



emily carr
university of art + design



2012 CARBON NEUTRAL ACTION REPORT

Executive Summary

Emily Carr University remains focused to reducing its carbon footprint and continues its commitment to implementing environmentally responsible practices.

In 2006, Emily Carr signed the Talloires Declaration, joining a worldwide movement to recognize higher education's responsibility towards sustainable development.

Our University Sustainability Policy was established in 2009. As part of the University's commitment, we are pleased to report that we have been very successful in many of our initiatives and will continue creating new initiatives that will engage our Faculty, Staff, Students and Community.

With the recent approval of our Great Northern Way Campus project, we will be constructing the new facility to achieve LEED gold certification.

Overviews

2012 Greenhouse Gas Emissions: 910 tonnes

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 2012

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



2012 Emissions Reduction Activities

Actions Taken to Reduce Greenhouse Gas Emissions in 2012

- Boiler replacement – completion of Phase II
- Continue with lighting and building control upgrades
- ✓ • Established a bike loan program
- Further reduction of paper consumption
- Student Union created a "re-use a mug" program
- Student Union hosted the annual clothing swap
- Student Union/ECU conducted a "bottle free" water day
- Emily Carr Blog – 180° Thinking for Sustainability. Blog can be found at www.ecuad.ca/about/sustainable_campus/newsletters

Plans to Continue Reducing Greenhouse Gas Emissions 2012 – 2014

In 2012, funding for the new campus at Great Northern Way was granted by the Province of B.C. Planning has commenced with completion anticipated in August 2016.

Further information pertaining to our new campus can be found at www.ecuad.ca/gnwcampus

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

Key initiatives for our Granville Island campus includes:

- Continue implementing energy efficient projects
- Routine Capital projects with emphasis on sustainable practices
- Create community garden
- Expand our metal and wood recycling program
- Work with Facilities Department to review preventative maintenance program to ensure that equipment is functioning efficiently
- Implement centralizing Purchasing Department

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

Michael Clifford, VP, Finance + Administration

Apr 22, 2013

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	Steps Taken	Steps Planned	Start Year	End Year
Stationary Fuel Combustion, Electricity					
Behaviour change program					
Help staff reduce personal energy use through ""workstation tune-ups""	Not Yet Evaluated				No End Date (Continuous)
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	2009	No End Date (Continuous)
Ask staff to unplug electrical equipment or switch off power bars when not in use	Ongoing/In Progress	ECU procedures have been in place since 2009. We will continue to remind the ECU community	Ongoing continuation of this procedure	2009	No End Date (Continuous)
Ask staff to close blinds at end of work day to reduce heating/cooling demands	Ongoing/In Progress	We continue to remind the ECU community	Ongoing continuation of this procedure	2009	No End Date (Continuous)
Encourage staff to use air dry setting on dishwashers	Ongoing/In Progress	There is only one dishwasher on the premises. The person responsible for the dishwasher is aware of the air dry setting	Ongoing continuation of this procedure	2009	No End Date (Continuous)
Provide tips to staff on saving energy in the office while working outside of regular business hours	Not Yet Evaluated				No End Date (Continuous)
Encourage use of stairs instead of elevators	Ongoing/In Progress	The Wellness Committee held their annual "Wellness Challenge". Challenges consisted of a 30 day program, which included using the stairs in lieu of the elevator, modifications to their diet, etc.	ECU will continue with this program	2009	No End Date (Continuous)
Provide reminders for turning off lights (e.g., signs, stickers, messages)	Ongoing/In Progress	During the October Energy Saving month, signs to reduce energy consumption were posted throughout the campus. Conducted our annual Earth Hour campaign and extended hour lights out program	ECU will be setting up an email reminder for personnel	2009	No End Date (Continuous)
Promote hot water conservation	Completed (in Previous Year)				No End Date (Continuous)
IT power management					
Install power management software which shuts down computers outside of regular business hours	Ongoing/In Progress	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 to turn this on that minimizes disruption. Our Apple computers are not centrally managed, but most staff do turn them off.	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 to turn this on that minimizes disruption. 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	An additional 10% of our existing hardware servers were virtualized this year. 100% of all new servers were virtualized.	Continuation of our server virtualization project. Currently 80% are virtualized	2009	No End Date (Continuous)
Apply auto-sleep settings on computer monitors and CPUs	Completed (in Previous Year)				No End Date (Continuous)
Remove stand-alone printers, copiers, and/or fax machines and install multi-function devices as part of a print management strategy	Ongoing/In Progress	Many offices/departments have had the number of printers, photocopiers and faxes replaced with 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, fax machines, and/or multi-function devices	Completed (in Previous Year)				No End Date (Continuous)
Replace computers with ENERGY STAR models during regular computer upgrades	Completed (in Previous Year)				No End Date (Continuous)
Leased buildings					
Establish energy performance baseline for leased buildings	Not Yet Evaluated				No End Date (Continuous)
Lease space with operations and maintenance performance labelling/certification (e.g., LEED EB:O&M)	Not Yet Evaluated				No End Date (Continuous)
Lease space in buildings with new construction performance labelling/certification (e.g., LEED NC)	Not Yet Evaluated				No End Date (Continuous)

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Action	Status	Steps Taken	Steps Planned	Start Year	End Year
Develop a green lease policy that requires green features to conserve energy be included in all lease negotiations	Not Yet Evaluated				No End Date (Continuous)
Other Stationary Fuel Combustion					
To schedule automated power off electronic presentation equipment in teaching spaces	Ongoing/In Progress	Additional two rooms have been provided with the automated scheduled power off timers	To add two more rooms with the automated scheduled power off timers	2010	No End Date (Continuous)
Owned buildings					
Establish energy performance baseline for owned buildings	Completed (in Previous Year)				No End Date (Continuous)
Register for performance labelling/certification for operations and maintenance of owned buildings (e.g., LEED EB:O&M)	Not Yet Evaluated				No End Date (Continuous)
Register for performance labelling/certification for commercial interiors of owned buildings (e.g., LEED CI)	Not Yet Evaluated				No End Date (Continuous)
Achieve LEED NC Gold certification at a minimum for new construction or major renovations	In Development	See steps taken in 2013 - 2014	ECU's new GNW building will be LEED's Gold Certified	2013	No End Date (Continuous)
Perform energy retrofits on existing, owned buildings	Ongoing/In Progress	Phase 2 (boiler replacement) of our Energy Study is in progress. Work will be completed in Spring 2013.	If funding is made available, we will commence with the next phase of the energy study recommendations	2012	No End Date (Continuous)
Incorporate a refrigerant management strategy into regular building management/maintenance to reduce fugitive emissions	In Development	Refer to Steps Planned in 2013 - 2014	The parameters established within the LEED Gold certification will address means of reducing fugitive emissions for our new building	2013	No End Date (Continuous)
Planning/management					
Reduce office space (square meters) per employee	Ongoing/In Progress	Current office allocation remained the same	With the funding approved for a new building at the GNW Campus, ECU will work with the Steering Committee to establish the number and size of office spaces required for their employees	2013	2014
Install a real time metering system (e.g. Pulse, Reliable Controls, Houle Controls)	Ongoing/In Progress	No additional DDC's were installed	Real time metering will be considered if existing equipment requires replacement	2010	No End Date (Continuous)
Retrofit details for owned buildings					
Upgrade mechanical systems (heating, cooling, ventilation) during retrofits	Ongoing/In Progress	Phase 2 (boiler replacement) has been completed.	In 2013, we anticipate replacing the last boiler in our North Building.	2012	No End Date (Continuous)
Upgrade lighting systems during retrofits	Ongoing/In Progress	No upgrades were required in 2012	Continue to upgrade systems as required	2009	No End Date (Continuous)
Upgrade/adjust control systems during retrofits	Ongoing/In Progress	No upgrades were necessary for 2012	We will continue to upgrade when required	2009	No End Date (Continuous)
Improve building insulation (including windows) during retrofits	Ongoing/In Progress	No upgrades were required in 2012	ECU will make improvements as required	2009	No End Date (Continuous)
Supplies (Paper)					
Behaviour change program					
Train staff to use collaborative software for electronic editing (e.g. SharePoint, Groove, etc.)	In Development	Ongoing self-directed training in using Google Docs	Continue with the self directed training	2011	No End Date (Continuous)
Encourage staff to hold paperless meetings or presentations (i.e., no handouts)	In Development	Staff are beginning to use I pads for meetings. The use of the Ipad is increasing over the year	Continue researching new means of becoming paperless	2012	No End Date (Continuous)
Electronic media in place of paper					
Install collaborative software for electronic editing (e.g. SharePoint, Groove, etc.)	Ongoing/In Progress	Adopting Google Docs for collaborative sharing	Investigating BCNet shared document service for campus wide document sharing	2012	No End Date (Continuous)
Use electronic document library for filing common documents	Completed (in Previous Year)				No End Date (Continuous)
Switch to an electronic payroll notification system in place of paper pay	Completed (in				No End Date

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Action	Status	Steps Taken	Steps Planned	Start Year	End Year
stubs	Previous Year)				(Continuous)
Paper Type					
Purchase 30% post-consumer recycled paper	Completed (in Previous Year)				No End Date (Continuous)
Purchase 40% post-consumer recycled paper	Completed (in Previous Year)				No End Date (Continuous)
Purchase 100% post-consumer recycled paper	Completed (in Previous Year)				No End Date (Continuous)
Printer/document settings					
Switch networked printers and photocopiers to automatic double-sided	Completed (in Previous Year)				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					
Action	Status	Steps Taken	Steps Planned	Start Year	End Year
Business Travel					
Behaviour change program					
Train staff in web-conferencing	Ongoing/In Progress	Technical staff trained in desktop video conference software and room systems support. Development in defining and communicating universities "Best Practices" for videoconferencing to improve quality and experience	Continue to develop and refine on-line support and resources for improving quality and "best practices" approach for virtual meetings	2011	No End Date (Continuous)
Encourage staff to consider virtual attendance/presentation at events where possible	Ongoing/In Progress	There has been an increase in virtual meetings since 2011. Virtual meetings are now commonly used for faculty hiring's, administration meetings, guest speakers, conference participation and guest reviewers for thesis defences in the MAA program	Continue to encourage and support all forms of virtual meetings for faculty, staff and students. Invest in technology that meets the criteria needed for distance learning at the same time anticipating growth in on-line and virtual meeting usage	2011	No End Date (Continuous)
Encourage carpooling to meetings	Ongoing/In Progress	ECU staff are very cooperative and carpool whenever possible	ECU will continue to promote carpooling	2008	No End Date (Continuous)
Encourage alternative travel to meetings (e.g., bicycles, public transit, walking)	Ongoing/In Progress	The UPASS program has reduced the number of parking passes required for 2012. Car2Go was introduced along with ZipCar as alternative means of transportation. ECU has also implemented a bike loan program to encourage staff and students.	Continue promoting alternative travel	2008	No End Date (Continuous)
Policy and budgeting					
Create a low-carbon travel policy or travel reduction goal	Not Yet Evaluated				No End Date (Continuous)
Virtual meeting technology					
Install web-conferencing software (e.g., Live Meeting, Elluminate, etc.)	Ongoing/In Progress	Administration: Shared Service with BCNET using multi-user cloud-based bridge service called Bluejeans for virtual meetings. Regular and Pro Skype accounts set up for faculty and staff to use. Approximately 30 Bluejeans web conferencing meetings and 40 Skype meetings set up in 2012. Admin on-line communications tools such as 77 WordPress, 12 Moodle and 1 Wiki. Distance Learning: 21 Online Moodle courses, 130 face to face Moodle courses, 5 courses using Adobe Connect, 40 graduate students using WordPress Blogs and Virtual Studio and 1 online Wiki course	Research underway with BCNET and BC Campus to evaluate desktop videoconference solutions. Focus on research to select one or two desktop conferencing solutions that can be fully supported by and address the needs of distance learning and administration applications	2011	No End Date (Continuous)
Make desktop web-cameras available to staff	Ongoing/In Progress	Web cameras installed in Boardrooms and distributed from AV equipment distribution centre for use by faculty, staff and students	Increase distributionHD webcams for faculty, staff and student use	2011	No End Date (Continuous)
Install video-conferencing units in meeting rooms or provide mobile video-conferencing units	Ongoing/In Progress	Accessible mobile videoconferencing unit available for use by faculty and staff. Purpose built videoconference classroom built in 2011. Running 40 interactive classes with North Island College and other ad-hoc videoconference classes in Spring 2012	Continue to support and encourage the use of videoconference classroom for scheduled and ad-hoc conferencing needs	2011	No End Date (Continuous)
Education, Awareness, and Engagement					
Awards/Recognition					
Establish a sustainability/green awards or recognition program	In Development	Creation of the Student Leadership in Sustainability award	Develop Faculty/Staff recognition program	2011	No End Date (Continuous)
Other Education, Awareness, and Engage					
Provide outreach initiatives	Ongoing/In Progress	Created a travelling exhibit on sustainability. Exhibition shown at various Vancouver High Schools	Continue developing the exhibit and increase its viewers	2011	No End Date (Continuous)
Staff Professional Development					

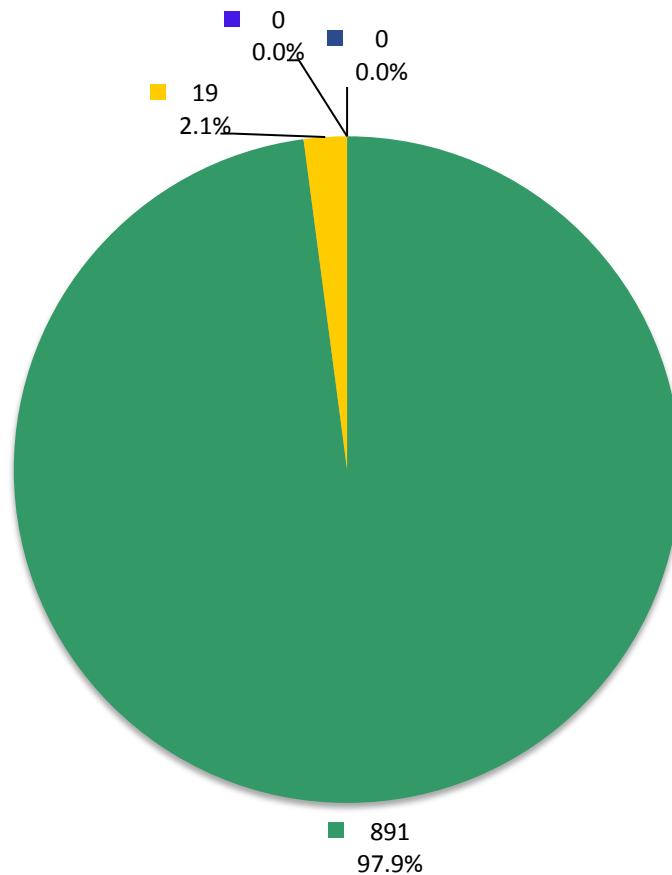
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Action	Status	Steps Taken	Steps Planned	Start Year	End Year
Support green professional development (e.g., workshops, conferences, training)	Ongoing/In Progress	ECU Faculty were one of the keynote speakers at the PALS workshop/summit. Co-hosted the annual ECO-Design conference	Continue with the involvement and development of the PALS organization. Conduct follow-up workshop in May	2009	No End Date (Continuous)
Include green options in employee performance measurement system	Not Yet Evaluated				No End Date (Continuous)
Staff awareness/education					
Provide education to staff about the science of climate change	Ongoing/In Progress	ECU hosted several presentations to staff, students and the public	Continue to host presentations for both internal and external communities	2010	No End Date (Continuous)
Provide education to staff about the conservation of water, energy, and raw materials	Ongoing/In Progress	A sustainable practices blog has been formed. ECU will be providing additional noon hour speakers	ECU will continue with hosting seminars, best practices presentations, etc.	2008	No End Date (Continuous)
Provide green tips on staff website or in newsletters	In Development	A blog has been created and coordinated through the efforts of Faculty and Students	Continue to develop the blog	2012	No End Date (Continuous)
Provide sustainability education during new staff orientation	Not Yet Evaluated				No End Date (Continuous)
Team-building					
Create Green, Sustainability, Energy Conservation, or Climate Action Teams with executive endorsement	Ongoing/In Progress	New Academic Sustainability Working Group organized and set up regular lines of communication. Created itemized list of 126 sustainable accomplishments	Increase number of members to the working group	2010	No End Date (Continuous)
Provide resources and/or dedicated staff to support teams	Ongoing/In Progress	An Academic Coordinator of Sustainability Initiatives position has been created	Clarify role and responsibilities. Attend PALS summit. Prepare reports for ECU community	2011	No End Date (Continuous)
Providing behaviour change education/training to teams (e.g., community-based social marketing)	Not Yet Evaluated				No End Date (Continuous)
Other Sustainability Actions					
Adaptation to Climate Change					
Assessed whether extreme weather events and/or long term changes in climate will affect the organization's business areas	Not Yet Evaluated				No End Date (Continuous)
Integrated considerations of extreme weather events and/or long term changes in climate into the organization's decision making.	Not Yet Evaluated				No End Date (Continuous)
Building construction, renovation					
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, and re-purpose whenever possible. The Space Planning committee remain committed to minimizing renovations without compromising a safe work place for employees	This is an ongoing and expanding initiative	2008	No End Date (Continuous)
Incorporate lifecycle costing into new construction or renovations	Not Yet Evaluated				No End Date (Continuous)
Commuting to and from home					
Introduce telework/work from home policy	Not Yet Evaluated				No End Date (Continuous)
Offer staff a compressed work week	Ongoing/In Progress	The compressed work week has been made available to staff members	Continue monitoring whether the program has benefits	2008	No End Date (Continuous)
Encourage commuting by foot, bicycle, carpool or public transit	Ongoing/In Progress	ECU's Wellness Committee continue to offer lunch hour seminars promoting the various means of transportation. The Car2Go and ZipCar programs have been made available	Continue promoting through lunch hour sessions and newsletters	2008	No End Date (Continuous)
Provide shower or locker facilities for staff/students who commute by foot or by bicycle	Completed (in Previous Year)				No End Date (Continuous)
Provide secure bicycle storage	Completed (in				No End Date

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Actions to Reduce Provincial Emissions and Improve Sustainability					
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Action	Status	Steps Taken	Steps Planned	Start Year	End Year
	Previous Year)				(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.)	Not Yet Evaluated				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.)	Not Yet Evaluated				No End Date (Continuous)
Implement sustainable purchasing program for cleaning products, disposable paper products and trash bags	Ongoing/In Progress	Continue to evaluate and test new products	Test new products as they become available	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	Ongoing/In Progress	Establish ongoing needs with CMHC to determine if their initiative was advantageous	Collaboration between ECU and CMHC has been created. A centralized station will be provided for all community members to drop off their waste for disposal	2012	No End Date (Continuous)
Implement a hazardous waste reduction and disposal strategy	Ongoing/In Progress	Reviewed inventory of materials to identify whether products can be replaced with less hazardous substances	Continue to investigate product replacements	2012	No End Date (Continuous)
Water conservation					
Establish a water conservation strategy which includes a plan or policy for replacing water fixtures with efficient models	Ongoing/In Progress	The Student Union created a "re-use of mug" program together with a "bottle free" water day to discourage use of the disposal cups	Planning for the new GNW Campus will include a comprehensive water management strategy	2012	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	Not Yet Evaluated				No End Date (Continuous)
Introduce a stormwater management landscape strategy (e.g., vegetated roofs, permeable paving, rain gardens, bioswales)	Not Yet Evaluated				No End Date (Continuous)

Emily Carr University of Art and Design Greenhouse Gas Emissions by Source for the 2012 Calendar Year (tCO₂e*)



Total Emissions: 910

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

Offsets Applied to Become Carbon Neutral in 2012 (Generated May 27, 2013 11:29 AM)

Total offsets required: **910**. Total offset investment: **\$22,750**. 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.