced if missing or defective. All faucets have low plow aerators.	Continue process.	2004	No End Date (Continuous)
Supplies (Paper)							
Paper Type							
Purchase 30% post-consumer recycled paper	Completed in 2011	100	% of total paper purchased contains 30% recycled content	Paper purchased contains the maximum percentage of recycled content possible that will work in our printers.	Continue practice.	2011	No End Date (Continuous)
Printer/document settings							
Switch networked printers and photocopiers to automatic double-sided	Ongoing/In Progress	80	% of network printers or photocopiers are set to automatic double-sided	All network printers are setup to default to automatic double sided when installed.	All network printers are setup to default to automatic double sided when installed.	2010	No End Date (Continuous)
Apply "print and hold" settings to networked printers to eliminate unclaimed print jobs	Ongoing/In Progress	50	% of network printers have 'print and hold' settings applied	Student printers pay printing and most public accessible printers are "print and hold" .	Continue adding "print and hold" as required.	2003	No End Date (Continuous)
Electronic media in place of paper							
Install collaborative software for electronic editing (e.g. SharePoint, Groove, etc.)	Ongoing/In Progress	25	% of staff workstations with software installed	Implemented SharePoint.	Continue deploying Sharepoint institution wide.	2011	2013
Post materials online that were previously printed	Ongoing/In Progress	80		Continue posting most material using Sharepoint.	Continue deploying Sharepoint institution wide.	2011	2013
Behaviour change program							
Train staff to use collaborative software for electronic editing (e.g. SharePoint, Groove, etc.)	Ongoing/In Progress	15	% of staff currently have received collaborative software training	Continue posting most material using Sharepoint.	Continue deploying Sharepoint institution wide.	2011	No End Date (Continuous)
Encourage staff to hold paperless meetings or presentations (i.e., no handouts)	Ongoing/In Progress			The Board of Governors now receives their materials electronically and are setting a leadership example through this significant reduction in use of printed documents. Other areas have also begun this practice and are encouraged to minimize printing.	The Senate is exploring the possibility of transitioning to an all-electronic format as well. Some sub-committees have implemented the practice for 2012. Other opportunities will be explored throughout the organization.	2011	No End Date (Continuous)
Encourage re-use of scrap paper	Ongoing/In Progress			The Print Shop reuses blank paper from obsolete materials like old letterhead to make note pads. The Library also cuts up scrap paper, for use as note paper at Library catalogue search stations.	Explore additional opportunities to re-use scrap paper.	Started before 1995	No End Date (Continuous)

Kwantlen Polytechnic University - 2011 Carbon Neutral Action Report

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 <i>Greenhouse Gas Reduction Targets Act</i> . 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 12/31/11)	Performance to Date (as of 12/31/11)		Steps Taken in 2011	Steps Planned for 2012 -2014	Start Year	End Year
Business Travel							
Policy and budgeting							
Create a low-carbon travel policy or travel reduction goal	In Development			Kwantlen's travel policy is currently being revised. The revised policy will be implemented in the new fiscal year.	Continue process.	2011	No End Date (Continuous)
Virtual meeting technology							
Install web-conferencing software (e.g., Live Meeting, Elluminate, etc.)	Ongoing/In Progress	100	% of computers have web-conferencing software installed	Office communication is installed on all desktops however do not know the % of usage estimate 5%	Implement MS Lync.	2011	2013
Make desktop web-cameras available to staff	Ongoing/In Progress	2	% of staff have access to a desktop web-camera	Web cameras are installed in only 2 or 3 departments.	Continue installing web cameras as required.	2010	No End Date (Continuous)
Install video-conferencing units in meeting rooms or provide mobile video-conferencing units	Ongoing/In Progress	10	% of meeting rooms have access to video-conferencing equipment	Five video conferencing installations and seven polycom conferencing meeting rooms.	Continue expanding.	2011	No End Date (Continuous)
Behaviour change program							
Train staff in web-conferencing	Ongoing/In Progress	5	% of staff are trained web-conferencing	IET staff and other departments trained and University Faculty using the present web conferencing installations.	Continue expanding.	2010	No End Date (Continuous)
Train staff in video-conferencing or provide technical support for video-conferencing set-up	Ongoing/In Progress	2	% of staff are trained in video-conferencing or have access to technical support	Limited but On-site IET Campus Support Technologists are trained.	Ongoing training required.	2010	2013
Encourage staff to consider virtual attendance/presentation at events where possible	Ongoing/In Progress	1	% of staff are trained in video-conferencing or have access to technical support	The University has video conference facilities on each campus as well as implementing desktop video conferencing.	Full implementation including encouraging staff behavior changes will be undertaken in 2013.	2011	No End Date (Continuous)
Encourage carpooling to meetings	Ongoing/In Progress			Carpooling is encouraged through preferential parking.	Continue practice.	2007	No End Date (Continuous)
Encourage alternative travel to meetings (e.g., bicycles, public transit, walking)	Ongoing/In Progress			The university has implemented an intercampus shuttle service during 2011.	Continue practice.	2011	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			The University has worked on establishing a broad based Green Campus initiative.	Active groups planned to be in place.	2010	No End Date (Continuous)
Provide resources and/or dedicated staff to support teams	In Development			No progress.	The Committee will be resourced through the Office of the Vice President Finance and Administration.	2012	No End Date (Continuous)
Providing behaviour change education/training to teams (e.g., community-based social marketing)	In Development			The Horticulture department developed and presented a series of educational symposiums called Green Wednesdays, aimed at informing and instructing community members in sustainability.	Continue practice and explore further opportunities.	2009	No End Date (Continuous)

Kwantlen Polytechnic University - 2011 Carbon Neutral Action Report

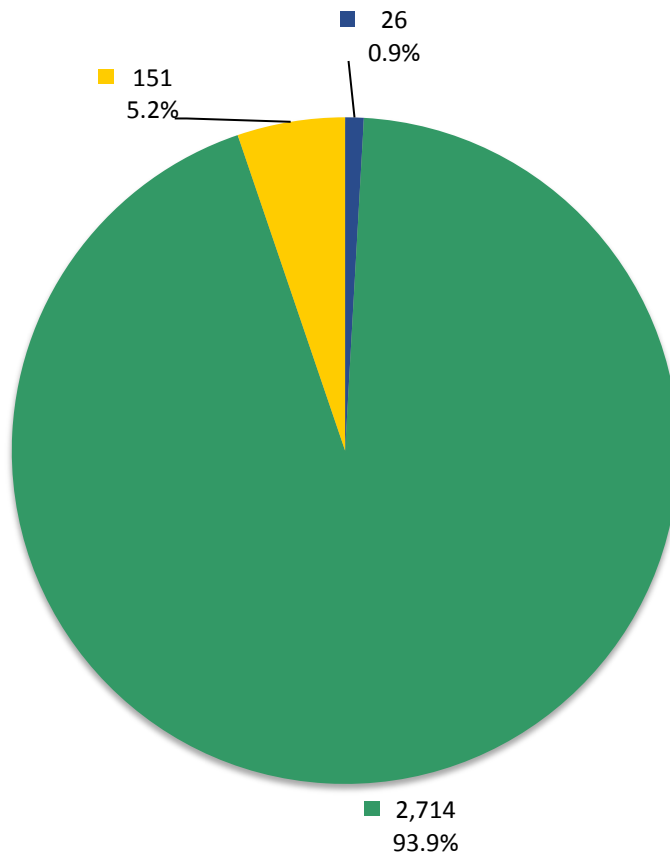
Action	Status (as of 12/31/11)	Performance to Date (as of 12/31/11)		Steps Taken in 2011	Steps Planned for 2012 -2014	Start Year	End Year
<b>Awards/Recognition</b>							
Establish a sustainability/green awards or recognition program	In Development			No progress.	No initiatives planned at present. The new Environmental committee will consider.	2012	No End Date (Continuous)
<b>Staff awareness/education</b>							
Provide education to staff about the science of climate change	Ongoing/In Progress			Kwantlen's new Degree in Policy Studies focuses on sustainability.	A new Bachelor of Applied Science in Sustainable Agriculture is being offered for intake in September 2012. Establishing these programs provides educational opportunities to both Faculty and Staff.	2011	No End Date (Continuous)
Provide education to staff about the conservation of water, energy, and raw materials	Ongoing/In Progress			Kwantlen's new Degree in Policy Studies focuses on sustainability.	A new Bachelor of Applied Science in Sustainable Agriculture is being offered for intake in September 2012. Establishing these programs provides educational opportunities to both Faculty and Staff.	2011	No End Date (Continuous)
Provide green tips on staff website or in newsletters	Ongoing/In Progress			Draft for website developed.	Upload website and maintain.	2011	No End Date (Continuous)
Provide sustainability education during new staff orientation	In Development			No progress.	This will be the responsibility of the Green initiatives Committee.	2011	No End Date (Continuous)
<b>Client/public awareness/education</b>							
Provide education to clients/public about the science of climate change	Ongoing/In Progress			New Degrees make a major contribution to this.	Continue developing new programs.	2011	No End Date (Continuous)
Provide education to clients/public about the conservation of water, energy, and raw materials	Ongoing/In Progress			New Degrees make a major contribution to this.	Continue developing new programs.	2011	No End Date (Continuous)
<b>Other Sustainability Actions</b>							
<b>Water conservation</b>							
Establish a water conservation strategy which includes a plan or policy for replacing water fixtures with efficient models	Ongoing/In Progress			Implemented enhanced maintenance program that repairs/replaces old or worn out taps with efficient models.	Continue process and replace old taps with new ones.	2011	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			All landscape modifications are xeriscape landscaping.	The CAHS project at Langley campus will use water efficient toilets and plumbing fixtures. All new installations will use water efficient models. When existing fixtures reach end of life they will be replaced with efficient models.	2005	No End Date (Continuous)
Introduce a stormwater management landscape strategy (e.g., vegetated roofs, permeable paving, rain gardens, bioswales)	Ongoing/In Progress			Converted approximately 125 square meters of asphalt sidewalk to grass at Surrey campus.	Continue practice of exploring and developing sustainable measures.	2006	No End Date (Continuous)
<b>Waste reduction/diversion</b>							
Put in place an operations policy to facilitate the reduction and diversion of building occupant waste from landfills or incineration facilities	Ongoing/In Progress			Departmental practice already in place (Waste Management and the Environment). Have an active listing of approximately 24 material products that are recycled or diverted from landfill including auctioning of obsolete furnishings and equipment.	Continue program.	Started before 1995	No End Date (Continuous)
Implement a hazardous waste reduction and disposal strategy	Ongoing/In Progress			Minimize hazardous products used. Dispose through recycling and safe disposal practices.	Continue program.	Started before 1995	No End Date (Continuous)
<b>Procurement (non-paper supplies)</b>							



Kwantlen Polytechnic University - 2011 Carbon Neutral Action Report

Action	Status (as of 12/31/11)	Performance to Date (as of 12/31/11)		Steps Taken in 2011	Steps Planned for 2012 -2014	Start Year	End Year
Incorporate minimum recycled content standards into procurement policy for consumable, non-paper supplies (e.g., writing instruments, binders, toner cartridges, etc.)	Ongoing/In Progress			Consumables and products are evaluated and documented for environmental impact on the Purchasing Green Index.	Continue program.	2010	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.)	Ongoing/In Progress			Furniture, carpet and paint products selected include green standards as selection criteria and requirement specified in contract agreements.	We will establish written green standards for office & classroom furniture as part of new procurement contracts.	2010	No End Date (Continuous)
Implement sustainable purchasing program for cleaning products, disposable paper products and trash bags	Ongoing/In Progress			Continue using green cleaning products & processes.	Continue Green cleaning program.	2005	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			New construction & renovations diverted debris from the landfill and reused building material, as required by LEED , or as LEED equivalent.	This will be addressed through department practices rather than policy.	2005	No End Date (Continuous)
Incorporate lifecycle costing into new construction or renovations	Ongoing/In Progress			We use life cycle costing when appropriate to determine most suitable products for renovations & construction.	Continue process.	2005	No End Date (Continuous)
Indoor air quality							
Enforce a scent-free policy (e.g., no strong perfumes, deodorants, etc.)	Ongoing/In Progress			The University has taken an active approach in promoting a scent free learning and work environment for students and employees of the University. We have a Scent Awareness program and guidelines.	Continue process.	Started before 1995	No End Date (Continuous)
Incorporate low volatile organic compounds (VOCs) standards into procurement policy for products such as paints, carpets, and furniture	Ongoing/In Progress			Paint & carpet are identified as low VOC in all capital projects.	Low VOC furniture will be specified in new procurement contracts.	2008	No End Date (Continuous)
Commuting to and from home							
Introduce telework/work from home policy	Ongoing/In Progress			We have no policy. This is done informally throughout the University, however, the University administration needs to be mindful of any collective agreement requirements or limitations.	Continue process.	Started before 1995	No End Date (Continuous)
Offer staff a compressed work week	Ongoing/In Progress			A number of our employees enjoy a modified or flexible work arrangement within the department where they work. These arrangements provide for employees to work the same number of hours that they have been hired for in a reduced number of days.	Continue process.	Started before 1995	No End Date (Continuous)
Encourage commuting by foot, bicycle, carpool or public transit	Ongoing/In Progress			Established intercampus shuttle between Surrey, Cloverdale, & Langley campuses, providing free service to all Kwantlen students, faculty & staff members.	Continue to exploring opportunities.	Started before 1995	No End Date (Continuous)
Modify parking fees or parking availability for staff/students	In Development			Planning initiated.	In development for 2012.	2012	No End Date (Continuous)

# Kwantlen Polytechnic University Greenhouse Gas Emissions by Source for the 2011 Calendar Year (tCO<sub>2</sub>e\*)



**Total Emissions: 2,892**

- Mobile Fuel Combustion (Fleet and other mobile equipment)
- Stationary Fuel Combustion (Building Heating and Generators) and Electricity
- Supplies (Paper)

## Offsets Applied to Become Carbon Neutral in 2011 (Generated May 18, 2012 11:10 AM)

Total offsets required: **2,891**. Total offset investment: **\$72,275**. Emissions which do not require offsets: **1** \*\*

\*Tonnes of carbon dioxide equivalent (tCO<sub>2</sub>e) 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.