



2010 CARBON NEUTRAL ACTION REPORT

EXECUTIVE SUMMARY

Emily Carr University continues its commitment to reducing Greenhouse Gas Emissions, building awareness and supporting sustainability.

The University's Strategic Plan 2010-15 addresses sustainability as a key theme. With the 2010 announcement for a new campus at Great Northern Way, emphasis towards planning for a sustainable campus is our main focus.

Overviews

2010 Greenhouse Gas Emissions

Emily Carr University's 2010 greenhouse gas emissions from all sources were 858.77 tonnes. The 2009 Phase 1 Boiler Upgrade initiative together with ongoing initiatives enabled Emily Carr University to reduce its annual consumption by 17%. SMARTtool was implemented and all of 2009 data was entered in order to establish a baseline for assessing current Greenhouse Gas Emissions. This also allows us to estimate offset obligations and work toward further reductions. Emily Carr University does not operate a fleet of vehicles, other than a single forklift.



Offsets Applied to Become Carbon Neutral in 2010

100% of our total emission offsets have been applied towards our commitment to becoming carbon neutral.

Emissions Reduction Activities

Actions Taken to Reduce Greenhouse Gas Emissions in 2010

- “Switch it Off” campaign
- Earth Hour
- Smart printer initiative
- Reduction of non-recyclable paper
- Library lighting upgrade
- DDC and controls systems upgrade
- Creation of two secured bike cages

Plans to Continue Reducing Greenhouse Gas Emissions 2011 – 2013

Planning for the new campus at Great Northern Way will continue to occupy most of our attention for the next few years. The intention is to build an exemplary model of a sustainable campus.

In conjunction with this planning, we continue to integrate curriculum and operation initiatives throughout our main campus.

Key initiatives include:

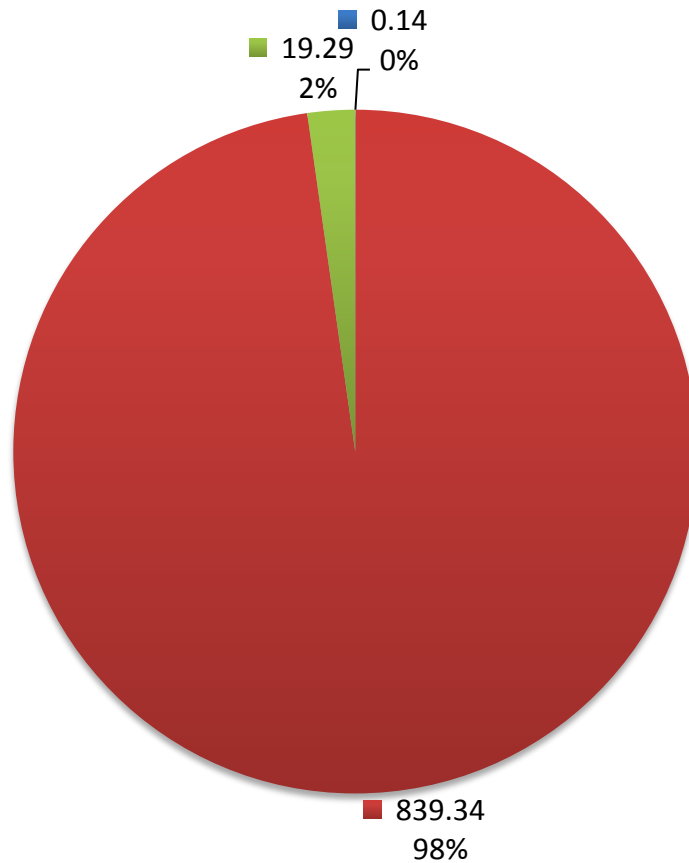
- Translink U-Passes
- Upgrade to HVAC units
- Phase 2 and 3 to the boiler upgrade
- Bottled water campaign
- Reduction in paper consumption

Our Sustainable Campus link is available at www.ecuad.ca/about/sustainablecampus.

Michael Clifford, VP, Finance + Administration

Date

Emily Carr University of Art + Design Greenhouse Gas Emissions by Source for the 2010 Calendar Year (tCO₂e*)



Total Emissions: 858.77

- Mobile Fuel Combustion (Fleet and other mobile equipment)
- Stationary Fuel Combustion and Electricity (Buildings)
- Supplies (Paper)

Offsets Applied to Become Carbon Neutral in 2010

Total offsets purchased: **858.77**. Total offset investment: **\$21,469.25**. Emissions which do not require offsets: **0** **

*Tonnes of carbon dioxide equivalent (tCO₂e) 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.

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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 12/31/10)	Performance to Date (as of 12/31/10)	Steps Taken in 2010	Steps Planned for 2011 -2013	Start Year	End Year
Mobile Fuel Combustion (Fleet and other mobile equipment)						
This section is either not applicable, not yet evaluated, or was completed before 2010						
Stationary Fuel Combustion, Electricity and Fugitive Emissions (Buildings)						
Planning/management						
Enrol in a building energy benchmarking program (e.g., GREEN UP)	In Development			Programs affecting existing buildings will be considered with respect to the future move of ECU to a new campus at Great Northern Way (GNW)	2010	No End Date (Continuous)
Reduce office space (square meters) per employee	Ongoing/In Progress	8	is the current average rentable square meters per employee	Existing office space is very small and limited. Faculty/staff must continue to share office space	2010	No End Date (Continuous)
Install a real time metering system (e.g. Pulse, Reliable Controls, Houle Controls)	Ongoing/In Progress	80	% of buildings have a real time metering system installed	New gas metering system installed for new boiler. Additions to the DDC have been implemented	2010	No End Date (Continuous)
Owned buildings						
Establish energy performance baseline for owned buildings	Ongoing/In Progress	100	% of owned buildings have an established energy performance baseline	BC Hydro conducted an energy audit of buildings in 2009. Energy usage is regularly entered onto SMARTool	2009	No End Date (Continuous)
Achieve LEED NC Gold certification at a minimum for new construction or major renovations	In Development	0	% of owned buildings are certified LEED NC Gold or LEED NC Platinum	Conceptual Plan for GNW has been developed. Awaiting decision to proceed with detailed Business Plan	2011	No End Date (Continuous)
Incorporate integrated design process into new construction or during renovations of owned buildings	In Development	0	% of buildings built or renovated since start year indicated used the integrated design process		2011	No End Date (Continuous)
Incorporate a refrigerant management strategy into regular building management/maintenance to reduce fugitive emissions	In Development			Continue to plan to minimize fugitive emissions to refrigerants at the new campus	2010	No End Date (Continuous)
Complete energy retrofits on existing, owned buildings	Ongoing/In Progress	100	% of owned buildings have undergone energy retrofits since start year indicated	The remaining T12 lights in the Library were upgraded to T8's. Tie-in's to the DDC system were completed for ease of maintenance	2000	No End Date (Continuous)
Retrofitting owned buildings						
Upgrade mechanical systems (heating, cooling, ventilation) during retrofits	Ongoing/In Progress	50	% of retrofits since start year indicated had heating, cooling, and ventilation systems upgrades	Recent upgrades to both North and South Building dust extractors to enhance better performance. Project funded by the Province and Federal Government (KIP)	2000	No End Date (Continuous)

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Action	Status (as of 12/31/10)	Performance to Date (as of 12/31/10)		Steps Taken in 2010	Steps Planned for 2011 -2013	Start Year	End Year
Upgrade lighting systems during retrofits	Completed in 2010	80	% of retrofits since start year indicated had lighting systems upgrades	Remaining T12 fixtures were upgraded to T8's.	Conduct cost analysis to convert T8's to T5's	2010	No End Date (Continuous)
Upgrade/adjust control systems during retrofits	Ongoing/In Progress	5	% of retrofits since start year indicated had control system upgrades or adjustments	HW Control Valve installed to link existing domestic HWT to new boiler	Continue to implement the 2009 Energy Audit recommendations. Continuation is dependent on initiatives and funding	2010	No End Date (Continuous)
Install an on-site renewable energy demonstration project	In Development	0	% of retrofits since start year indicated had on-site renewable energy components		A renewable energy demo project may be included in the plans for constructing a "green" building at GNW. Student projects relating to renewable energy and other sustainability issues are regularly on display for the public at the current campus	2010	No End Date (Continuous)
Leased buildings							
Establish energy performance baseline for leased buildings	Ongoing/In Progress	100	% of leased buildings have an established energy performance baseline	Annual data has been entered in SMARTool to establish baseline	Ongoing data entry into SMARTool	2009	No End Date (Continuous)
IT power management							
Install power management software which shuts down computers outside of regular business hours	Ongoing/In Progress	10	% of computers shut down automatically outside of regular business hours	Continued to install Windows 7 wich facilitates this process	Most office computers will be upgraded to Windows 7. This provides an opportunity to revisit both policy and the capabilities to managed automatic shutdown	2009	No End Date (Continuous)
Implement server virtualization	Ongoing/In Progress	50	% of servers have been virtualized since start year indicated	We virtualized about 30% more hardware	Completion of Virtualization of all candidate hardware servers	2009	No End Date (Continuous)
Apply auto-sleep settings on computer monitors and CPUs	Completed in 2010			Implemented		2009	2010
Remove stand-alone printers, copiers, and/or fax machines and install multi-function devices	Ongoing/In Progress	40	% reduction in printers, copiers, and/or fax machines since start year indicated	Many offices/departments have had the number of printers, photocopiers and faxes replaced by multifunction devices	More offices will be reviewed and targeted for equipment rationalization and reduction	2009	No End Date (Continuous)
Apply auto-sleep settings on printers, copiers, fax machines, and/or multi-function devices	Completed in 2010			Implemented	No additional plans	2009	2010
Replace computers with ENERGY STAR models during regular computer upgrades	Completed in 2010			Implemented	All computers to be purchased in 2011-2012 will be energy star rated	2005	No End Date (Continuous)
Appliances and electronic devices							
Replace refrigerators with ENERGY STAR models or source ENERGY STAR models for future purchases	In Development	1	% of fridges are ENERGY STAR rated		Future purchases will be Energy Star models	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			No purchases required for 2010	Continue to replace with Energy Star models	2010	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			Incandescent bulbs continue to be replaced with CFL's as required	Continue replacing bulbs with CFL's when necessary	2008	No End Date (Continuous)
Behaviour change program							
Ask staff to unplug electrical equipment or switch off power bars when not in use	Ongoing/In Progress			Reminders via email regularly sent to ECU community	Continue to remind ECU community	2010	No End Date (Continuous)

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Action	Status (as of 12/31/10)	Performance to Date (as of 12/31/10)		Steps Taken in 2010	Steps Planned for 2011 -2013	Start Year	End Year
Ask staff to close blinds at end of work day to reduce heating/cooling demands	Ongoing/In Progress			Staff were asked to close manual blinds when they leave work for the day	Continue to remind staff	2009	No End Date (Continuous)
Encourage staff to use air dry setting on dishwashers	Ongoing/In Progress			Instructions posted near the dishwasher	Continue to remind users	2009	No End Date (Continuous)
Encourage use of stairs instead of elevators	Ongoing/In Progress			Wellness Committee encourage "taking the stairs" in newsletter	Increase awareness with additional signage	2009	No End Date (Continuous)
Provide reminders for turning off lights (e.g., signs, stickers, messages)	Ongoing/In Progress			Signage and stickers placed in offices and general areas	Increase awareness by encouraging the Departmental Managers to remind employees	2010	No End Date (Continuous)
Promote hot water conservation	Completed in 2010			Temperature setting reduced to conserve	Signage posted to conserve	2010	No End Date (Continuous)
Supplies (Paper)							
Paper Type							
Purchase 30% post-consumer recycled paper	Ongoing/In Progress	63	% of total paper purchased contains 30% recycled content	ECU purchased an additional 36% recycled paper	Continue our efforts to limit purchases to only 100% recycled	2008	No End Date (Continuous)
Purchase 100% post-consumer recycled paper	Ongoing/In Progress	10	% of total paper purchased contains 100% recycled content	ECU newsletter converted to an on-line version in lieu of printing	Purchase of new printers that will accommodate 100% recycled paper, as required	2009	No End Date (Continuous)
Printer/document settings							
Switch networked printers and photocopiers to automatic double-sided	Ongoing/In Progress	75	% of network printers or photocopiers are set to automatic double-sided	All printers and multifunction devices purchased in 2010 had duplexing capabilities	Continue to purchase duplex printers and multifunction devices. Promote and assist community members in using the duplex feature	2009	No End Date (Continuous)
Electronic media in place of paper							
Install collaborative software for electronic editing (e.g. SharePoint, Groove, etc.)	Ongoing/In Progress	15	% of staff workstations with software installed	Researched new collaborative software called Alfresco. Received approval from the Executive Committee to implement this	Implementation of the Alfresco software	2010	2011
Post materials online that were previously printed	Completed in 2010			Reimbursibles cheques were previously issued. New process allows for e-chequing directly to employee account		2010	No End Date (Continuous)
Switch to an electronic payroll notification system in place of paper pay stubs	Completed in 2010			Payroll advices were previously issued. New process allows advices to be emailed directly		2010	2010
Behaviour change program							
Train staff to use collaborative software for electronic editing (e.g. SharePoint, Groove, etc.)	In Development	15	% of staff currently have received collaborative software training	Currently only the President's Department and IT Services have been trained in the Alfresco system	IT Services plans to roll this out to all Departments this 2011	2010	2011
Encourage staff to hold paperless meetings or presentations (i.e., no handouts)	In Development			On-line presentations incorporated into presentations	If paper is required, consider using scrap/discarded paper	2010	No End Date (Continuous)
Encourage re-use of scrap paper	Ongoing/In Progress			Continue to promote the re-use of scrap paper	Research possibility of central bins for re-use	2005	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 12/31/10)	Performance to Date (as of 12/31/10)		Steps Taken in 2010	Steps Planned for 2011 -2013	Start Year	End Year
Business Travel							
Virtual meeting technology							
Install web-conferencing software (e.g., Live Meeting, Elluminate, etc.)	Ongoing/In Progress	5	% of computers have web-conferencing software installed	Continue with software evaluation. We are looking at a cross platform solution that supports both Mac's and PC's. We have Facetime, but limited to the MAC	Determine software and implement	2009	2012
Make desktop web-cameras available to staff	Completed in 2010			Web cameras were available for loan		2008	2010
Install video-conferencing units in meeting rooms or provide mobile video-conferencing units	Completed in 2010			Nothing to report		2008	2010
Behaviour change program							
Train staff in web-conferencing	Ongoing/In Progress	10	% of staff are trained web-conferencing	Evaluated need for further training	Implementation of additional training on an ad hoc basis. This is contingent on a cross platform technology solution	2005	2012
Encourage staff to consider virtual attendance/presentation at events where possible	Ongoing/In Progress			Deployment of Remote Desktop Software and Training	Further deployment of Remote Desktop Software and Training	2007	No End Date (Continuous)
Encourage carpooling to meetings	Ongoing/In Progress			Car-pooling is common practice when feasible. An additional secured bike cage was installed to accommodate 30 bikes	Continue to encourage car-pooling	2006	No End Date (Continuous)
Encourage alternative travel to meetings (e.g., bicycles, public transit, walking)	Ongoing/In Progress			Continue to promote alternative methods of transportation	The U-Pass was implemented for all ECU students.	2006	No End Date (Continuous)
Education, Awareness, and Engagement							
Team-building							
Create Green, Sustainability, Energy Conservation, or Climate Action Teams with executive endorsement	In Development				The proposed sustainability coordinator would introduce a program throughout the university	2011	No End Date (Continuous)
Provide resources and/or dedicated staff to support teams	In Development			Proposal for part time sustainability coordinator has been approved	Identify key components to the position and commencement with hiring	2010	No End Date (Continuous)
Providing behaviour change education/training to teams (e.g., community-based social marketing)	Ongoing/In Progress			The Wellness Committee continues to host health and sustainability noon-hour workshops for the ECU community as well as organized other related activities	Sustainability coordinator to establish future activities	2008	No End Date (Continuous)
Staff Professional Development							
Support green professional development (e.g., workshops, conferences, training)	Ongoing/In Progress			Engineering Supervisor has attended several courses sponsored by BC Hydro. Faculty member attends PALSS on behalf of ECU	Staff will continue to be encouraged to attend workshops or conferences relating to sustainability	2009	No End Date (Continuous)
Staff awareness/education							

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Action	Status (as of 12/31/10)	Performance to Date (as of 12/31/10)	Steps Taken in 2010	Steps Planned for 2011 -2013	Start Year	End Year
Provide education to staff about the conservation of water, energy, and raw materials	Ongoing/In Progress		ECU sustainable campus link to our main website continues to be updated with current news. Participation in world wide Earth Hour continues to be promoted	Participate in world wide Earth Hour for future years. Establish community wide a "Switch it Off" program to promote the concept of switching monitors, computers, lights, etc while attending meetings and leaving at the end of the day. Faculty member continues liaison role with the Presidents Academic Leadership Summit on Sustainability education.	2008	No End Date (Continuous)
Provide green tips on staff website or in newsletters	Completed in 2010		ECU's newsletter can now be viewed on-line in lieu of printing	Continue to expand website with further information	2009	No End Date (Continuous)
Client/public awareness/education						
Provide education to clients/public about the science of climate change	Ongoing/In Progress		Course curriculum includes climate change issues. Students were assigned projects for public display. Faculty members continue to speak at public events and have had guest speakers speak on sustainability.	This continues to be an on-going activity. Two new speakers will be presenting in 2011.	2006	No End Date (Continuous)
Provide education to clients/public about the conservation of water, energy, and raw materials	Ongoing/In Progress		Course curriculum includes issues relating to water conservation and other ecological topics	This continues to be an on-going activity. Two new speakers will be presenting in 2011.	2006	No End Date (Continuous)
Provide green tips on client/public website or in newsletters	Ongoing/In Progress		Website will be expanded to include for green tips and other sustainable topics.	Continue to expand website with further information. Research possibility of more involvement from students	2009	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		Faucets and toilets are motion triggered. Research viability of a central hydration system.	Water hydration system to be installed. Decrease vending machine water bottles to promote use of the water hydration system. Establish policy to ban selling of bottled water	2005	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	In Development			Waterless urinals are still under consideration. Planning for the GNW campus will include a comprehensive water management strategy. Identify locations for grey water barrels	2009	No End Date (Continuous)
Introduce a stormwater management landscape strategy (e.g., vegetated roofs, permeable paving, rain gardens, bioswales)	In Development		GNW campus will include strategies that take into account water conservation	Continue with sustainable criteria for our GNW campus	2009	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		Extensive recycling of paper, plastics, bottles, tins, electronic equipment and building materials are in place. Implemented additional resources to cafeteria contractor to dispose of misc items. Collaborating with Granville Island - CMHC to identify combined efforts	Planning for adequate recycling equipment and storage will be a factor in planning the new campus at GNW. Install new Hydration Water System to reduce bottled water consumption	2006	No End Date (Continuous)
Implement a hazardous waste reduction and disposal strategy	Ongoing/In Progress		Purchased alternative supplies to reduce community hazardous waste. Combined efforts from the ECU community now allow the ability to compact and combine for disposal	Continue to seek alternatives to reduce consumption	2008	No End Date (Continuous)
Procurement (non-paper supplies)						
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			Planning the new GNW campus will provide the opportunity to employ green standards in future purchases	2009	No End Date (Continuous)
Implement sustainable purchasing program for cleaning products, disposable paper products and trash bags	Ongoing/In Progress		Actively investigated and testing new products	Continue to research further alternative products as they become available	2007	No End Date (Continuous)

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Action	Status (as of 12/31/10)	Performance to Date (as of 12/31/10)	Steps Taken in 2010	Steps Planned for 2011 -2013	Start Year	End Year
Require a minimum purchase of sustainable, and organic food and beverages supplied by contracted food suppliers or caterers	Ongoing/In Progress		Cafeteria/catering company continues to source out local products. 100% recycled disposable wares are used. 100% reusable cups and food containers are still in use. Additional recycled bins have been provided for items not previously recycled	Continue to source local and/or organic products. Menu has been changed to reflect additional organic features	2009	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		The re-use of materials continues to be assessed. Items such as doors, locks, steel studs, duct work, wood, lights and flooring are typically re-used.	This is an ongoing and expanding initiative	1998	No End Date (Continuous)
Indoor air quality						
Enforce a scent-free policy (e.g., no strong perfumes, deodorants, etc.)	Ongoing/In Progress		Departments continue promoting their areas as scent free environments.	Research and consider developing a scent-free policy	2008	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		ECU continue to purchase low VOC paint. Researched alternative environmentally friendly furnishings	Development of a new "green" campus at GNW will provide an opportunity to use a wide variety of environmental friendly products	2009	No End Date (Continuous)
Commuting to and from home						
Introduce telework/work from home policy	In Development		IT Department actively promotes and supports telecommuting. The Unversity has the infrastructure to support this and HR is looking for ways to promote the idea to other Departments	Continue to investigate its viability	2009	No End Date (Continuous)
Offer staff a compressed work week	Ongoing/In Progress		Continue monitoring pros and cons of existing personnel working a compressed work week	A compressed work week is not feasible for areas with limited staffing. Proposals will be considered when presented	2008	No End Date (Continuous)
Encourage commuting by foot, bicycle, carpool or public transit	Ongoing/In Progress		Researched various options for alternative transportation. Student union lobbied for the U-Pass initiative and was successful	Continue to promote alternative means of transport.	2008	No End Date (Continuous)
Provide secure bicycle storage	Completed in 2010		An additional bike cage was installed to accommodate 30 bikes		2009	2010
Modify parking fees or parking availability for staff/students	Completed in 2010		Continue to promote alternative means of transportation. U-Pass initiative underway		2009	2010