



2011 CARBON NEUTRAL ACTION REPORT

Executive Summary

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

Our University Sustainability Policy was established in 2009. As part of the University's commitment, the objective of this policy is to:

- educate members of the University community
- to engage effectively as global citizens
- to steward our natural resources, and
- to work towards a sustainable future in cooperation with organizations at the local, provincial, national and global level

And in 2006, Emily Carr signed the Talloires Declaration. Emily Carr recognizes its commitment to higher education responsibility towards sustainable development. As a member of this world wide movement, we share the responsibility of building sustainable, human-centered, creative societies.

Overviews

2011 Greenhouse Gas Emissions

Emily Carr University's 2011 greenhouse gas emissions from all sources were 993 tonnes.

A comparison of our 2009 vs 2010 CO₂ emissions are as follows:

- 2009 CO₂e emitted was 1029 tonnes.
- 2010 CO₂e emitted was 858 tonnes.

This reduction was achievable through the ongoing commitment of the Emily Carr community.



The University was required to purchase \$ 24,825.00 of offsets for its 993 tonnes of CO2 emitted in 2011.

It was estimated that fugitive emissions from stationary cooling comprise of less than 0.01% of Emily Carr's total emissions. Collection of this data was not feasible.

Offsets Applied to Become Carbon Neutral in 2011

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 2011

- Integrate new audio visual technology to facilitate web conferencing
- Promoted the Car 2 Go program to our staff and students
- Established a community composting program
- Upgraded washroom faucets and fixtures
- Continuation of lighting upgrades and building controls

Plans to Continue Reducing Greenhouse Gas Emissions 2012 – 2014

In 2010 the University announced the development of a new campus at Great Northern Way. Further exploration of the Campus Redevelopment Project Concept Plan is currently underway. Our focus will be towards designing and building an exemplary sustainable campus.

Planning for the new campus at Great Northern Way will continue to occupy most of our attention for the next few years.

In conjunction with this planning, we continue to integrate curriculum and operational initiatives throughout our Granville Island campus.

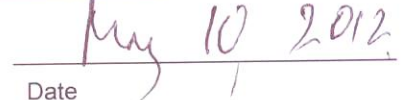
Key initiatives include:

- Upgrade to HVAC units
- Phase 2 and 3 to the boiler upgrade
- Bottled water campaign
- Reduction in paper consumption
- Form a community garden
- Establish metal and wood recycling program

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



Michael Clifford, VP, Finance + Administration



Date

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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 12/31/11)	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)						
This section is either not applicable, not yet evaluated, or was completed before 2011						
Stationary Fuel Combustion, Electricity and Fugitive Emissions (Buildings)						
Planning/management						
Enrol in a building energy benchmarking program (e.g., GREEN UP)	In Development			Program to be considered pending future move to Great Northern Way Campus	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	A review of existing office space was conducted. Faculty/staff still continue to share office space. Regrouped various departments to accommodate for new staff without the need to retrofit existing 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	Additional DDC's have been installed	2010	No End Date (Continuous)
Owned buildings						
Incorporate a refrigerant management strategy into regular building management/maintenance to reduce fugitive emissions	In Development			Continue planning to minimize fugitive emissions at the new campus	2010	No End Date (Continuous)
Perform energy retrofits on existing, owned buildings	Ongoing/In Progress			South Building Atrium Lights replaced. Expected annual electricity savings is 50,000 kWh	2000	No End Date (Continuous)
Retrofitting owned buildings						
Upgrade mechanical systems (heating, cooling, ventilation) during retrofits	Ongoing/In Progress			Various minor upgrades to both the North and South buildings relating to HVAC and dust extractors.	2000	No End Date (Continuous)
IT power management						
Install power management software which shuts down computers outside of regular business hours	Ongoing/In Progress	50	% of computers shut down automatically outside of regular business hours	All our desktop PC's have this functionality but because we do updates after business hours, we have not deployed it. We are currently evaluating ways that minimize disruptions. Our Apple computers are not centrally managed, but most staff do turn them off.	2008	No End Date (Continuous)
Implement server virtualization	Ongoing/In Progress	70	% of servers have been virtualized since start year indicated	An additional 20% of our existing hardware servers were virtualized this year. 100% of all new servers were virtualized	2009	No End Date (Continuous)
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	Many offices/departments have had the number of printers, photocopiers and faxes replaced by multifunction devices	2009	No End Date (Continuous)
Appliances and electronic devices						

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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
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 2011	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 replaced with CFL's	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 regularly sent to ECU community	Continue to remind ECU community	2010	No End Date (Continuous)
Ask staff to close blinds at end of work day to reduce heating/cooling demands	Ongoing/In Progress			Reminders regularly sent to ECU community	Continue to remind ECU community	2009	No End Date (Continuous)
Encourage staff to use air dry setting on dishwashers	Ongoing/In Progress			One dishwasher on premises. 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 regular newsletters.	Wellness Committee hosted a "February Wellness Challenge" and during the month, everyone is encouraged to use the stairs. ECU will continue to promote this activity.	2009	No End Date (Continuous)
Provide reminders for turning off lights (e.g., signs, stickers, messages)	Ongoing/In Progress			A "Switch It Off" initiative was presented to the ECU community. Students launched a lunch hour information session for everyone to attend.	Increase awareness by encouraging the Departmental Managers to remind their employees. Students will set up lunch hour session in 2012.	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	We continue to limit our purchases to 30%, 40% and 100% recycled paper.	As noted in Steps Taken in 2011.	2008	No End Date (Continuous)
Purchase 40% post-consumer recycled paper	Ongoing/In Progress			same as above	ECU are gradually switching the 30% inventory to 40% paper	2011	No End Date (Continuous)
Purchase 100% post-consumer recycled paper	Ongoing/In Progress	10	% of total paper purchased contains 100% recycled content	The purchase of new printers allows for 100% recycled paper	Continue to purchase printers and photocopiers which can accommodate 100% recycled paper	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 2011 had duplexing capabilities	Continue to purchase duplex printers and multifunction devices. Promote and assist community members in using the duplex features	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	100	% of staff workstations with software installed	Adopting Google Docs for collaborative sharing	Investigation of VMWare Octopus for campus wide document sharing	2010	No End Date (Continuous)
Behaviour change program							

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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
Train staff to use collaborative software for electronic editing (e.g. SharePoint, Groove, etc.)	In Development	25	% of staff currently have received collaborative software training	Ongoing self-directed training in using Google Docs	ITS will implement a formal training program if VMWare Octopus successfully passes the Beta test	2011	No End Date (Continuous)
Encourage staff to hold paperless meetings or presentations (i.e., no handouts)	In Development				Staff are beginning to use IPADS for meetings. We will evaluate its performance and efficiencies	2011	No End Date (Continuous)
Encourage re-use of scrap paper	Ongoing/In Progress			Placed centralized bins throughout the premises to encourage re-cycling	Continue to purchase and recycled paper products	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 12/31/11)	Performance to Date (as of 12/31/11)	Steps Taken in 2011	Steps Planned for 2012 -2014	Start Year	End Year	
Business Travel							
Virtual meeting technology							
Install web-conferencing software (e.g., Live Meeting, Elluminate, etc.)	Ongoing/In Progress		All staff and faculty have access to centrally booked laptops with various flavours of web-conferencing software. Those who frequently use web-conferencing are outfitted with hardware and software	Plan to make the installation web-conferencing software standard in the deployment of all new computers	2010	No End Date (Continuous)	
Make desktop web-cameras available to staff	Ongoing/In Progress		A small number of HD portable webcams are now available to sign out to faculty and staff for web-conferencing. Faculty laptops provided by the University have built in web-cameras	ECU plans to increase the number of loaner HD webcams and portable laptops to staff in support of web-conferencing	2011	No End Date (Continuous)	
Install video-conferencing units in meeting rooms or provide mobile video-conferencing units	Ongoing/In Progress	14	% of meeting rooms have access to video-conferencing equipment	HD videoconferencing unit installed in classroom. In 2011 we conducted our first interactive videoconferencing class between Emily Carr students and North Island College students. A portable videoconferencing unit is also accessible for administration meetings and classes.	Increase the number of interactive videoconferencing class for 2012-2013. In development are collaboration with US and International Universities.	2006	No End Date (Continuous)
Behaviour change program							
Train staff in web-conferencing	Ongoing/In Progress		Began using Bluejeans, a cloud based video conferencing service to bridge multiple video conferencing end points. A total of 25 video conferencing administration meetings were held in 2011	Investing funds in continuing Bluejeans service or other comparable service for bridging multiple callers at once while maintaining quality control of calls. On-line information on web-conference facilities and support offered in development	2011	No End Date (Continuous)	
Train staff in video-conferencing or provide technical support for video-conferencing set-up	Ongoing/In Progress		Designated technical staff assigned and trained in supporting video conferencing and web-conferencing needs	Currently developing online information for staff on web-conferencing and video conferencing support.	2010	No End Date (Continuous)	
Encourage staff to consider virtual attendance/presentation at events where possible	Ongoing/In Progress		Began webcasting and live video streaming of conferences and events. Purchased mobile equipment and provided staffing to produce	Plan is to increase the number of webcasting and live video streaming events held at the University. We will permanently install video capture equipment in the Theatre and expand on mobile video capture and streaming equipment	2010	No End Date (Continuous)	
Encourage carpooling to meetings	Ongoing/In Progress		ECU continue to carpool to external meetings. We also encourage the Car2Go program	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 the UPASS program. Optional transportation programs such as Car2Go were implemented	The University continues to promote alternatives means of transportation	2006	No End Date (Continuous)	
Education, Awareness, and Engagement							
Staff Professional Development							
Support green professional development (e.g., workshops, conferences, training)	Ongoing/In Progress		Faculty members attend annual workshop/summit with PALS. ECU also hosted a conference for ECO-Design	ECU Faculty will be keynote speaker at upcoming PALS workshop/summit. Same member is writing new Sustainable Design for Professionals book	2009	No End Date (Continuous)	
Staff awareness/education							
Provide education to staff about the science of climate change	Ongoing/In Progress		Guest speakers presentations were conducted throughout the year	Continue to host presentations for both internal and external communities	2010	No End Date (Continuous)	

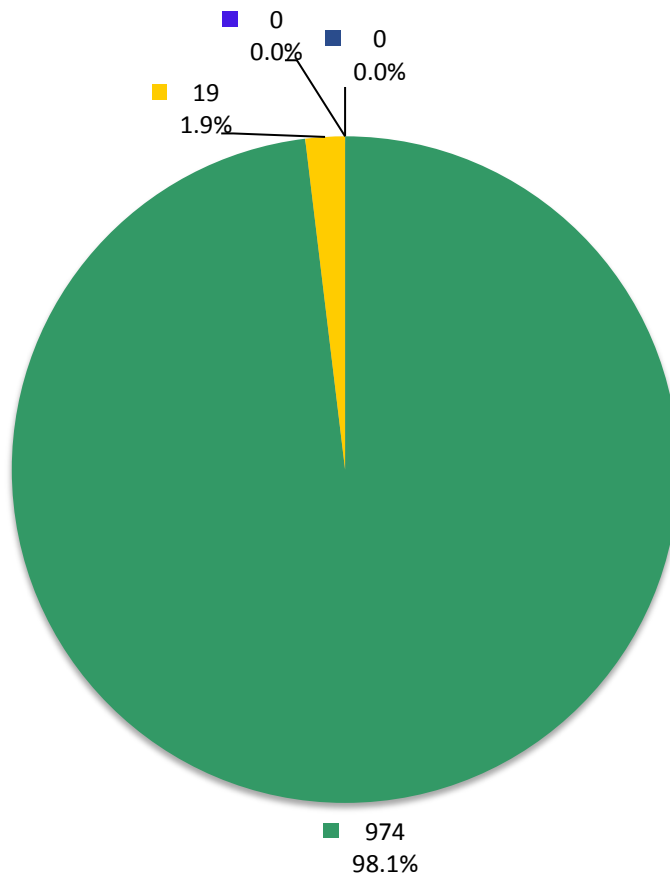
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Action	Status (as of 12/31/11)	Performance to Date (as of 12/31/11)	Steps Taken in 2011	Steps Planned for 2012 -2014	Start Year	End Year
Provide education to staff about the conservation of water, energy, and raw materials	Ongoing/In Progress		ECU sustainable campus link to our website continues to be updated with current news. ECU contributed to the Earth Hour annual event.	ECU will continue to provide information related to the conservation of water, energy and raw materials	2008	No End Date (Continuous)
Provide green tips on staff website or in newsletters	In Development			Faculty email monthly bulletin being developed.	2010	No End Date (Continuous)
Client/public awareness/education						
Provide education to clients/public about the science of climate change	Ongoing/In Progress		Several guests speakers presented in 2011. A sustainable practices blog has been formed. A Clean Energy course was incorporated into the curriculum	Provide more sustainable design courses and host sustainable seminars	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 conversation and other ecological topics	This continues to be an on-going activity.	2006	No End Date (Continuous)
Provide green tips on client/public website or in newsletters	Ongoing/In Progress		Website will be expanded to include the monthly bulletin and live stream hosted events	Continue to expand website with further information.	2006	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		One set of washroom faucets were upgraded complete with auto sensor	Waterless urinals are still being considered. Planning for the new GNW campus will include a comprehensive water management strategy.	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 composting disposal area for staff and cafeteria contractor.	Planning for adequate recycling equipment and storage will be a factor in planning the new campus at GNW.	2006	No End Date (Continuous)
Implement a hazardous waste reduction and disposal strategy	Ongoing/In Progress		ECU has centralized their program for members to drop off their electronics, batteries and light bulbs. Items are picked up by recycling company when required	Additional items will be included in the disposal process. Planning for adequate recycling equipment and storage will be a factor in planning the new campus at GNW.	2008	No End Date (Continuous)
Procurement (non-paper supplies)						
Implement sustainable purchasing program for cleaning products, disposable paper products and trash bags	Ongoing/In Progress		ECU continues to test out new custodial cleaning products	Test new products as they become available	2007	No End Date (Continuous)
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.	Continue to source local and/or organic products.	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		ECU continues its mandate to re-use, re-cycle, re-purchase whenever possible. A Space Planning Committee was formed to minimize renovations without compromising a safe work place for employees	This is an ongoing and expanding initiative.	1998	No End Date (Continuous)
Indoor air quality						

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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 low volatile organic compounds (VOCs) standards into procurement policy for products such as paints, carpets, and furniture	Ongoing/In Progress		The Facilities Department currently purchase low VOC paint for community wide use.	Development of a new "green" campus at GNW will provide us an opportunity to use a wide variety of environmentally friendly products	2009	No End Date (Continuous)
Commuting to and from home						
Introduce telework/work from home policy	In Development		Human Resources Department have begun investigating whether this is a viable option for the ECU Community	HR Dept will finalize their results and present it to the various committess for their review and comment	2009	No End Date (Continuous)
Offer staff a compressed work week	Ongoing/In Progress		A compressed work week is available to several staff members.	Continue monitoring pros and cons of existing personnel. New requests will be considered when presented	2008	No End Date (Continuous)
Encourage commuting by foot, bicycle, carpool or public transit	Ongoing/In Progress		ECU's Wellness Committee provide monthly lunch hour seminars promoting the various options of transporation. The Car2Go Program was launched in early 2011	ECU will continue to provide lunch information seminars and newsletters promotion.	2008	No End Date (Continuous)
Modify parking fees or parking availability for staff/students	Ongoing/In Progress		UPASS initiative has enabled ECU to reduce the number of parking stalls.	We continue to promote alternative means of transportation	2009	No End Date (Continuous)

Emily Carr University of Art and Design Greenhouse Gas Emissions by Source for the 2011 Calendar Year (tCO₂e*)



Total Emissions: 993

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

Offsets Applied to Become Carbon Neutral in 2011 (Generated May 18, 2012 11:08 AM)

Total offsets required: **993**. Total offset investment: **\$24,825**. 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.