

Selkirk College

# Carbon Neutral Action Report

May 2015



*Sustainable*

Selkirk  College

## 2014 Carbon Neutral Action Report – SELKIRK COLLEGE

This is the 2014 Carbon Neutral Action Report (CNAR) for Selkirk College. This report contains our 2014 emissions profile, offsets purchased, the actions we have taken in 2014 to reduce our GHG emissions and our plans to continue reducing emissions in 2015 and beyond.

By June 30, 2015, Selkirk College's final CNAR will be posted to our website at [www.selkirk.ca](http://www.selkirk.ca)

### 2014 GHG Reduction Actions:

In 2014, the focus for energy reduction at Selkirk College was to optimize existing building systems controls at the Castlegar campus and reduce exterior lighting energy at the Nelson campuses. A detailed energy audit and building controls re-commissioning study was completed for the Castlegar campus. Changes to building control strategies recommended from the study were implemented. The hybrid heating plant which was installed in 2013 was also optimized to maximize use of the heat pumps and reduce use of the natural gas fired condensing boilers.

Exterior lighting was upgraded to LED fixtures at both the Tenth Street and Silverking campuses. The new lighting reduced electrical power consumption by approximately 75%. Over the past 2 years, Selkirk College reduced exterior lighting energy use by 77% between the three main campuses located in Castlegar and Nelson. Total energy reduction was over 25,000 watts.

For the 2015 calendar year, Selkirk College supported wind power by purchasing renewable energy credits for the electrical energy used at its Tenth Street Residence facility. The electrical energy used at this facility is 520,000 KWH.

### 2015 GHG Reduction Strategies:

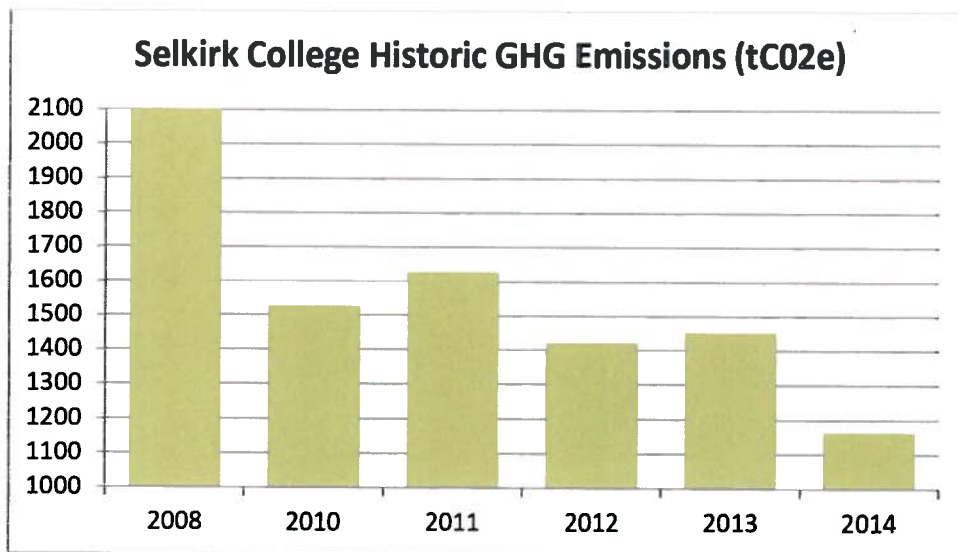
We will be continuing with LED lighting upgrades for interior lighting in the coming year. We also plan on sourcing funding to replace the hot water boiler used in the Castlegar gymnasium building which has the potential to reduce GHG emissions by over 50 tCO<sub>2e</sub> annually.

A detailed energy audit and building controls re-commissioning study for our Tenth Street campus will also be completed in 2015. The information will allow us to identify and prioritize which areas to target to maximize GHG reduction.

**GHG Reduction Performance:**

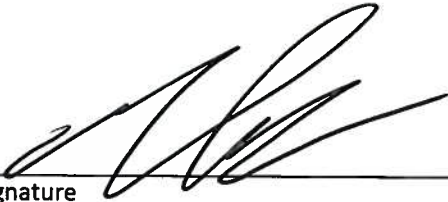
Sustainability and the reduction of our ecological footprint is part of Selkirk College’s Vision statement. One of the College’s strategic directions is to have state of the art facilities not only for learning, but for a reduced environmental impact. Selkirk College is committed to reducing its GHG emissions by at least 33% by 2020 compared to 2007 emission levels.

We’re very pleased and proud of the fact that with the reduced GHG emissions achieved in 2014, we were able to achieve this goal in 2014, several years ahead of our target. Although somewhat milder temperatures in the southern interior of the province experienced over the past winter months was a contributing factor to lower natural gas usage, reduced energy use strategies incorporated over the past few years were also critical to realizing these reductions. Further reductions to our GHG emissions will continue to be a priority over the coming years.



**Emissions and Offsets Summary:**

<b>Selkirk College GHG Emissions and Offsets for 2014 (TCO2E)</b>	
<b>GHG Emissions created in calendar year 2014 (from SMARTTool Homepage)</b>	
Total Emissions	1,165
Total Emissions for Offsets	1,164
<b>Adjustments to GHG Emissions Reported in Previous Years (from SMARTTool Homepage)</b>	
Total Emissions	77
Total Emissions for Offsets	78
<b>Credit owing from PCT at end of 2013 reporting year (if applicable – from May 15 Invoice):</b>	
Credit Owing	0
<b>Total Emissions for Offsets for the 2014 Reporting Year (from Offset Invoice):</b>	<b>1,242</b>


Date 2015/06/05

GARY LEIER
Title UP College Services

Name (please print)
Title

# 2014 Carbon Neutral Action Report (CNAR) - Part 2 ACTIONS

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## Organization Name

Selkirk College

## Actions Taken to Reduce Emissions

### 1) Stationary Fuel Combustion, Electricity (Buildings): Indicate which actions were taken in 2014:

Performed energy retrofits on existing buildings

Yes

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

No

Undertook an evaluation of overall building energy use.

Yes

Please list any other actions taken to reduce emissions from Buildings:

Performed energy retrofits on existing buildings

Optimized controls for the hybrid heating plant at the Castlegar campus to maximize use of the heat pumps and minimize use of the natural gas fired boilers.

Completed an energy audit and building controls re-commissioning for the Castlegar campus. Implemented recommendations from the studies.

Upgraded building DDC controls to enable improved building control with respect to heating and

lighting systems.

**2) Mobile Fleet Combustion (Fleet and other vehicles):Indicate which actions were taken in 2014:**

Do you have a fleet?

Yes

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

Yes

Replaced existing vehicles with hybrid or electric vehicles

No

Reduced the overall number of fleet vehicles

No

Took steps to drive less than last year

No

Please list any other actions taken to reduce emission from fleet:

Two vans replaced with more efficient models.

**3) Supplies (Paper):Indicate which actions were taken in 2014:**

Used less paper than previous year

No

Used only 100% recycled paper

No

Used some recycled paper

Yes

Used alternate source paper (Bamboo, hemp, etc.)

No

Please list any other actions taken to reduce emissions from paper use:

2014 shifted bulk of paper purchased for use at college to higher recycled content:

	2013		2014	
	PKG	% Total	PKG	% Total
0% recycle content	296	6%	274	5
10% recycle content	32	1%	4	Less than 1%
20% recycle content	26	Less than 1%	0	0
30% recycle content	4928	30	685	13
100% recycle content	0	0	4400	82

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### **Actions Taken to Reduce Emissions - continued**

Explain how you plan to continue minimizing emissions in 2015 and future years:

Replace existing inefficient lighting and heating equipment with energy efficient equipment. Complete energy audits at remaining campuses and implement recommendations. Expand and improve on building controls.

If you wish to list any other "sustainability actions" outside of buildings, fleet, paper and travel check "yes". This reporting is optional.

Yes

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**Actions to Promote Sustainability and Conservation - Optional**The following are actions that fall outside the scope of the Carbon Neutral Government Regulation, but which many organizations still undertake and may wish to report on. This section is optional for reporting.

**Business Travel**Created a low-carbon travel policy or travel reduction goal (Low-carbon: Lowest emission of greenhouse gases per kilometre per passenger)

No

**Virtual Meeting Technology**Installed web-conferencing software (e.g., Live Meeting, Elluminate, etc.)

Yes

**Made desktop web-cameras available to staff**

No

**Encourage alternative travel to meetings (e.g., bicycles, public transit, walking)**

No

**Encourage carpooling to meetings**

Yes

**Education and Awareness**Have created Green, Sustainability, Energy Conservation, or Climate Action Teams.

Yes



**Provided resources and/or dedicated staff to support these teams**

No

**Provided behaviour change education/training for these teams (e.g., community-based social marketing)**

No

**Established a sustainability/green awards or recognition program**

Yes

**Support green professional development (e.g., workshops, conferences, training)**

Yes

**Planning for Climate Change Have assessed whether extreme weather events and/or long term changes in climate will affect our organization's business areas**

No

**Long term changes in climate have been incorporated into our organization's decision making.**

Yes

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**Actions to Promote Sustainability and Conservation - Optional (continued)**

**Staff Awareness and Education Provided education to staff about the science of climate change**

No

**Provided education to staff about the conservation of water, energy, and raw materials**

No

**Provided green tips on staff website or in newsletters**

No

**Alternate Work/Commuting Options Allow for telework/working from home**

No

**Staff have the option of a compressed work week**

Yes

**Commuting by foot, bicycle, carpool or public transit is encouraged**

Yes

**Shower or locker facilities are provided for staff/students who commute by foot or by bicycle**

Yes

**Secure bicycle storage is provided**

Yes

**Other Sustainability Actions Establish a water conservation strategy which includes a plan or policy for replacing water fixtures with efficient models**

Yes

**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**

Yes

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

Yes

**Have implemented a hazardous waste reduction and disposal strategy (Hazardous Waste: E.g., electronics including computer parts and monitors, batteries, paints, fluorescent bulbs)**

Yes

**Have incorporated minimum recycled content standards into procurement policy for consumable, non-paper supplies (e.g., writing instruments, binders, toner cartridges, etc.)**

No

**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**

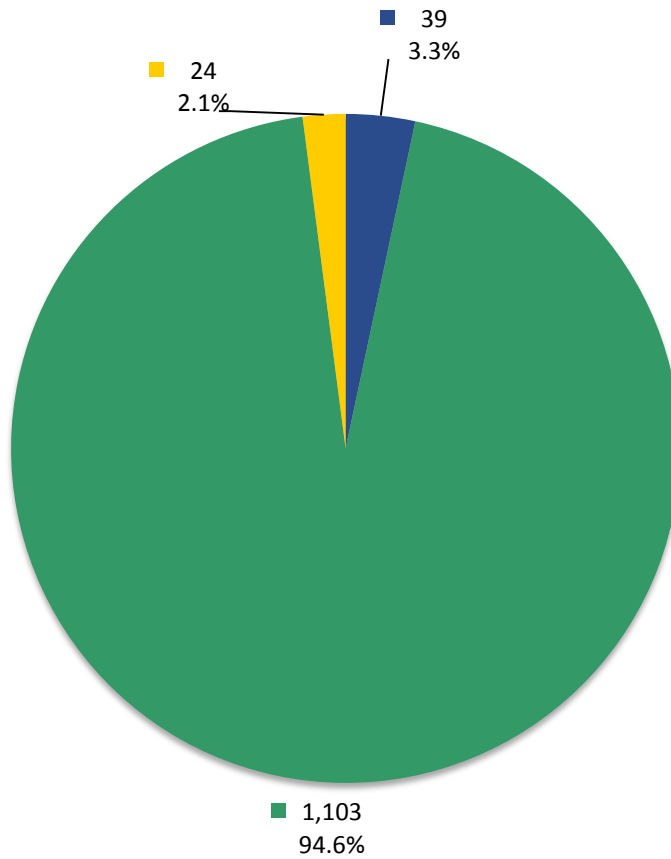
No

**Please list and other sustainability actions you wish to report not included in the previous list.**

Staff Ambassadors to promote Environmental Sustainability initiatives, including:

- trade out light fixtures/bulbs in favour of more efficient (LED) models;
- trade in space heaters for lap blankets;
- encourage use of ceramic/reusable coffee mugs over disposable;
- implemented staff kitchen area with appliances to encourage staff with office "kitchens" to remove appliances in favour of using communal kitchen (award/recognition incentives in place)

**Selkirk College  
Greenhouse Gas Emissions by Source  
for the 2014 Calendar Year (tCO<sub>2</sub>e\*)**



**Total Emissions: 1,165**

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

**Offsets Applied to Become Carbon Neutral in 2014 (Generated June 23, 2015 4:39 PM)**

Total offsets required: **1,164**. Total offset investment: **\$29,100**. Emissions which do not require offsets: **1** \*\*

\*Tonnes of carbon dioxide equivalent (tCO<sub>2</sub>e) 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.