

Carbon Neutral Action Report

2015



This is BCLC's 2015 Carbon Neutral Action Report* This report contains:

1. Our emissions profile,
2. The offsets purchased,
3. Actions we have taken to reduce GHG emissions, and
4. Our plans to continue reducing emissions in 2015 and beyond.

* Gaming facilities, such as casinos, racetracks and lottery kiosks, are owned and operated by private sector service providers. Therefore, only BCLC offices in Kamloops and Vancouver, and the activities of BCLC staff, fall within the scope of this report.

Executive Summary

BCLC is a dynamic, consumer-driven gambling entertainment company and our revenues benefit communities. We strive to deliver great entertainment to our players while always considering the impacts of our business on the people and communities of British Columbia. This includes our impact on the environment and wherever possible, we lead by example and take steps to promote sustainability to our staff, service providers, retailers and stakeholders.

Initiatives to reduce our carbon footprint are ongoing across BCLC. An active employee-led Green Committee regularly hosts events to promote sustainability and environmental awareness amongst staff. This includes the annual Bike-to-Work Week and Commuter Challenge where employees are encouraged to bike, carpool or take transit to work. In 2015 employees logged over 1,900 kilometers through these events, saving more than 420 kilograms in emissions.

Although not part of our reportable emissions reductions, we are pleased with our progress on waste management. In 2015, several steps were taken to decrease waste from our Kamloops office including working with a local waste management company to implement an organics collection program. Recycling and composting programs are now in place at both of our Kamloops and Vancouver facilities. BCLC was the first business in Kamloops to adopt an organics collection program and we hope that other businesses in the Kamloops community will get on board.

We continue to explore new ways to reduce electricity across our operations. In 2015, new storage technology was implemented in BCLC's data centre. The new equipment is able to perform the work that had typically been dedicated to multiple machines, reducing overall power consumption. In addition, lighting in the Kamloops parkade was upgraded to energy efficient LEDs. BCLC's paper consumption also dropped in 2015 as a result of an increased effort to host corporate reports online and encouraging employees to present information digitally in meetings.

In 2015, our reportable greenhouse gas (GHG) emissions decreased by 31 per cent from 2014. BCLC also surpassed our 2020 target of reducing reportable GHG emissions by 33 per cent as set by a 2007 baseline. Our emission target for 2020 is 1,032 tonnes and our emissions in 2015 totalled 906 tonnes. A decrease in fleet vehicles resulted in a significant reduction in reportable emissions and allowed us to meet our goal five years earlier than forecast.

While BCLC's operations are relatively small, we're also very connected to many service providers and retailers, increasing our environmental impact. As we move forward we will continue to build on our accomplishments and find new and innovative ways to encourage our employees and partners to minimize our collective environmental footprint.

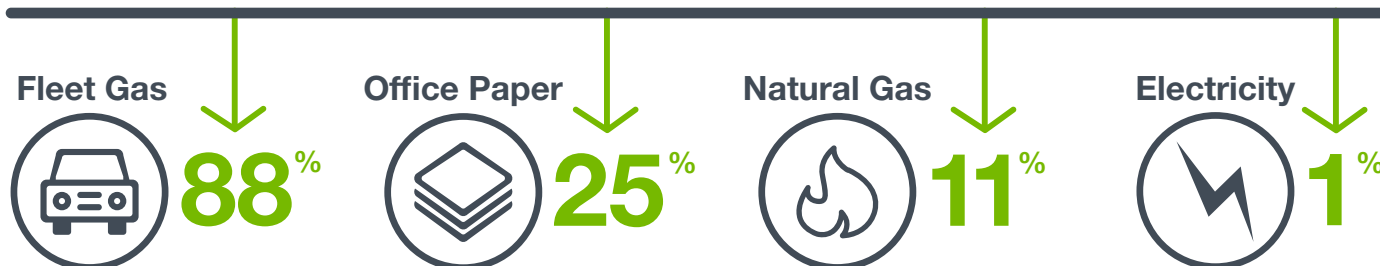


Susan Dolinski

Vice-President

Social Responsibility and Communications

Here is our consumption snapshot for 2015:



2015 Greenhouse Gas Emissions

BCLC's reportable greenhouse gas (GHG) emissions totaled 906 tonnes in 2015, a decrease of 31 per cent from 2014. A number of factors contributed to this reduction. First, 2015 was the first full year that BCLC operated with a significantly smaller fleet. In September of 2014, our fleet size shrank from 94 vehicles to 8, which reduced our emissions during the last quarter of that year. This trend continued in 2015, as reportable emissions from mobile combustion dropped by 258 tonnes from the previous year. Second, we consumed 11 per cent less natural gas in our two offices compared to 2014. In both Vancouver and Kamloops, the average daytime temperatures in the winter months of 2015 were higher than their respective long-term average, which could account for this decrease in consumption. Finally, there were no fugitive emissions to report in 2015, as there were in 2014.

Other sources of emissions remained relatively flat in 2015. Our total electricity use decreased slightly, continuing a downward trend from the peak consumption in 2013. Electricity use in both the Vancouver and Kamloops office dropped by 2 per cent, but increased by 13 per cent at BCLC's backup data center in Kamloops as more server racks were added. We consumed 1500 fewer packets of paper in 2015, dropping our emissions from this source by 5 tonnes.

The significant drop in the number of fleet vehicles that BCLC owns or leases has allowed us to surpass our 2020 emissions target five years earlier than forecast. While this is an accomplishment to be proud of, we acknowledge that this business decision only impacted our reportable emissions, as personal vehicles are now being used for business related travel. Buildings now account for 93 per cent of our total emissions profile and thus we remain committed to limiting electricity and natural gas use in our offices.

2015 GHG Emissions in tonnes CO₂ equivalent



Note:

1. Our year-on-year target was set in 2009. The target is for reducing actual reportable emissions and is not intensity based. In Q4 2014 we reduced our corporate fleet from 94 to eight vehicles. This change significantly reduced our fleet emissions and as a result we updated our annual target for 2015 onward.
2. We were responsible for vacant floor space in Richmond from mid-December 2010 to June 2011 following our move to a more efficient Vancouver facility. This commitment resulted in slightly increased emissions for 2011 over 2010.

2015 Reportable greenhouse gas emissions

Tonnes CO₂ equivalent

Electricity	91 tonnes
Natural gas	747 tonnes
Fleet gas	34 tonnes (32 tonnes to be offset)
Supplies of office paper	29 tonnes
Diesel for building standby generators	6 tonnes
Fugitive sources*	0 tonnes
Total declared emissions	906 tonnes
Total emissions for offset	905 tonnes

Fugitive Emissions*

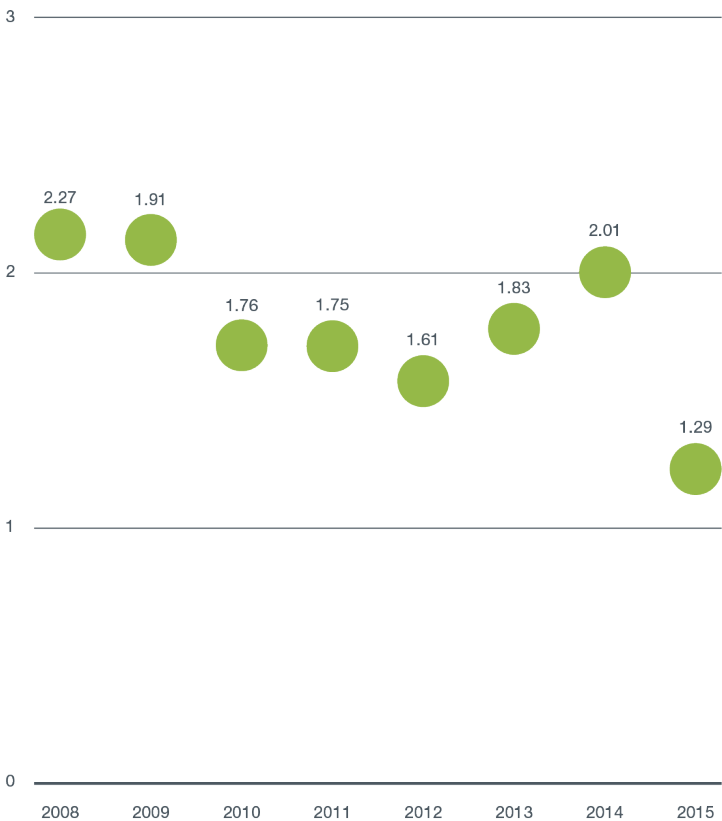
BCLC monitors and records the amount of refrigerant added to building heating, ventilation and air conditioning (HVAC) systems and vehicle air-conditioning. In 2015, 34 kg of building refrigerant that is out of the scope of the Carbon Neutral Government Regulation was replaced. No vehicle air-conditioning systems were topped up with refrigerant.

Operational Changes in 2015

In 2015 our GHG emissions per average headcount was 1.29 tonnes CO₂e. We have calculated this based on the monthly headcount in our Kamloops and Vancouver offices, excluding field staff. This is a more accurate reflection of our impact given the primary source of emissions for BCLC stems from energy use in buildings. Our headcount has increased since last year, and combined with lower consumption levels for all emission sources in 2015, our per capita emissions have dropped significantly.

We reset our future emission targets in 2014 to account for the anticipated decrease in emissions from our reduced fleet. This reduction was accounted for in the 2015 target, with smaller, incremental decreases targeted in future years. The actual reduction in emissions from fleet was even larger than we anticipated, which contributed to the substantial decrease this year.

GHG Emissions per FTE in tonnes CO₂ equivalent



Offsets Applied

To Become Carbon Neutral in 2015

As required by Section 7 of the Carbon Neutral Government Regulation, BCLC has offset a total of 905 tonnes of carbon dioxide equivalent emissions from the following sources:

- Building operations, including the consumption of natural gas and electricity.
- Fleet gas consumption.
- Supplies of office paper.
- Diesel consumption.

The emission offset does not include:

- Two tonnes of bio carbon dioxide from fleet gas. The Province has deemed bio carbon dioxide out of scope for emissions offsets.
- Gas purchased for vehicles not owned or leased by BCLC.
- Fugitive emissions from building and fleet refrigeration units. These sources account for less than one per cent of our total emissions inventory.



In 2015, BCLC offset
905 tonnes of CO₂
equivalent emissions



Actions taken to Reduce GHG Emissions in 2015



Electricity

For the second year in a row, our total electricity use declined. Specifically, electricity consumption dropped by 2 per cent in both of BCLC's offices, even as the average headcount increased slightly in 2015. In Vancouver, no major changes were made to building operations and no energy efficiency equipment was installed in the office. Thus, the decline in electricity use can at least be partially attributed to staff efforts to reduce consumption. For example, decals were attached to light switches in all meeting rooms to remind staff to turn off the lights when leaving. During energy reduction week, tips were displayed to remind staff to turn off their monitors when leaving at the end of the day. In the summer months, blinds were drawn on all south facing windows of the Vancouver office to help cool the building over the weekend.

In Kamloops, where BCLC's Data Center is housed, new storage technology was implemented as part of the ongoing evergreen program. Higher density and solid state storage replaced legacy equipment, reducing overall power consumption. Infrastructure virtualization in the Data Centre continued in 2015 and is becoming mainstream. In the past, equipment was typically dedicated to single workloads but through virtualization, the equipment is performing multiple workloads, which increases overall efficiency and density without sacrificing service levels.

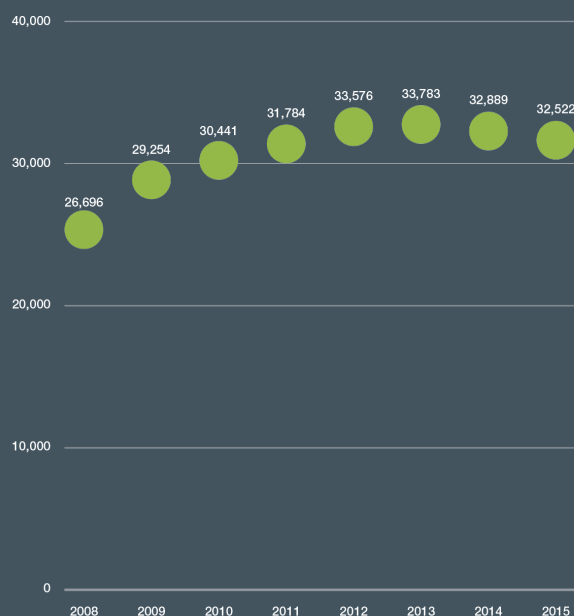
Additionally, 23 new LED luminaires were installed in the parkade, replacing legacy metal-halide lamps. This improves evening lighting in the parkade and is expected to save 14,000 kWh of electricity per year. These changes have helped decrease the average power load at the Kamloops office from 785 kW to 690 kW.



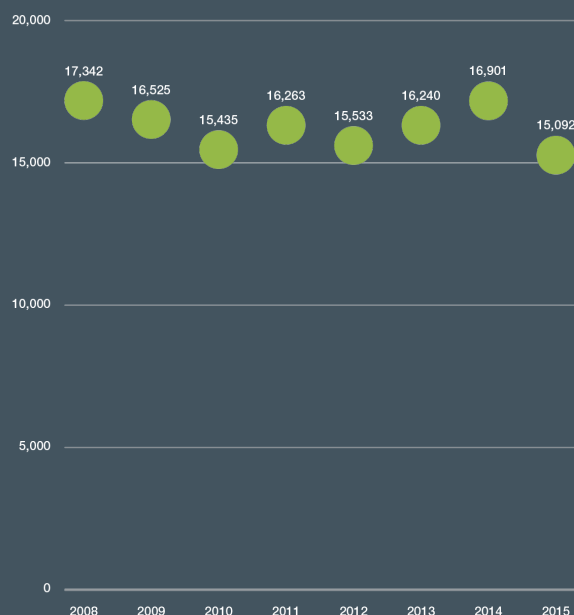
Natural Gas

In 2015 natural gas use from our Kamloops and Vancouver offices decreased by 11%, dropping to the lowest level since we started reporting our emissions. As there were no significant changes to facility operations, this decrease is likely due to warmer temperatures during the winter months, when the majority of natural gas is consumed for building heat. The average temperature in Kamloops in 2015 was 10.7 °C, up from 9.4 °C in 2014. Similarly in Vancouver, the average temperature was 12.6 °C in 2015, compared to 11.9 °C in 2014.

Electricity in GJ



Natural Gas in GJ



Fleet Gas in litres



Office Paper in packets



In previous years, Shared Services British Columbia (SSBC) managed the natural gas account in Kamloops on behalf of BCLC, and thus it was not possible for the facilities team to identify trends and evaluate consumption in real time. In July 2015, the gas account was transferred back to BCLC and we've had the ability to view natural gas usage on a regular basis since then. Ongoing analysis and monitoring now occurs daily and system adjustments are made regularly to further reduce natural gas consumption.



Fleet Gas

BCLC now operates a fleet of eight vehicles, seven of which are hybrid. These vehicles are primarily used for site visits and inter-office travel and, as a result, emissions from purchased gasoline are relatively low. To reduce the need for inter-office travel, both of our offices are equipped with video-conferencing equipment. When travel between offices is necessary, carpooling is encouraged.

In 2015, just over 14,000L of fuel was consumed, a decrease of 88 per cent from 2014 when our fleet was much larger. Fleet gas accounts for the largest decrease in reportable emissions for BCLC in 2015 and now represents a small fraction of our overall emissions inventory.

Note: BCLC stopped accounting for private Km driven in fleet vehicles from 2009 onwards. In Q4 2014, BCLC's fleet was reduced from 96 vehicles to eight. BCLC acknowledges that the reduction in fleet size does not curb real emissions, but rather reduces the mobile emissions sources which fall in-scope for the purpose of reporting. (as per the 2015 Scope Summary for B.C. Public Sector Greenhouse Gas Emissions, mobile assets that are owned or leased by employees and used for business purposes or commuting to/from work are out of scope.)



Office Paper

In 2015, we purchased less office paper than any other year since we began recording paper use. On average over the previous seven years we reported 6,710 packets of paper. This year that number dropped to 4,616. Although paper use accounts for a small fraction of our overall emissions inventory, we are pleased with our efforts and will continue to promote actions that reduce our consumption. This includes posting corporate reports online, presenting information digitally in meetings, and where possible developing alternatives to printed material (e.g. replacing conference agendas with a smart phone app). When hard copies are necessary, default settings on printers are set to black & white and double-sided printing.

Note: BCLC only accounted for letter-sized paper in 2007 and 2008. From 2009 onwards we have reported the purchase of 8.5" x 11" (letter), 8.5" x 14" and 11" x 17" office paper.



Other Activities

BCLC is committed to find ways to address our wider environmental impacts outside of our reportable GHG emissions. Here are examples of some of the other environmental initiatives and activities that we're proud of:

In-house waste reduction and recycling programs:

Recycling and composting programs are in place in both corporate facilities to reduce office waste. Both of BCLC's offices have centralized waste stations to sort garbage, organics, recyclables and paper. This helps encourage employees to divert waste from landfill. In 2015, our efforts paid off:

- 91% of waste diverted from landfill in Vancouver
- 70% of waste diverted from landfill in Kamloops (organics program was initiated in October)

In 2015 we took several steps to increase our diversion rate in our Kamloops office. We phased out purchases of disposable items such as coffee cups and paper plates, and replaced them with reusable mugs and ceramic plates.

We also installed centralized waste stations throughout the office, eliminating the need to have lined garbage bags at each workstation. Staff can now sort paper recycling, compost, refundable containers and garbage at one of several stations. Finally, we worked with a local waste management company to provide organics collection services. Previously, BCLC had run a small scale on-site composting pilot, but this was limited to a small section of the office. Now, organic material from across the office, including the cafeteria and kitchen, are collected and composted. We hope that BCLC's efforts to initiate organics collection will encourage other businesses in Kamloops to do the same.

Keeping Vancouver Spectacular and Adopt-a-Road:

BCLC Green Committee members have led numerous initiatives over the past year including 'Adopt-a-Road' and 'Keep Vancouver Spectacular' events, where volunteers in each office spend a few hours at lunch to clean up the streets around their respective offices. During the Fall 2015 cleanups, more than 30 employee volunteers collected 130 pounds of litter.



Recycling Stewardship Programs: BCLC is a steward of two provincial programs that help us meet our obligations for B.C.'s Recycling Regulation – Multi-Materials British Columbia (MMBC) and Electronic Products Recycling Association (EPRA).

- **MMBC:** Each year, BCLC reports the amount of packaging and printed material that is released to residential waste streams, including marketing materials, lottery paper and scratch tickets. We then pay a fee based on the weight of this material, which helps to cover costs of downstream recycling programs. In 2015, BCLC reported more than 670,000 kg of paper and packaging material.
- **EPRA:** In 2015 we recycled 115 tonnes of electronic equipment through this program, including slot machine parts, computers, and lottery equipment.

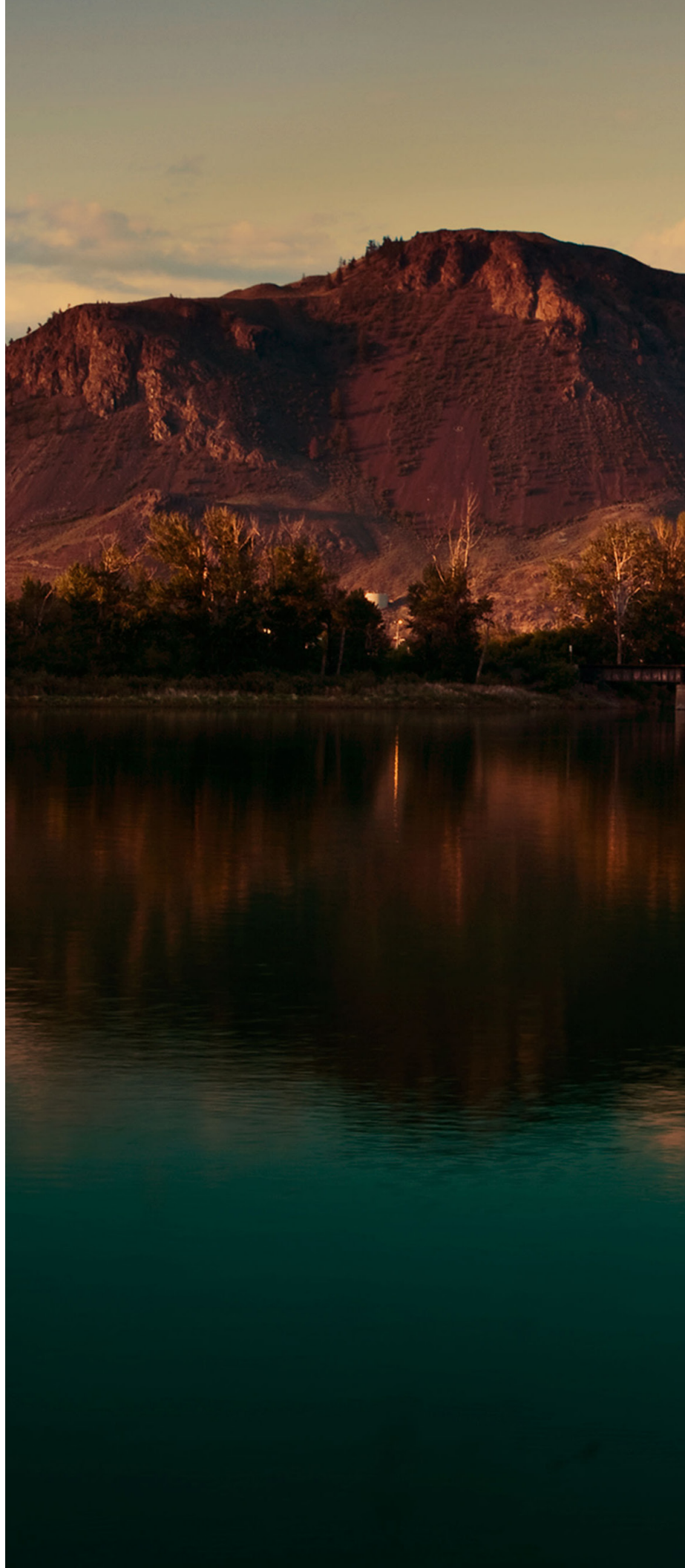
Alternate Transportation: A number of our employees bike to work to stay fit, feel better, and save on gas. During Bike-to-Work Week, employees are encouraged to go from four wheels to two wheels and take the biking challenge. The Vancouver and Kamloops offices compete for the most kilometres travelled on bike, and every day participants are eligible to win prizes like bike tune-ups, gear and gift certificates. The week after Bike-to-Work Week is the Commuter Challenge, where employees are encouraged to reduce single occupancy commutes by taking alternate modes of transportation, such as transit and car-pooling. In Spring 2015, BCLC employees logged more than 1,900 km through these events and saved 420 kg of greenhouse gas emissions.

Video Conference Technology: To reduce the need to travel between Vancouver and Kamloops, video conferencing is available to host meetings. Not only does this result in significant cost savings, it helps us avoid greenhouse gas emissions from business travel.

Plans to Continue Reducing Greenhouse Gas Emissions in 2016/2017

Our reportable greenhouse gas emissions decreased from 1,315 to 906 tonnes in 2015, a reduction of 409 tonnes. This is well below our target of 1,142 tonnes, as reported in the 2014 Carbon Neutral Action Report. It also surpasses our 2020 target of reducing our 2007 emissions by 33 per cent. As a low emitter, external factors such as weather and fugitive sources will have all the more impact on our emissions from year to year. Consequently, we have decided not to adjust our future targets based on this year's results.

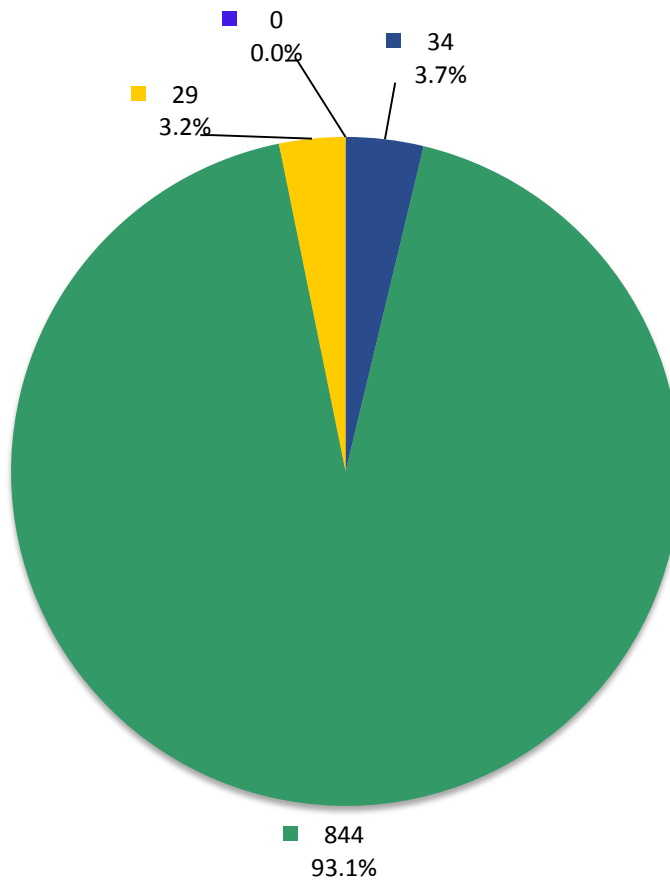
Reportable greenhouse gas emissions remain a distinct corporate performance measure that we continuously track. With our fleet now accounting for a small fraction of our emissions, additional reductions will become increasingly difficult. Our focus will be to reduce energy use at our two offices, and in particular the data center, where additional energy saving measures are planned. Having already met our goal of reducing emissions by 33 per cent by 2020, we will look for incremental efficiencies to further lower emissions, including encouraging employees to make sustainable choices every day.





In 2015 our reportable
greenhouse gas emissions
decreased by 409 tonnes.

**BC Lottery Corporation
Greenhouse Gas Emissions by Source
for the 2015 Calendar Year (tCO₂e*)**



Total Emissions: 906

- 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 8:52 AM)

Total offsets required: **905**. Total offset investment: **\$22,625**. Emissions which do not require offsets: **2** **

*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:

BCLC

Please select your sector:

- Crown Corporation

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:

No

If Yes, please describe:

(No response)

Undertook evaluations of building energy use:

No

Performed energy retrofits on existing buildings:

No

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):

No

Replaced existing vehicles with hybrid or electric vehicles:

No

Took steps to drive less than previous years:

No

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)

Yes

If yes, please describe:

The default setting for all network printers is double-sided.

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.)

No

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

(No response)

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)

No

Encouraged or allow telework/working from home:

Yes

Other:

(No response)

Education Awareness

Have a Green/Sustainability/Climate Action Team:

Yes

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:

(No response)

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:

Yes

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.)

Yes

Incorporated lifecycle costing into new construction or renovations:

No

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

In 2015, we continued our efforts to reduce our overall environmental footprint. From organizational policies and recycling programs to grassroots employee participation, here are a few examples of our efforts:

Organization wide composting: For many years the Vancouver office has offered composting in our cafeteria and all coffee stations, which has helped keep our diversion rates near 90%. In Kamloops, offsite composting was not available until this year. BCLC commissioned the first vendor in the city to collect office compost. Introduced in October 2015, we have already diverted more than two tonnes of waste from the landfill. We expect that waste diverted from landfill in Kamloops will increase by 20% from last year and continue to climb as more employees learn to sort their waste.

Our Green Committee was very active in the past year, coordinating multiple garbage cleanups around our offices in Kamloops and

Vancouver. We also hosted an 'Earth Week' educational campaign that promoted sustainable behaviours for our staff (movie screening, trivia day, reusable cup giveaway, etc.)