



2017

Carbon Neutral Action Report

Okanagan College





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Declaration Statement:

This Carbon Neutral Action Report for the period of January 1st 2017 to December 31st 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.

By June 30, 2018 Okanagan College's final *Carbon Neutral Action Report* will be posted to our website at http://www.okanagan.bc.ca/Campus_and_Community/employees/facilities_management/Sustainability/Climate/Carbon_Neutrality.html

Overview

Okanagan College continues to develop and enhance its focus on sustainability from the perspective of an organization with a responsibility to education, training and community development, and from the perspective of an organization that is focused on achieving carbon neutrality.

The *Okanagan College Strategic Plan* identifies the need to address the human and financial resources, infrastructure, and environmental challenges that will accompany anticipated demographic, economic and social changes.



- Seek additional sources of funding to sustain and further develop the College.
- Ensure there are sustainable operations in each of the four regions.
- Augment the College's human resource plan through improved strategies in key areas such as succession planning, employee development and the recruitment and retention of a diverse employee base.
- Complete and implement a sustainability plan that addresses environmental, financial and social sustainability.

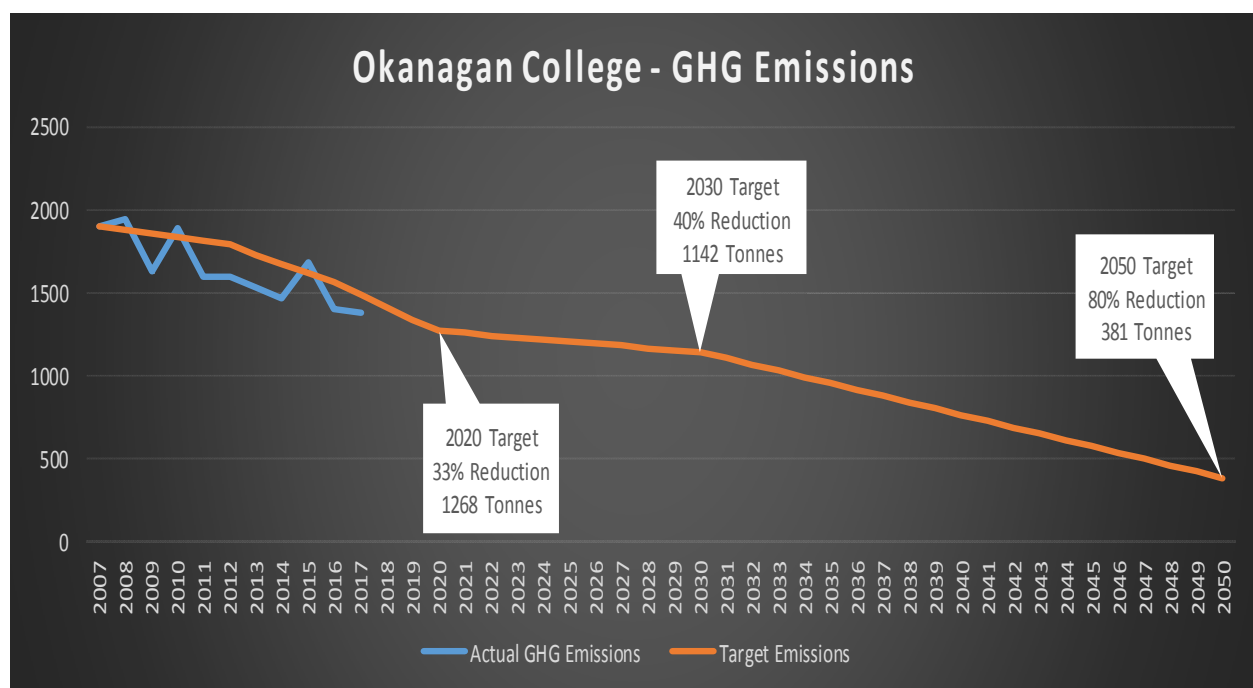
The College continues to participate in the **STARS** program – (**Sustainability Tracking and Assessment Rating System** administered by the Association for the Advancement of Sustainability in Higher Education). The process involves a rigorous examination of practices, policies, and





achievements that contribute to sustainability. Okanagan College currently holds a Silver rating and is planning to resubmit in 2018 to help establish new benchmarks and targets going forward – particularly with regards to our greenhouse gas emissions. Conveniently, many of the activities which improve our STARS scoring are also directly aligned with our carbon reduction initiatives.

The quest for improvement is ongoing. The institution has established goals for itself to exceed the provincially mandated Bill 44 targets for carbon emissions with an annual carbon emission reduction of 80 tons per year.



Part of Okanagan College's commitment to sustainability has involved giving greater voice and visibility to the topic. It starts with new staff orientation – sustainability is a featured topic in those sessions that introduce employees to the values and vision, policies and practices of the institution. Social Media plays a larger role every year as we now have an active Facebook page to complement our sustainability blog.



Success Stories and Emissions Reductions Activities/ Initiatives in 2017

Infrastructure

Penticton Daycare

A significant achievement in 2017 was the completion of **Little Learners Academy** on our Penticton campus. This project was certified as a passive house, making it the first passive house daycare facility in Canada. It is built to LEED Platinum standards, uses heat pump technology for a minimal carbon footprint and is also designed to



accommodate enough future solar energy to operate as *Energy Net Zero*. This 4400 ft² building provides capacity for child care services for up to 64 children and eight staff in a comfortable and energy-efficient space, which makes it easier for staff and students to attend the College.

The College also started construction on three more energy efficient spaces:

Penticton Welding

This 4500 ft² facility, which will be completed in 2018, is designed to meet LEED Gold certification. It comes complete with an exhaust air heat recovery system which allows exhaust control from each individual workstation to optimize heating requirements and minimize related carbon emissions.

Vernon Trades

This facility will be completed in the summer 2018. It boasts over 12,000 ft² energy efficient design, heated by ultra-high efficiency condensing boilers with a roof top covered with solar photovoltaic panels providing electricity to this building as well as to the rest of the campus, when opportunity allows. LEED Gold certification is also anticipated for this project.

Trades Training House

This facility consists of a 3000 ft² base structure with an open two story interior allowing students to develop and modify the interior spaces to suit programming needs and training opportunities. It is heated with a high efficiency condensing boiler feeding a radiant slab, and it will also double as educational infrastructure for our foundational plumbing students who occupy half the building.



The other half of the building is designed to accommodate the addition of solar panels to allow our electrical programming to adjust to future industry demands.

Health Sciences Centre – design phase

Design work on this project began in 2017. The 30,000 ft² project is pursuing multiple green construction certifications including LEED Gold and the WELL building standard. Most significant from a Carbon perspective is that the building is one of the Pilot Projects for the new Carbon Zero building standard developed by the Canadian Green Building Council. This requires us to consider embodied carbon from all construction materials, carbon free operation, renewable energy and optimized design to minimize heating requirements.

All these projects allow Okanagan College the infrastructure and opportunities to share construction best practices with our students and the communities we serve.

The College will continue to leverage the technology, passion and creativity inherent in these buildings to be an agent of change for the larger community, drawing on the interests and expertise of staff and students to advance our intentions regarding sustainability and carbon reduction.

Purchasing / Consumption

Our *Pay for Print* program continues to develop with the addition of the *Follow-U-Print* feature: print jobs are sent to the printer but they do not complete until the user physically arrives at the machine. This prevents the common habit of printing a document and then leaving it uncollected because of distractions. Our individual print and copy reports continue to help staff better understand their own printing habits and usage patterns.

Transportation

2017 saw the development of a partnership plan with the City of Kelowna for a Bike Share program which will be rolled out in 2018.

Negotiations also started with the Okanagan Car Share Co-op to see vehicles stationed on our Kelowna Campus.

Fleet “right-sizing”: consolidation and analysis of our fleet allowed us to downsize two of our service vans to more fuel efficient vehicles, and eliminate one full size van.



Continued Participation in the “Ride to Work Week” and “ICBC Commuter Challenge” programs allow us to educate and engage staff and students.

Policy & Planning

Our *Strategic Plan 2016-2020*, which includes *Sustainability* as one of our *Core Values*, continues to help guide our long term planning.

STARS Planning: we are now working on our performance in many areas in anticipation of our 2018 submission.

Education and Engagement

Sustainability continues to be a key element in our orientation processes for new staff and students.

Plans to Continue Reducing Greenhouse Gas Emissions 2018 and beyond

The design of our new Health Sciences Centre and the pursuit of the Carbon Zero designation requires us to develop a strategic “Zero Carbon Transition Plan” which includes energy reduction strategies, financial analyses of alternatives, and development of a long term heating plan free of fossil fuel combustion. This plan will most certainly guide us into the future.

Using Lean methodology, we are constantly reviewing administration processes in different departments to encourage reducing, where practical, unnecessary paper-based filing systems.

Continued monitoring of our fleet vehicles and usage patterns as well as technology developments in video conferencing will help us optimize travel related emissions.

Emissions and Offset Summary Table:

<i>Okanagan College GHG Emissions and Offset for 2017 (TCO₂E)</i>	
GHG Emissions created in Calendar Year 2017 :	
Total Emissions (tCO ₂ e)	1380
Total Offsets (tCO ₂ e)	1379
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 2017 Reporting Year :	
Grand Total Offsets (tCO ₂ e)	1379

Retirement of Offsets:

In accordance with the requirements of the *Greenhouse Gas Reduction Targets Act* and *Carbon Neutral Government Regulation*, **Okanagan College (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 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 plus GST per tonne of offsets retired on its behalf.

Executive sign-off:



Signature

30 May 2018

Date

Jim HAMILTON

Name (please print)

PRESIDENT

Title

Part 1: CNAR Survey

1. General Information

Name: Rob St.Onge

Contact Email: rstonge@okanagan.bc.ca

Organization Name: Okanagan College

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)

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?:

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

How many new "Green" buildings?: 4

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

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

We continue to retrofit old HVAC systems as opportunity and budget allow. Focus is given to exhaust air heat recovery and conversion to low temp heating systems which allow for an easier transition to heat pump technologies.

b) Over the following 6-10 years

The college is on the process of developing a long term master utility plan which will address carbon emissions, utility costs, redundancy and future infrastructure upgrades.

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)

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

How many vehicles?: 3

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

We are working on a Partnership with the local Car Share coop which will eventually increase vehicle utility beyond simple college operation. This will also provide opportunities for college population to take advantage of a more diverse set of transportation options.

2 More electric vehicle stations planned for Kelowna campus

b) Over the following 6-10 years

Continued development of master transportation plan.

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)

Had a policy requiring the purchase of recycled content paper

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

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

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.

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)

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)

Lifecycle costing of new construction or renovations