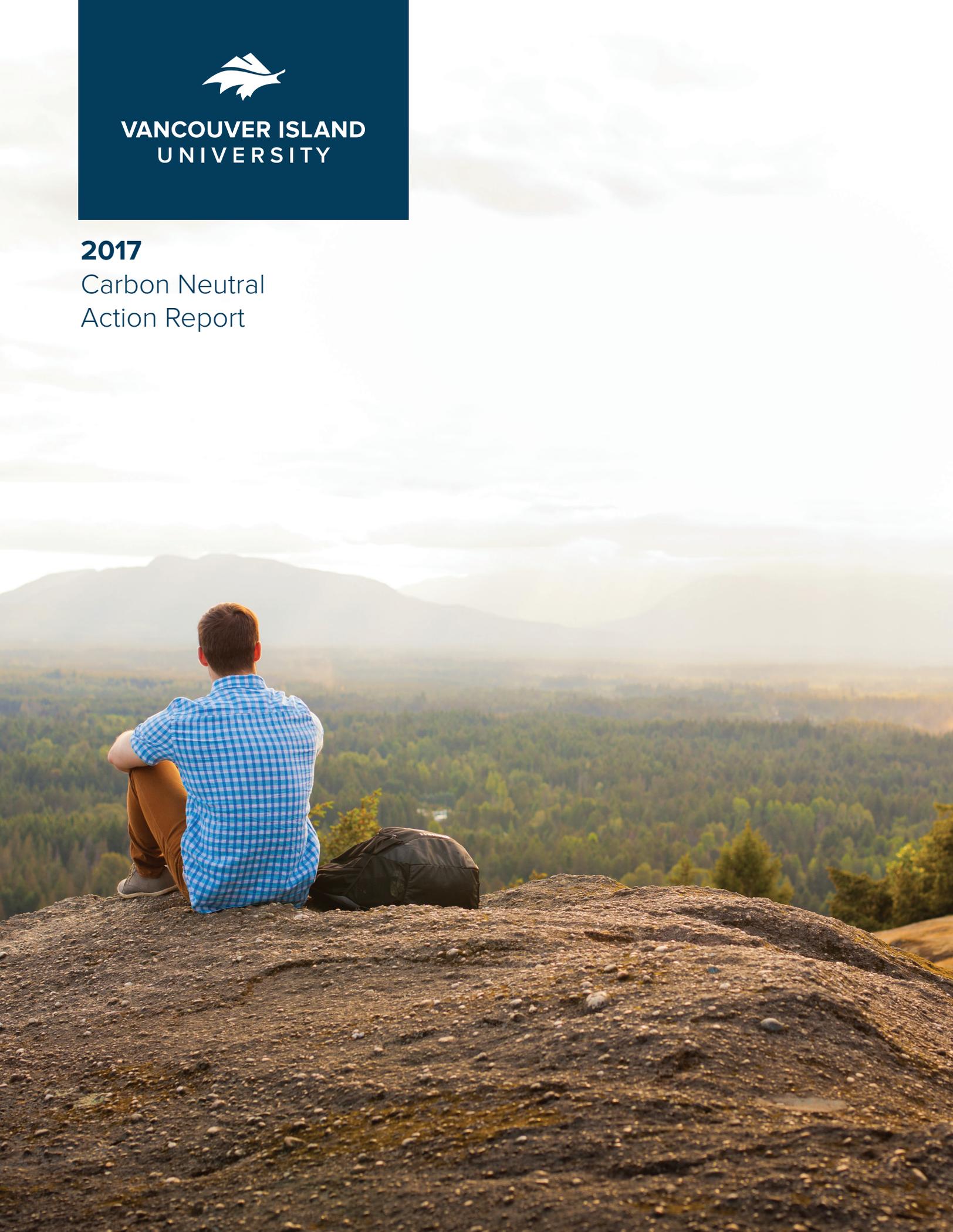




VANCOUVER ISLAND  
UNIVERSITY

**2017**

Carbon Neutral  
Action Report



# The 2017 Carbon Neutral Action Report

The 2017 Carbon Neutral Action Report contains Vancouver Island University emissions profile, offsets purchased, the actions we have taken in 2017 to reduce our greenhouse gas (GHG) emissions, and our plans to continue reducing our emissions in 2018 and beyond.

By June 30, 2018 VIU's final CNAR will be posted to our website at: [viu.ca/sustainability/CarbonNeutralActionReport.asp](http://viu.ca/sustainability/CarbonNeutralActionReport.asp)

## Executive Summary

### Our Purpose – You Matter Here

As a leader in providing high-quality learning, Vancouver Island University supports the well-being of the people of Vancouver Island and coastal British Columbia through commitment to student success, community engagement and associated scholarship.

VIU has a responsibility of environmental stewardship and to demonstrate leadership to our community in protecting our exceptional natural features. We work diligently to honour our partnership with the Snuneymuxw First Nation, on whose territory we live, work, learn and play, to encourage Indigenous ways of knowing and respect for the environment.

Through our actions we meet our GHG reduction mandate. Through our Academic Plan, we enshrine these values into our daily activities at VIU. Through the Nanaimo Campus Master Plan we ensure all building, updates and retrofitting are informed by GHG reduction targets.

### New Buildings and Construction Activities

There are three major construction projects at VIU that are nearing completion: The Health & Science Centre (HSC), the Marine, Automotive and Trades Complex (AMTC) redevelopment and expansion project, and the District Geo-Exchange Energy project, which uses water trapped deep underground in the old Wakesiah mine to heat and cool buildings. These projects will ensure a substantial improvement in our ability to deliver key programs in a sustainable way, thanks in part to the LEED-gold and silver standard certification the buildings are set to receive. The HSC will increase VIU's square footage by about eight per cent. It, along with Shq'apthut: A Gathering Place, will be heated by the Geo-Exchange, which will mitigate their impact on VIU's GHG emissions.

Despite these construction activities, we remained neutral in our emissions. Both the HSC and the AMTC will open for the fall 2018 academic year.

### Student Engagement in Sustainability

VIU engaged with the VIU Students' Union (VIUSU) to reduce the environmental footprint of students on campus. VIUSU discontinued the use of plastic straws and stir sticks in its beverages. There are a variety of student clubs dedicated to environmental sustainability, including the Earth Sciences Club, Awareness of Climate Change Through Education and Research (ACER) and Nurses for Environmental Action Today (NEAT). Through the Centre for Experiential Learning (CEL), students can participate in research projects directly related to their degree, many of which have an environmental focus such as those in the Sustainable Tourism Management degree. VIU's Mount Arrowsmith Biosphere Region Research Institute employs students in a variety of research projects that have a direct impact on the community and most have an environmental focus. Projects for 2017 included Garry Oak Ecosystem Mapping project, Forage Fish Spawning Habitat Monitoring, Wetland mapping and many more.

### Initiatives through the Sustainability Office

The Sustainability Advisory Committee meets monthly to discuss sustainability initiatives, plan events to come up with new ways to engage students and employees, and address any issues or concerns. In 2017 the office hosted the annual Bike to Work Week, the Active Commute Fair, The Green Dragons (an event in which students came up with energy-saving ideas to reduce GHG), and Energy Naughty or Nice (employees were encouraged to share how they were saving GHG throughout the holiday season). The entire institution shuts down all power sources over the holiday break, only keeping on emergency systems.

## Looking to the Future

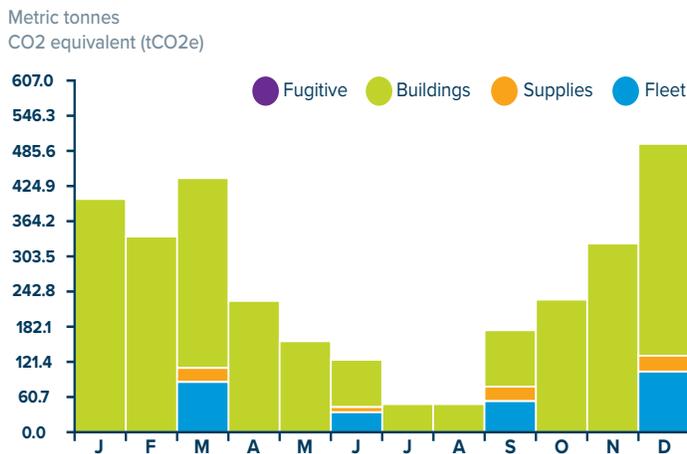
The new HSC Applied Environmental Research Lab will contain state-of-the-art instrumentation and real-time geospatial mapping, which will enable students to complete environmental quality assessments and track hazardous substances much more quickly and accurately than previously possible.

VIU is always looking for opportunities to work with VIUSU and employee groups to engage all of our people in becoming more conscious of our environmental impact and how to reduce our personal carbon footprints. We will also be conducting an electric vehicle test in our fleet, and our new buildings will be open.

## Declaration Statement

This Carbon Neutral Action Report for the period January 1, 2017 to December 31, 2017 summarizes our emissions profile, the total offsets to reach net-zero emissions, the actions we have taken in 2017 to reduce our greenhouse gas emissions and our plans to continue reducing emissions in 2018 and beyond.

### Total Emissions Calendar Year 2017



### Totals Calendar Year 2017

### Greenhouse Gases in Tonnes

	Measure	Quantity	CO <sub>2</sub>	BioCO <sub>2</sub>	CH <sub>4</sub>	N <sub>2</sub> O	TCO <sub>2</sub> e <sup>1</sup>
<b>Scope 1 (Direct) Emissions</b>							
Mobile Combustion (Fleet)	Litres	109,851.75	261.58	10.81	0.02	0.04	<b>284.76</b>
Stationary Combustion, Estimated <sup>2</sup>	Gigajoules	396.78	19.67	0.00	0.00	0.00	<b>19.79</b>
Stationary Combustion, Reported <sup>3</sup>	Gigajoules	50,023.95	2480.19	0.00	0.05	0.05	<b>2,494.85</b>
<b>Scope 2 (Indirect) Emissions</b>							
Purchased Energy, Estimated <sup>2</sup>	Gigajoules	295.10	0.89	0.00	0.00	0.00	<b>0.89</b>
Purchased Energy, Reported <sup>3</sup>	Gigajoules	49,958.40	149.88	0.00	0.00	0.00	<b>149.88</b>
<b>Scope 3 (Business Travel and office Paper) Emissions</b>							
Office Paper	Packages	13,976.00	83.76	0.00	0.00	0.00	<b>83.76</b>
<b>Total Emissions, Calendar Year 2017</b>			<b>2,995.97</b>	<b>10.81</b>	<b>0.07</b>	<b>0.09</b>	<b>3,034</b>
<b>Carbon Neutral or Offset Exempt</b>			<b>18.42</b>	<b>10.81</b>	<b>0.00</b>	<b>0.00</b>	<b>31</b>
<b>Total for Offsets<sup>4</sup></b>			<b>2,977.55</b>	<b>0.0</b>	<b>0.07</b>	<b>0.08</b>	<b>3,003</b>

## Emissions and Offset Summary Table:

**Vancouver Island University**  
GHG Emissions and Offset for 2017 (tCO<sub>2</sub>e)

### GHG Emissions created in Calendar Year 2017

Total Emissions (tCO <sub>2</sub> e) <sup>2</sup>	3034
Total Offsets (tCO <sub>2</sub> e)	3003

### Adjustments to GHG Emissions Reported in Prior Years

Total Emissions (tCO <sub>2</sub> e)	0
Total Offsets (tCO <sub>2</sub> e)	0

### Grand Total Offsets for the 2017 Reporting Year

Grand Total Offsets (tCO <sub>2</sub> e)	3003
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## 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 2017 calendar year, together with any adjustments reported for past calendar years.

The Organization hereby agrees that, in exchange for the Ministry of Environment and Climate Change Strategy 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.

May 31, 2018



Ralph Nilson, Ph.D.  
President and Vice-Chancellor  
Vancouver Island University

May 31/18  
Date

Each greenhouse gas has been converted to a standard measurement (tCO<sub>2</sub>e) by multiplying its emissions by its global warming potential (GWP). The GWP of carbon dioxide (CO<sub>2</sub>) from both anthropogenic and biogenic sources is

- 1; methane (CH<sub>4</sub>) is 25, and nitrous oxide (N<sub>2</sub>O) is 298. The Totals for tCO<sub>2</sub>e are shown here rounded to the nearest whole metric tonne as only whole tonnes of tCO<sub>2</sub>e can be purchased for offsets.
2. Estimated data has been calculated based on the methods described in the Methodology Document.
3. Reported data refers to consumption which has been directly billed to the organization.
4. The tCO<sub>2</sub>e value from the "Total for Offsets" line represents the quantity of offset purchases required to become carbon neutral.

# Part 1: CNAR Survey

## 1. General Information

Name: Alan Cumbers

Contact Email: alan.cumbers@viu.ca

Organization Name: Vancouver Island University

Sector: Post Secondary

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

During 2017, did your organization take any of the following actions to support emissions reductions from buildings? (please select all that apply)

Performed energy retrofits of the organization's building(s); Built, or are building new LEED Gold or other "Green" buildings

If you selected "*Performed energy retrofits of the organization's building(s)*":

How many buildings were retrofitted?: 2

If you selected "*Built, or are building new LEED Gold or other "Green" buildings*":

How many new "Green" buildings?: 2

Did your Organization perform any retrofits during 2017? Please describe briefly:

3 buildings currently under construction and intended to be LEED certified--  
LEED Gold -- Health and Science Centre  
LEED Gold -- Trades Discovery Building  
LEED Silver -- Renovation of Automotive Shop

## 2a. Stationary Sources (eg. Buildings, Power Generators): Fuel Combustion, Electricity use, Fugitive Emissions.

Please briefly describe your organization's plans to continue reducing emissions from its stationary sources:

### a) Over the next 1-5 years

A District Geo-Exchange Energy System is being built that will provide heating and cooling to the currently under-construction Health Science Centre and to The Gathering Place. This system will avoid significant natural gas consumption by using groundwater as the source for heating and cooling energy. This system has the capacity to be expanded to include additional buildings as funding becomes available.

### b) Over the following 6-10 years

The Geo-Exchange system is intended to be duplicated in up to three more locations on the main campus to eventually support most of the 44 buildings on site.

## 3. Mobile Sources (Vehicles, Off-road/portable Equipment): Fuel Combustion:

During 2017, did your organization take any of the following actions to support emission reductions from its mobile sources? (please select all that apply)

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

3) Mobile Sources - Other? Please specify: Lower- or zero-emission vehicles will be purchased as part of VIU's Fleet Evergreening strategy.

If you selected "*Replaced existing vehicles with more fuel efficient vehicles (gas/diesel)*":

How many vehicles?: 1

If you selected "*Replaced existing vehicles with hybrid or electric vehicles*":

How many vehicles?:

## 3a. Mobile Sources (Vehicles, Off-road/portable Equipment): Fuel Combustion:

Please briefly describe your organization's plans to continue reducing emissions from its mobile sources:

### a) Over the next 1-5 years

The next two vehicles to be purchased for VIU's fleet will be a hybrid vehicle and an all-electric vehicle.

Further, the institution is working to provide robust video-conferencing applications in order to decrease the need to travel between campuses, and to support/encourage engagement from partners across the country and around the world.

### b) Over the following 6-10 years

Anticipate that the ever-greening of the fleet will continue to replace hydrocarbon vehicles with electric at the rate of one or two per year.

## 4. Supplies (Paper): Indicate which actions your PSO took in 2017:

During 2017, did your organization take any of the following actions to support emissions reductions from paper supplies? (please select all the apply)

None of the above

If you selected "*Had a policy requiring the purchase of recycled content paper*":

State the required recycled content here (30%, 50%, 100%):

If you selected "*Had a policy requiring the purchase of alternate source paper (bamboo, hemp, wheat, etc)*", which type of alternate source paper did you use?

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

VIU is working toward a managed print system in order to decrease paper consumption as well as to be more efficient in its energy consumption.

## 5. Other Sustainability Actions

### a) Business Travel

During 2017, did your organization take any of the following actions to support emissions reductions from business travel? (please select all that apply)

None of the above

### b) Education/Awareness

During 2017, did your organization have any of the following programs or initiatives to support sustainability education and awareness? (please 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

### c) Other Sustainability Actions

During 2017, did your organization have any of the following programs or initiatives to support sustainability? (please 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; Lifecycle costing of new construction or renovations