

2016
Carbon Neutral Action Report



Declaration statement

This Carbon Neutral Action Report for the period January 1, 2016 to December 31, 2016 summarizes our emissions profile, the total offsets to reach net-zero emissions, the actions we have taken in 2016 to reduce our greenhouse gas emissions and our plans to continue reducing emissions in 2017 and beyond.

By June 30, 2017 Vancouver Island University's (VIU) final *Carbon Neutral Action Report* will be posted to our website at <https://www2.viu.ca/sustainability/CarbonNeutralActionReport.asp>.

Emissions and Offset Summary Table

Vancouver Island University GHG Emissions and Offset for 2016 (tCO ₂ e)	
GHG Emissions created in Calendar Year 2016	
Total Emissions (tCO ₂ e)	2773
Total Offsets (tCO ₂ e)	2743
Adjustments to GHG Emissions Reported in Prior Years	
Total Emissions (tCO ₂ e)	0
Total Offsets (tCO ₂ e)	0
Grand Total Offsets for the 2016 Reporting Year	
Grand Total Offsets (tCO ₂ e)	2743

Retirement of Offsets:

In accordance with the requirements of the Greenhouse Gas Reduction Targets Act and Carbon Neutral Government Regulation, Vancouver Island University (**the Organization**) is responsible for arranging for the retirement of the offsets obligation reported above for the 2016 calendar year, together with any adjustments reported for past calendar years. The Organization hereby agrees that, in exchange for the Ministry of Environment ensuring that these offsets are retired on the Organization's behalf, the Organization will pay within 30 days, the associated invoice to be issued by the Ministry in an amount equal to \$25 per tonne of offsets retired on its behalf plus GST.

Executive sign-off



Ralph Nilson, President and Vice-Chancellor, Vancouver Island University

May 31, 2016

Date

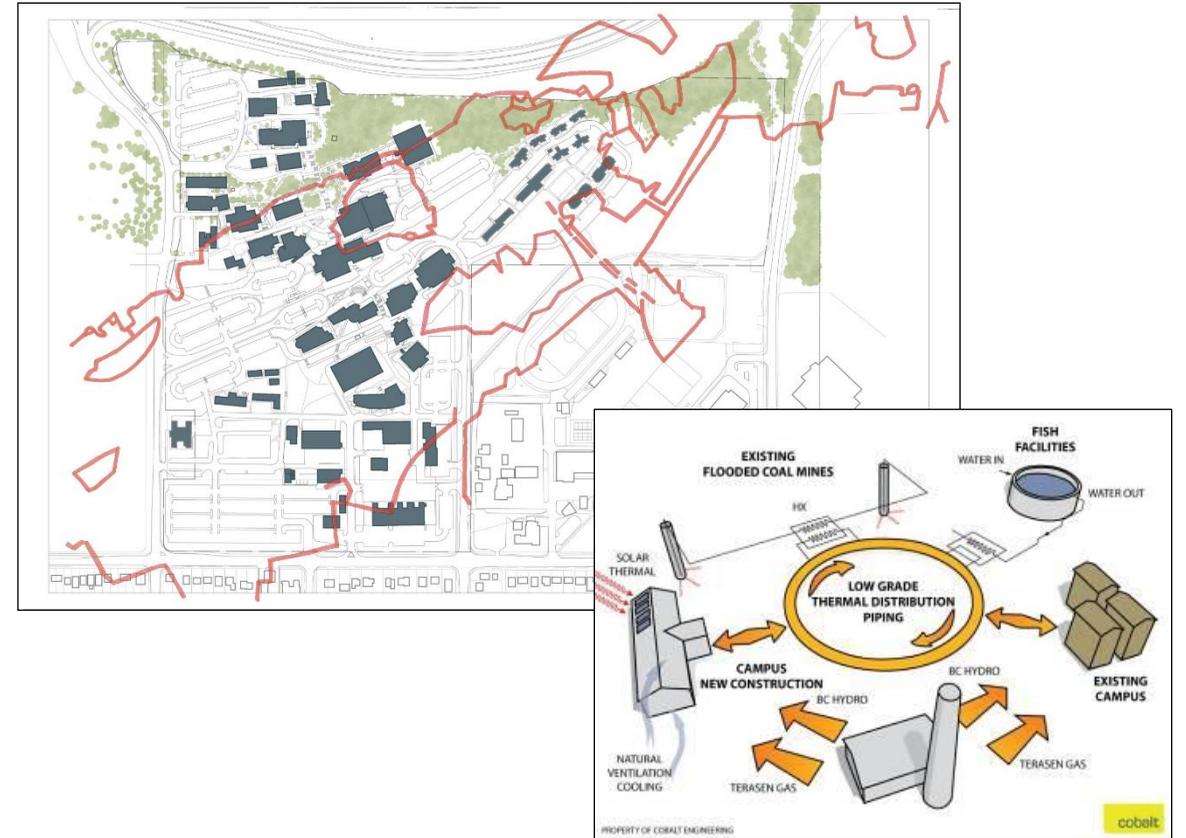
Overview

The complexity of post-secondary communities allows for diverse and dynamic climate stewardship; operational, behavioural change, and educational activities are all part of VIU's strategy to reduce GHG emissions. Actions taken in 2016 demonstrate the novel and enduring ways VIU is making responsible use of resources and engaging the community.

VIU is recognized as an active player in sustainability action as evidenced by the Vancouver Island Real Estate Board's Award of Excellence (Green category) for the shore stabilization project undertaken at Milner Gardens and Woodland.



Food Services has taken action to decrease their carbon footprint with an eco-tainer program. These reusable, compostable containers offer an alternative to single-use containers, and this in turn decreases methane-emitting waste as well as helps to raise both awareness of and practice of reusing resources. Another benefit is financial sustainability. Eco-containers have a low, one-time cost; however, customers are charged for each single-use, take-out container they use.



The District Geo-Exchange Energy project launched in 2016 is a highlight of operational innovation. VIU's Nanaimo campus is located over an extensive network of flooded coal mining shafts, and the water in these shafts remains at a relatively constant temperature year round. This unique placement, along with geo-exchange technology, will allow VIU to leverage the water's constant temperature for the heating and cooling of over 14,000 m² of building space as a result of Phase 1 currently under construction. The District Geo-Exchange Energy project has potential for significant avoidance of natural gas use, and thereby GHG reduction.



L-R
ACER generates discussion on climate and policy
<https://www.viu.ca/news/viu-acer-climate-change-symposium-generate-discussion-policy-and-science>

Bioblitz at Milner Gardens and Woodland
<https://www.viu.ca/news/milner-gardens-bioblitzed-viu-mabri>

Lakekeepers course connects students and community in common goals
<https://www.viu.ca/news/viu-students-and-regional-citizens-take-course-become-lakekeepers>

VIU’s purpose, as stated in its [Academic Plan: Promoting and Celebrating Access to Excellence](#), is to “...[support] the well-being of the people of Vancouver Island and coastal British Columbia by promoting a high quality of life for their communities through commitment to student success, community engagement and associated scholarship.” In keeping with this purpose, students and staff created a variety of opportunities to engage in climate action. From organizing symposiums to training citizen scientists, the VIU community continued its work on decreasing GHG emissions directly and indirectly.

ACER (Awareness of Climate Change through Education and Research), a multidisciplinary group of students, continued its work educating the VIU—and wider—community about climate change and fostering social action and advocacy. Continued development of partnerships

between internal and external stakeholders allowed VIU to bring awareness of GHG emissions in a meaningful way to a broad, multigenerational community. Events such as the Milner Gardens Bioblitz and a Lakekeepers course create bonds between students, staff, and the community as well as provide invaluable data for further research.

The university continues to take part in initiatives such as BC Hydro/Fortis’ Energy Wise Network. A holiday shutdown campaign resulted in electricity avoidance equivalent to powering an average BC home for 6 weeks. Bike to Work Week participation continued to grow. VIU riders cycled over 2100 km over the week which avoided about 460 kg of GHG emission. As well, VIU took a key organizational role in organizing the event across the city.

Promoting and supporting active transportation is one of the outreach events VIU hosts in order to decrease GHG emission, and promote action, awareness, and engagement amongst students, staff, and faculty.
<https://www.viu.ca/news/viu-students-and-staff-encouraged-make-shift-bike-work-week>





Dr. Suzie Nilson, and Stella Johnny, work together to teach INTR 211: Indigenous and Western Sciences of Plants and the Environment, which presents Indigenous and Western science knowledge on plants and their relationship to human health and the environment. From: <https://www.viu.ca/news/new-course-viu-cowichan-explores-science-plants-and-environment-indigenous-and-western>



Glenda Hunter, science instructor in VIU's Faculty of Academic and Career Preparation, showcases her green chemistry research. <https://www.viu.ca/news/viu-professors-explore-ways-go-green-chemistry-lab>



Students of VIU's Hairdressing program, a member of [Green Circle Salons](https://www.viu.ca/news/viu-trades-programs-use-skype-bridge-oceans), share trades skills with Trinidadian counterparts. <https://www.viu.ca/news/viu-trades-programs-use-skype-bridge-oceans>

Educational content, practice, and delivery are being used to model GHG emission reduction action. Cultivating a society that is more resilient, active, and able to challenge practices that contribute to environmental degradation is vital.

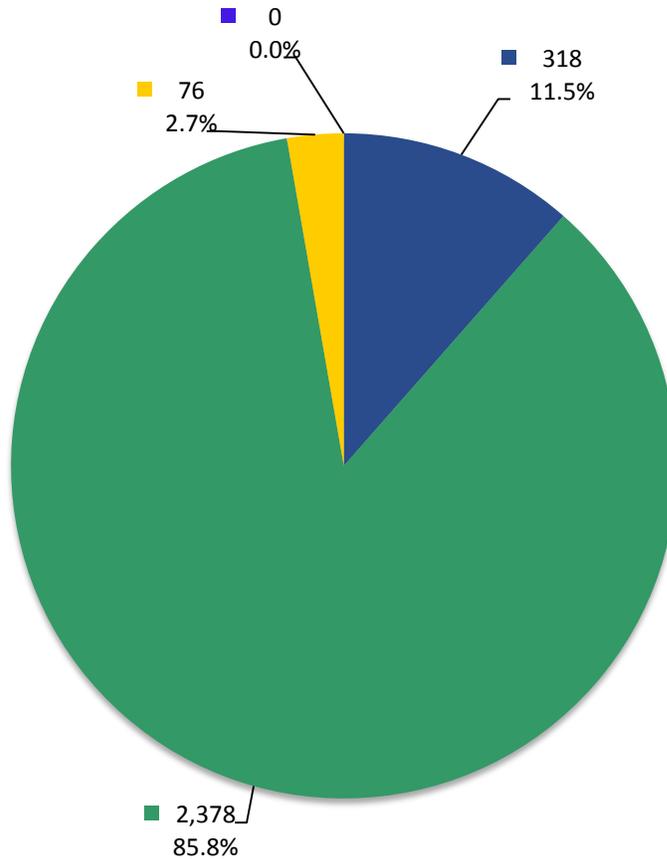
Courses such as VIU's INTR 211—Indigenous and Western Sciences of Plants and the Environment that highlight both intercultural and interdisciplinary teachings result in improved sustainability and environmental literacies. Appreciating and understanding different ways of knowing fosters a respect for the intercultural, interdisciplinary, and intergenerational approaches that are needed to succeed in climate change action.

Better ways of doing are also being researched and implemented. Green Chemistry techniques have significantly reduced chemical waste at VIU. Manuals and texts that were developed by VIU faculty are being shared locally and internationally.

Technology use to link with groups near and far continues to aid in less fossil-fuel travel and increases opportunities to share best practices.

The additions of the LEED® Gold Health & Science building and the LEED® Silver Automotive Marine Trades Reconfiguration to VIU's sustainable building portfolio are very much anticipated. VIU also looks forward to continued development of internal and external partnerships in sustainability, and meaningful contributions--through operational, educational, and research practices--to the health and well-being of local and global communities.

**Vancouver Island University
Greenhouse Gas Emissions by Source
for the 2016 Calendar Year (tCO₂e*)**



Total Emissions: 2,773

- 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 2016 (Generated May 15, 2017 4:21 PM)

Total offsets required: **2,743**. Total offset investment: **\$68,575**. Emissions which do not require offsets: **29** **

*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.

2016 Carbon Neutral Action Report Survey

Part One (external)

Contact Name(s):

Alan Cumbers, Executive Director, Facilities & Ancillary Services; Richard Lewis, Director, Facilities Services & Campus Development

Organization Name:

Vancouver Island University

Please select your sector:

- Post-Secondary Institution

1) Stationary Sources (Buildings, Power Generators): Fuel Combustion, Electricity use, Fugitive Emissions.

During 2016, did your organization take any of the following actions to support emissions reductions from buildings?

Select all that apply

- Performed energy retrofits of the organization's buildings.: CNCP-funded DDC installation and mechanical optimization in several buildings at VIU.
- Other actions? Please describe briefly.: Building envelope upgrades included increased insulation values.

Briefly describe your organization's plans to continue reducing emissions from its stationary sources in future years.

Development of the Geo-Exchange District Energy system.

During 2016, did your organization participate in utility-sponsored energy demand management program(s) (e.g. BC Hydro's Energy Management (Manager))?

Yes

If yes, please describe briefly:

BC Hydro and Fortis Gas Energy Wise Network—a conservation through behaviour change program.

2) Mobile Sources (Vehicles, Off-road/Portable Equipment): Fuel Combustion.

During 2016, did your organization take any of the following actions to support emission reductions from its mobile sources?

Select all that apply

-
- Replaced existing vehicles with more fuel efficient vehicles (gas/diesel).: More fuel-efficient vehicles were added to the VIU fleet.
-
- Took steps to drive less than previous years.

Briefly describe your organization's plans to continue reducing emissions from its mobile sources in future years.

Review of hybrid and electric vehicle feasibility for fleet vehicle replacement is ongoing. VIU intends to install several EV charging stations in the next year.

3) Supplies (Paper):

During 2016, did your organization take any of the following actions to support emissions reductions from paper supplies?

Select all that apply

(No response)

Briefly describe your organization's plans to continue reducing emissions associated with its office paper use in future years.

A managed print system is being researched with implementation anticipated in the near future.

4) Other Sustainability Actions:

Business Travel:

During 2016, did your organization take any of the following actions to support emissions reductions from business travel?

Select all that apply

-
- Other, please describe briefly: Encouraged active transportation to work/school through support of and participation in organization of Nanaimo's Bike to Work Week, hosted a number of Project 529 events (bike security), and offer lights, locks, and reflectors for those engaged in active transportation at the Campus store.
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Education Awareness:

During 2016, did your organization have any of the following programs or initiatives to support sustainability education and awareness?

Select all that apply

-
- Support for professional development on sustainability (e.g. workshops, conferences, training)
 - Supported or provided education to staff about the science of climate change, conservation of water, energy and/or raw materials
-

Other Sustainability Actions:

During 2016, did your organization have any of the following programs or initiatives to support sustainability?

Select all that apply

-
- An operations policy or program to facilitate the reduction and diversion of building occupant waste (e.g., composting, collection of plastics, batteries) from landfills or incineration facilities
 - Green procurement standards for goods (e.g., office furniture, etc.)
 - Lifecycle costing of new construction or renovations
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