



**VANCOUVER ISLAND
UNIVERSITY**

2015 Carbon Neutral Action Report

May 31, 2016





Declaration Statement

This Carbon Neutral Action Report for the period January 1st, 2015 to December 31st, 2015 summarizes our emissions profile, the total offsets to reach net-zero emissions, the actions we have taken in 2015 to reduce our greenhouse gas emissions and our plans to continue reducing emissions in 2016 and beyond. By June 30, 2016 Vancouver Island University's 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 2015 (tCO ₂ e)	
GHG Emissions created in Calendar Year 2015:	2760
Total Emissions (tCO ₂ e)	2760
Total Offsets (tCO ₂ e)	2720**
Adjustments to GHG Emissions Reported in Prior Years :	0
Total Emissions (tCO ₂ e)	0
Total Offsets (tCO ₂ e)	0
Grand Total Offsets for the 2015 Reporting Year :	2720
Grand Total Offsets (tCO ₂ e)	2720

***Difference in emissions and offsets is the result of fuel used for school buses (reported but out of scope for offset) and biogenic emissions from biodiesel fuel used (calculated but out of scope for offset)*

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 2015 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 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

A handwritten signature in black ink, reading "Ralph Nilson".

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

May 31, 2016

Date



Overview

VIU's 2015 carbon emissions show a decrease of just over 8% compared to 2014. Reductions in mobile and stationary fuel consumption have contributed to this shift.

Part of this reduction can be contributed to operations projects. New Energy Management Information Systems (EMIS) were installed in two buildings on the Nanaimo campus. It is projected these EMISs will result in an annual savings of 22,246 kWh of electricity—enough to charge nearly 2,000 iPads for a year. These systems are also projected to save 244 GJ of natural gas use, and avoid the emission of about 12.5 tonnes of CO₂e—similar to the annual emissions of two average-size cars. VIU was able to fund these Greenhouse Gas reduction projects through the Carbon Neutral Capital Program. As well, a routine maintenance project to change out T8 fluorescent tubes for LED replacement tubes that started in 2014 was completed. Now that the 3,000 lamps are in place, based on a conservative 2660 hours of operation per year, the resulting electricity reduction is about enough energy to run 9 houses for a year, and the GHG reduction is approximately equivalent to the weight of a Smart car—significant savings for the simple act of changing lightbulbs.



In addition to operational efforts, VIU strives to build sustainability into all aspects of the institution. Initiatives to engage the VIU community continue, with growing student interest and support. The Wacky Woollies day continues to gather momentum, and some classes are now incorporating sustainability initiatives as part of their course work.

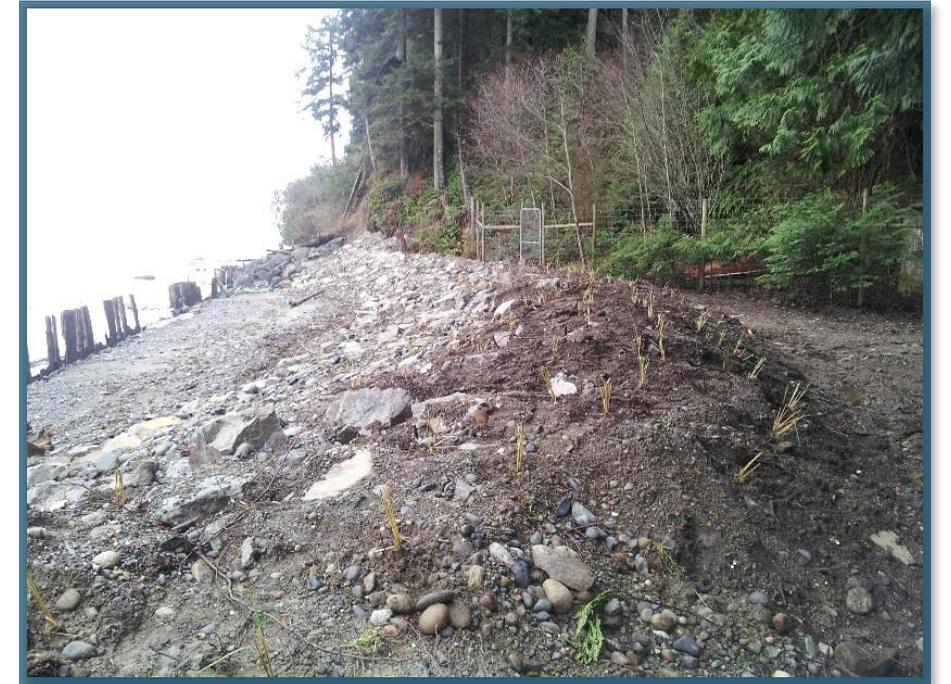
VIU values community partnerships that support a vibrant community and provide teaching and learning opportunities both for students and members of the community. A Memo of Understanding between VIU and the Nanaimo Port Authority has been signed with the vision of supporting “...the educational, social, environmental and economic prosperity of the region as well as to ensure good stewardship of the marine ecosystem.”

(See more at: <https://www.viu.ca/news/viu-and-nanaimo-port-authority-collaborate-support-prosperous-community#sthash.RQRM3R85.dpuf>)



Continuing with its tradition of demonstrating and developing sustainability best practices, VIU was awarded the Vancouver Island Real Estate Board's Green category Award of Excellence for the shore stabilization project carried out in 2015 at its Milner Gardens and Woodland site. As part of the restoration, on-site sand and cobble were used as much as possible, and the planting cap employed native species.

Through the Mount Arrowsmith Region Research Institute (MABRRI), VIU is building on its sustainability efforts by connecting the "expertise and experience of university researchers with the brainpower and energy of students and the priorities and concerns of the community to develop a collaborative research



agenda for

the Mount Arrowsmith Biosphere Region (MABR)." A UNESCO Biosphere reserve, MABR is considered a model region for sustainable development. MABR will work to promote the conservation of biological and cultural diversity in addition to economic and social development. MABR, as with all biosphere reserves, works with community partners to find innovative ways to achieve a balance between the needs of humans and nature.

The MABR held its first Roundtable gathering, involving representatives from Snaw-Naw-As (Nanose) First Nation, Qualicum First Nation, the City of Parksville, the Town of Qualicum Beach, the Regional District of Nanaimo, the BC Ministry of Environment, the Vancouver Island Conservation Land Management Program, Island Timberlands, TimberWest, and Vancouver Island University.

(With files from <http://www.mabr.ca/history/> and <http://www.mabr.ca/mandate/>)





VIU students continue to be an integral part of VIU’s sustainability efforts. Over the course of 2015, the student group Solutions encouraged the VIU community to break up with their (paper) cups. In drawing attention to the amount of energy and waste generated by paper cups, the “Love a Mug” campaign invited students and staff to decorate a used paper cup. The cups were then suspended in the cafeteria to demonstrate what a year’s worth of cups thrown ‘away’ by the average Canadian looks like. These types efforts are key to fostering and strengthening VIU’s community of sustainability. Through this community comes better conservation practice, sustainable institutional processes, and an appreciation of the complexity of climate change and the need for multi- and inter-disciplinary cooperation in developing strategies to address climate change. (See more at: <http://www.thenav.ca/2015/01/15/love-a-mug/>)

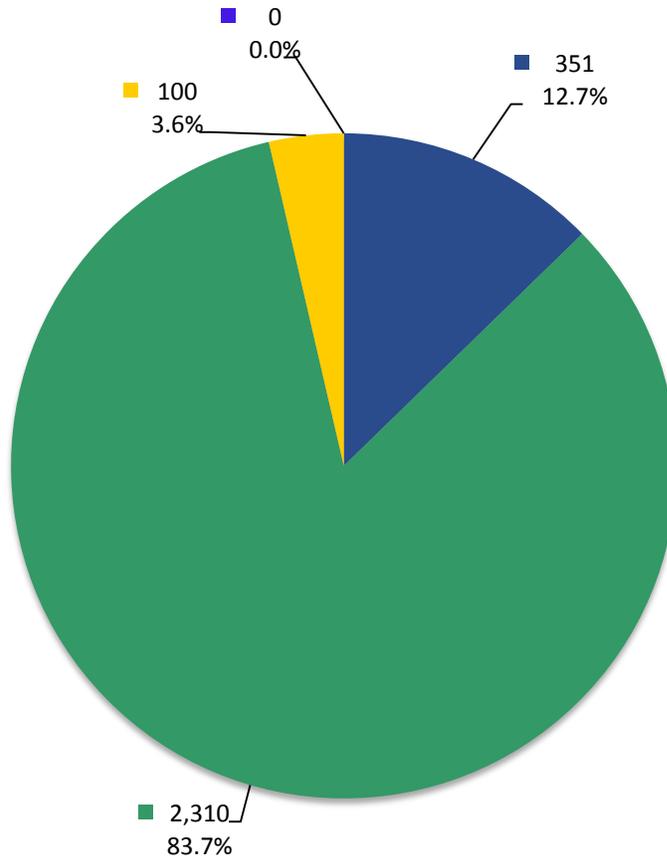
The High School, part of VIU’s community and situated on the Nanaimo campus, hosted a Sustainability Symposium in 2015 for their peers and for the community. A number of presenters engaged participants and challenged them to view their role in climate change and climate action. “Our staff encourages students to become global citizens with a strong sense of social responsibility and a commitment to help solve problems in Canada and around the world,” said Catherine Brazier, principal of the High School.

(See more at: <https://www.viu.ca/news/high-school-viu-hosts-sustainable-solutions-symposium#sthash.o63PN2ip.dpuf>)



Moving into 2016, VIU anticipates continued review and improvement of sustainable operations, increased engagement of the community in all aspects of sustainable action, fostering environmental and sustainable literacies in all areas of the university, and supporting others in their efforts toward climate change action.

**Vancouver Island University
Greenhouse Gas Emissions by Source
for the 2015 Calendar Year (tCO₂e*)**



Total Emissions: 2,761

- 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 2015 (Generated May 26, 2016 9:23 AM)

Total offsets required: **2,720**. Total offset investment: **\$68,000**. Emissions which do not require offsets: **41** **

*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.

2015 Carbon Neutral Action Report Survey

Organization Name:

Vancouver Island University

Please select your sector:

- Post-Secondary Institution

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

Please indicate which actions your PSO took in 2015:

Have developed an overall strategy/plan to reduce energy use in your organization's buildings inventory:

Yes

If Yes, please describe:

*Replaced HID lighting sources in the pathway lighting fixtures of the Nanaimo Campus with LED source fixtures. This project will significantly reduce electricity consumption.
Replaced Direct Digital Controls in Buildings 325 and 345 on the Nanaimo Campus, and re-commissioned the HVAC in each of the two buildings. We will see natural gas and electricity savings from these two projects.*

Undertook evaluations of building energy use:

Yes

Performed energy retrofits on existing buildings:

Yes

Built or are building new LEED Gold or other "Green" buildings:

No

Please list any other actions, programs or initiatives that your organization has introduced that support emissions reductions from buildings:

(No response)

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

Indicate which actions your PSO took in 2015:

Have put in place an operations policy/program to support systematic reductions in fleet related emissions:

(e.g., program to convert fleet to renewable fuels)

No

If Yes, please describe:

(No response)

Replaced existing vehicles with more fuel efficient vehicles (gas/diesel):

Yes

Replaced existing vehicles with hybrid or electric vehicles:

No

Took steps to drive less than previous years:

Yes

Please list any other actions, programs or initiatives that your organization has introduced that support emissions reductions from fleet combustion:

(No response)

3) Supplies (Paper):

Indicate which actions your PSO took in 2015:

Have put in place an operations policy/program to facilitate a systematic reduction in paper-related emissions:

(e.g., policy to purchase 100% Recycled Content; default to double-sided printing)

No

If yes, please describe:

(No response)

Have put in place an operations policy/program to facilitate behavioural changes from paper use:

(e.g. awareness campaign to reduce paper use):

No

If yes, please describe:

(No response)

Used only 100% recycled paper:

No

Used some recycled paper:

Yes

Used alternate source paper:

(e.g., bamboo, hemp, wheat etc.)

Yes

Please list any other actions, programs or initiatives that your organization has introduced that support emissions reductions from paper supplies:

*When able, areas of VIU use alternate paper sources such as wheat.
Double-sided copying is encouraged, and print management systems are being explored.*

4) Other Sustainability Actions:

Please note that this section is optional

Business Travel

Created a low-carbon travel policy or travel reduction goal:

(low-carbon = lowest emission of greenhouse gas per kilometer per passenger)

No

Encouraged alternative travel for business:

(e.g. bicycles, public transit, walking)

Yes

Encouraged or allow telework/working from home:

Yes

Other:

(No response)

Education Awareness

Have a Green/Sustainability/Climate Action Team:

No

Supported green professional development:

(e.g. workshops, conferences, training)

Yes

Supported or provided education to staff about the science of climate change, conservation of water, energy and/or raw materials:

Yes

Other:

A number of outreach events were held throughout the year to engage students and staff in sustainable behaviours such as turning off peripheral devices when not in use and dressing in layers rather than using a space heater.

Adaptation Planning for Climate Risks

Have assessed whether increased frequency of extreme weather events and/or long term changes in climate will affect your organization's infrastructure, its employees and/or its clients:

No

Have incorporated these anticipated changes in climate into your organization's planning and decision making:

No

Other:

(No response)

Other Sustainability Actions

Established a water conservation strategy which includes a plan or policy for replacing water fixtures with efficient models:

No

Have put in place an operations policy/program to facilitate the reduction and diversion of building occupant waste stream from landfills or incineration facilities:

(e.g., composting, collection of plastics, batteries)

Yes

Established green standards for goods that are replaced infrequently and/or may require capital funds to purchase:

(e.g., office furniture, carpeting, etc.)

No

Incorporated lifecycle costing into new construction or renovations:

No

Please list any other sustainability actions your organization has taken not listed above:

(No response)