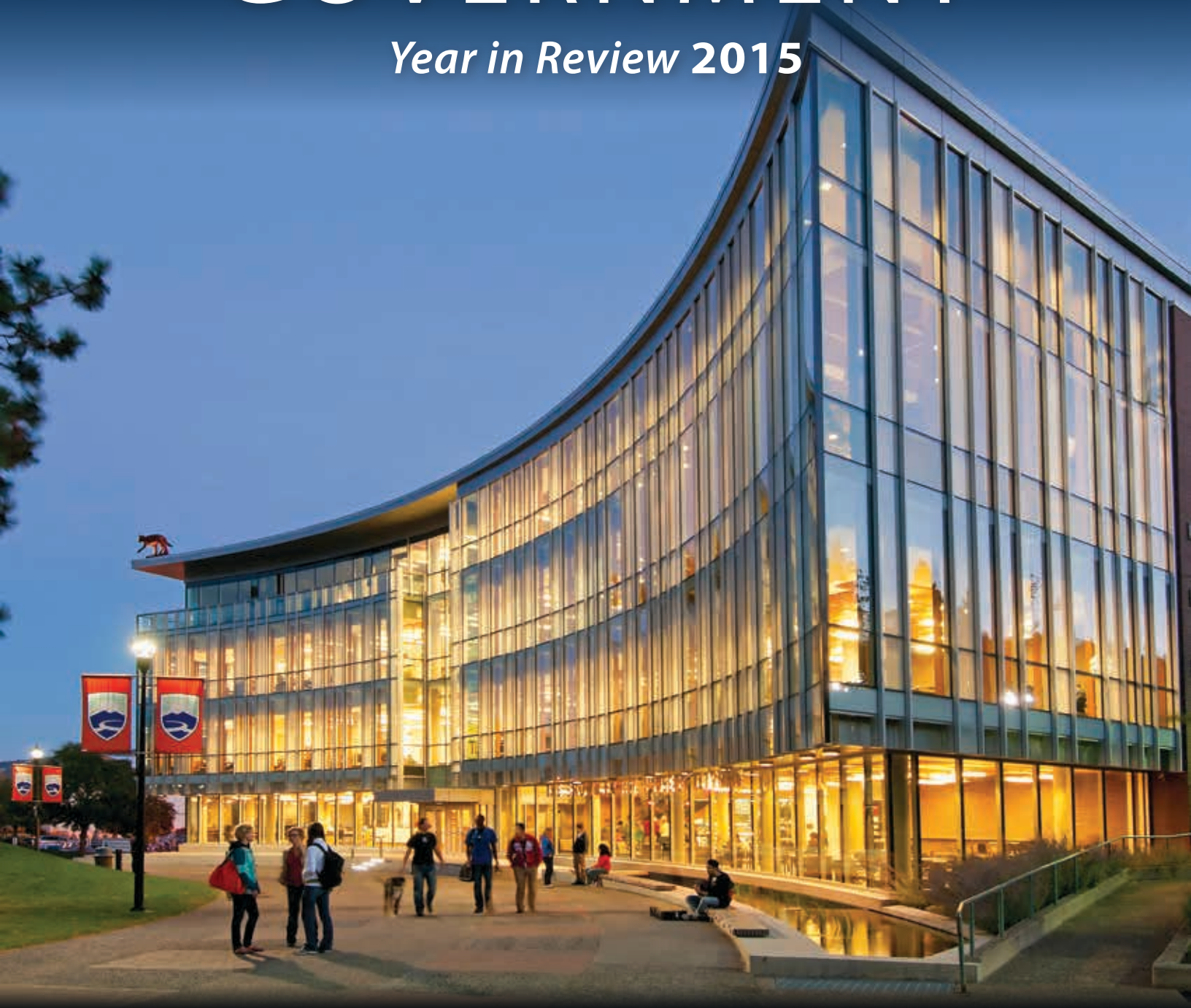
Carbon Neutral GOVERNMENT

Year in Review 2015



BRITISH COLUMBIA | Ministry of Environment

Cover photo credit: Thompson Rivers University

The LEED Gold Certified Brown Family House of Learning at Thompson Rivers University in Kamloops features environmentally conscious design and construction, including natural light, pine beetle-killed wood and an amphitheatre with a green roof. The certification reinforces the university's commitment to advancing sustainability as an institutional priority and foundational value. A recent retro-fit to LED lighting has led to a 60 percent reduction in related energy use.

Contents

Photo credit: Douglas Noblet

Message from the Minister

AS WE MARK ANOTHER YEAR of carbon neutrality across B.C.'s public sector, we celebrate a new era of climate leadership across our province, our nation and the world.

Since the release of our Climate Action Plan in 2008, British Columbia has been recognized as an international leader in the fight against climate change. Our province was the first jurisdiction in North America to introduce a broad-based, revenue-neutral carbon tax. We were also the first – and remain the only – province, territory or state on the continent to become carbon neutral across the public sector.

Other jurisdictions are following our carbon neutral government lead. We are sharing our successes with others working on their own carbon neutral government programs, including Yukon, Washington, Manitoba and Ontario.

Government's carbon neutral capital investments increase capacity, support proof-of-concept projects, spur the development and adoption of clean technology and turn energy savings into cost savings that can be reinvested in public services such as health care and education.

In our province all hospitals, schools, colleges and universities, Crown corporations, and government ministries and agencies have been carbon neutral in their operations since 2010 for their paper, fleet and building emissions. In this report, we highlight the successes of B.C.'s public sector organizations who have worked together to achieve our sixth consecutive year of carbon neutrality.

Carbon neutral government is fundamentally about leadership and will be an integral part of our new Climate Leadership Plan.

I look forward to hearing more success stories from public sector organizations that are finding unique and innovative ways to achieve carbon neutrality as we move our climate agenda forward.

The Honourable Mary Polak
MINISTER OF ENVIRONMENT

Photo credit: Bob Brett

A Word About Carbon Neutrality

VISION. PERSEVERANCE. LEADERSHIP. This year marks six years of carbon neutral government in British Columbia. Year by year, carbon neutrality is bringing about a significant cultural change in B.C.'s public sector organizations, which include schools, post-secondary institutions, hospitals, Crown corporations and government ministries and agencies. Carbon neutrality is about approaching environmental responsibility in an integrated way – embedding emissions reduction goals and values into both the operational and cultural fabric of organizations. Those public sector organizations that have seen the greatest positive impact on their emissions have looked at their organizations as a whole. They understand how greenhouse gas (GHG) reduction targets are related to energy costs and infrastructure investments decisions; how communication and staff training can inspire climate action and change corporate culture.

In this Carbon Neutral Government Year in Review 2015, we present the results of our annual carbon neutral cycle along with information about the key conditions necessary to achieve significant emissions reductions in the public sector.

CARBON NEUTRALITY is about climate action leadership and accountability: taking responsibility for GHG emissions by measuring, then reducing direct emissions as much as possible, and reporting on outcomes on an annual basis. To achieve carbon neutrality – or net-zero carbon emissions – remaining emissions are offset by investing in B.C.-based projects that reduce emissions through GHG removal or avoidance. B.C.'s schools, hospitals, colleges and universities, Crown corporations, ministries and agencies have been carbon neutral in their operations since 2010. This includes paper, fleet and building emissions. As well, provincial government ministries and agencies are also required to be carbon neutral with respect to their business travel.

DID YOU KNOW?

In 2015, nine B.C. public sector organizations were recognized by *Canada's 100 Greenest Employers*, up from six last year. New to the list are the BC Housing Management Commission, Vancouver Island Health Authority and Kwantlen Polytechnic University.

MEASURE

British Columbia's Public Sector by the Numbers

2015 EMISSIONS AT A GLANCE: *B.C.'s Public Sector*

- TOTAL GHG EMISSIONS: 738,697 *tonnes CO_2e*
- EMISSIONS THAT DO NOT REQUIRE OFFSETS: 114,112 *tonnes CO_2e**
- TOTAL OFFSETS PURCHASED: 624,585 *tonnes CO_2e***
- OFFSET INVESTMENT: $15,614,625
- TOTAL CARBON NEUTRAL CAPITAL FUNDING DISTRIBUTED: $14,500,000
- TOTAL ENERGY COSTS: $400,000,000***

* As per the Carbon Neutral Government Regulation, some of the reported emissions in the total do not require the purchase of offsets in order to reach carbon neutrality. This includes emissions from mobile or stationary combustion of biomass as well as emissions from bus fleets.

** Due to routine adjustments to prior year emissions, an additional 459 tonnes CO_2e of emissions were offset to ensure that all public sector organization emissions were accounted for. A total of 625,044 tonnes CO_2e of offsets were used to offset emissions.

*** Energy costs from buildings and vehicles.

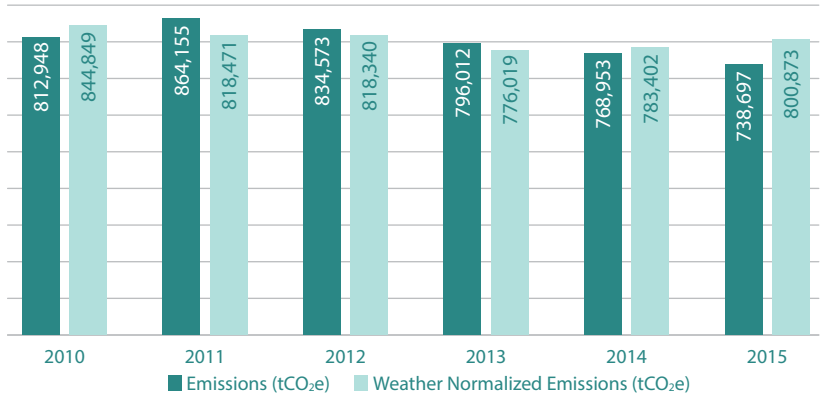
GREENHOUSE GAS EMISSIONS noted in this report are measured in tonnes CO_2e (carbon dioxide equivalent). Six gases are included in emission reporting in B.C.: carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, sulphur hexafluoride and perfluorocarbons. Each gas varies in its ability to trap heat in the atmosphere, known as global warming potential (GWP). To standardize the reporting of emissions, the unit "CO_2e" is used as a standard unit. For example, methane has a GWP of 25, indicating that, relative to CO_2, an equivalent mass of methane traps 25 times more heat in the atmosphere. In other words, releasing one tonne of methane is equivalent to releasing 25 tonnes CO_2, which can also be reported as 25 tonnes CO_2e.[1]

This year, energy costs for the B.C. public sector were estimated at $400 million, two percent down from the baseline year of 2010.

In 2015, B.C.'s public sector emissions were approximately 74,000 tonnes CO_2e lower than 2010 emissions. Once normalized for weather conditions, the decrease in B.C.'s total public sector emissions is approximately 44,000 tonnes CO_2e relative to 2010, the equivalent of taking approximately 9,400 cars off the road. About 30,000 tonnes CO_2e of this decrease can be attributed to an increase in cleaner hydroelectric generation compared to prior years.

[1] The current GWPs for all of the greenhouse gases can found in the Carbon Neutral Government Regulation.

Total Emission Across the Public Sector 2010–2015



British Columbia's Public Sector by the Numbers *continued*

What Is Weather Normalization?

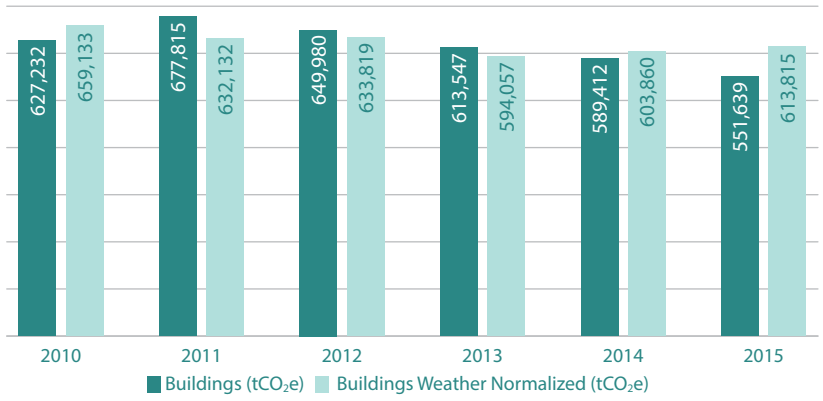
Buildings generate approximately 75 percent of B.C.'s provincial public sector emissions. As the weather changes from year to year, so too do the heating and cooling requirements in buildings. To enable year-to-year comparison of building-related emissions, emissions are adjusted to remove weather effects. This is known as weather normalization.

2015 was an unprecedented year for weather in B.C.[2] The El Niño phenomenon is believed to have brought warmer winter temperatures. The average annual temperature in B.C. for 2015 was the warmest on historical record. This resulted in less overall energy use for heating. While this brought public sector emissions down overall, it is important to gauge progress not by yearly fluctuations in temperature but by energy use trends after normalization has been considered.

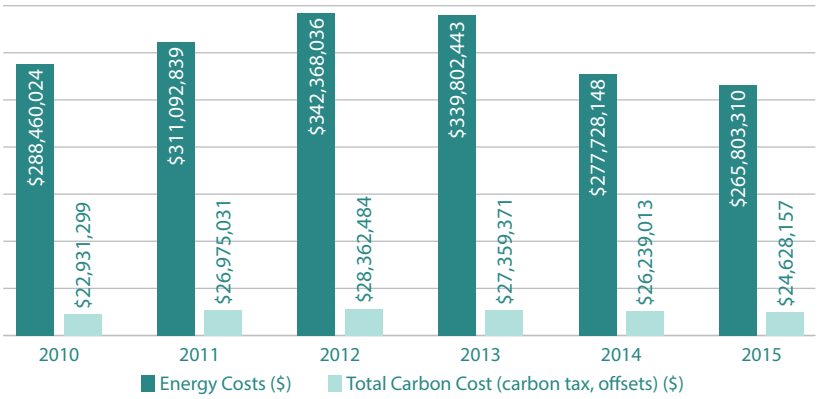
To normalize building emissions, the average temperature profile for a 30-year period is used to calculate the number of days buildings use energy to heat or cool (based on temperatures above or below 15˚C).

[2] Historical data on B.C.'s weather since 1900 is available at Environment Reporting B.C. The Pacific Climate Impacts Consortium's Plan2Adapt climate model tool provides projected future climate conditions for regions throughout B.C.

Building Emissions Across the Public Sector 2010–2015



Estimated Public Sector Building Energy Costs vs. Carbon Costs 2010–2015



Saanich Royal Oak Middle School

In Canada and around the world, leaders are considering placing a price on carbon. B.C.'s public sector organizations have taken a leadership role on carbon pricing since 2008. Today, public sector organizations pay $30 per tonne CO_2e in carbon tax and $25 per tonne CO_2e for carbon offsets.

REDUCE

Reducing Public Sector Emissions

B.C.'S COMMITMENT TO CARBON NEUTRALITY has resulted in a fundamental shift in the way public sector organizations operate. Six years of carbon neutral public sector operations have resulted in increased expertise in GHG reduction, as well as a significant repository of energy use data. This data is used to improve asset management, inform future investment decisions, track changes year over year and identify areas for improvement. From building awareness to instituting small, daily conservation efforts, to the use of state-of-the-art environmental technologies, public sector organizations have reduced emissions and costs, and reinvested savings into student programs, patient care and other important initiatives.

The B.C. government has been tracking the learnings and successes of its carbon neutral public sector commitment since its inception. Through time and experience key drivers to achieving significant operational emissions reductions have emerged.

These key drivers are consistent across public sector organizations in all regions of the province as evidenced by the success stories featured in this report.

Leadership commitment was identified by public sector organizations as the most important driver for achieving GHG emission reductions.

See p. 20 to learn how Capilano University discovered that giving students life-changing lessons about sustainability is as important as decreasing emissions.

Key Factors in Achieving Emissions Reductions

Leadership Commitment

- ✓To ensure integration in planning and decision making, climate leadership is supported by organizational decision-makers.
- ✓Leadership's commitment to environmental action is reinforced in all strategic activities and public reports.
- ✓Commitment to GHG reduction is communicated widely and often, both internally and externally.

Goal Setting

- ✓Setting clear GHG reduction targets motivates and guides staff in every area of the organization.
- ✓GHG targets create a framework for incremental goals and accelerate the adoption of GHG emission-reducing behaviours and technologies.

Recognizing & Celebrating Achievements

- ✓Internal and external recognition motivates decision-makers to continue to engage in sustainability initiatives.
- ✓Celebrating small and big achievements keeps teams focused and motivated.

Creating a Sustainability Culture

- ✓A culture of sustainability acts as a corporate incubator where innovative ideas can be brought forward for implementation.
- ✓Thinking and operating sustainably is embedded as "the way we do things around here."

Reducing Public Sector Emissions *continued*

Harnessing Champions

- ✓ Those staff who embody and promote the values of sustainability are essential in moving the organization forward in its emissions reduction goals.
- ✓ Giving champions room to innovate and implement is critical to fostering a culture of sustainability.

Being Implementation-Ready

- ✓ Organizations have done the up-front planning and are ready to implement emissions reduction projects as soon as funding becomes available.
- ✓ Projects can be phased so that funding available within a given fiscal year – even if insufficient for the entire project – can be put to use.

Awareness of Funding Sources

- ✓ Organizations are knowledgeable about all potential funding sources.
- ✓ Funding can be "stacked" so that small amounts of funding from different sources can be pooled to pay for larger projects.

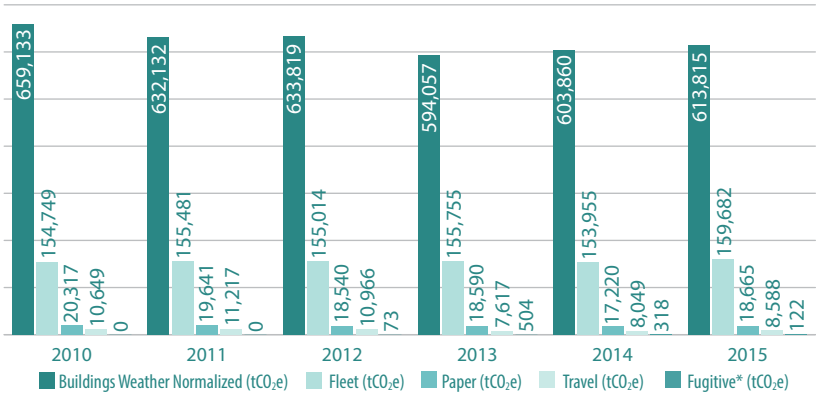
Investing in Knowledge

- ✓ Information and best practices are shared across public sector organizations.
- ✓ Organizations understand the benefit of investing in building operations training.
- ✓ Organizations are open to new technologies and new ways of doing things.
- ✓ Sustainability-related skills are built into job descriptions.
- ✓ Decision-makers understand the total cost of ownership, how investing now can save money later (e.g. energy efficient technologies that may be more expensive up front, but will save on energy costs over time).

Communication

- ✓ Communication is the foundation for successful leadership, goal-setting, recognizing and celebrating achievements, encouraging a cultural shift and encouraging the emergence of corporate champions.

Total Emissions Across the Public Sector by Source 2010–2015



The Carbon Neutral Capital Program

The Carbon Neutral Capital Program was introduced in 2012 to help school districts throughout B.C. implement energy and cost-saving activities and technologies. In 2014, the program was expanded to include additional funding for B.C.'s health authorities and post-secondary institutions. In 2015, a total of $14.5 million was distributed to the public health, education and post-secondary sectors. This funding supports projects that include everything from boiler, lighting and HVAC (heating, ventilation and air conditioning) upgrades to installation of solar, geo-exchange and heat recovery systems. Since its inception, the Carbon Neutral Capital Program has distributed $53.5 million to finance energy efficiency projects that will continue to reduce emissions and save money into the future.

* Fugitive emissions are GHGs unintentionally or incidentally released into the air, for example, HFC-based refrigerants that leak from air conditioning equipment.

OFFSET

Carbon Offsets

Benefits of Made-in-B.C. Offsets

- A cleaner environment
- A low-risk, cost-effective way to meet GHG reduction targets
- Support for B.C.'s clean tech industries
- More efficient, competitive industries in B.C.
- More green jobs for British Columbians

Since the start of B.C.'s carbon neutral commitment in 2008 until the end of 2014, the purchase of offsets has contributed an estimated $372.5 million to the provincial GDP and supported 4,438 jobs.[3,4]

[3] Measured in person-years.

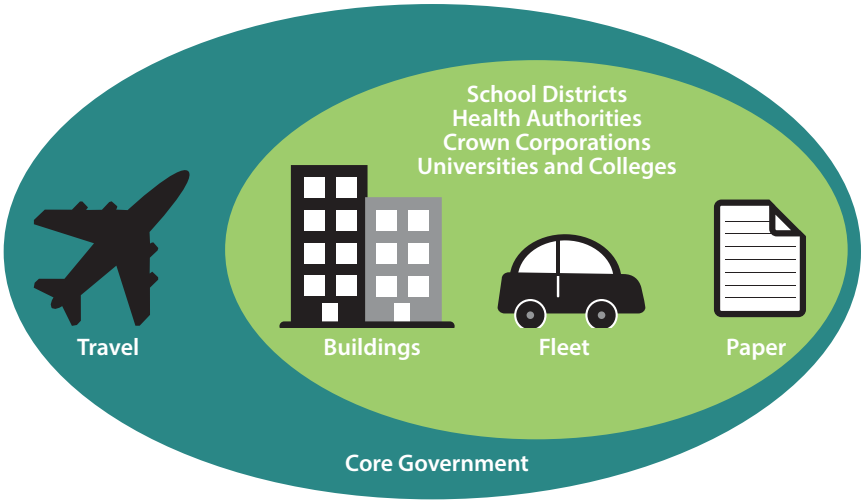
[4] Economic Impacts Analysis of B.C.'s Carbon Neutral Government Program. EcoRessources. Dec. 1, 2015, pages 13 & 14.

A CARBON OFFSET represents reductions in GHG emissions that can be used to compensate for, or offset, emissions from other sources. Once B.C.'s public sector organizations have reduced operational emissions as much as possible, offsets are purchased and applied to bring emissions to net-zero. The Province invests in carbon offsets developed in regions and sectors throughout B.C. Offsets are generated by GHG reduction or sequestration projects that reduce GHGs going into the atmosphere – for example, switching from a fossil fuel to a renewable fuel as the energy source, or preserving trees that absorb carbon dioxide. Because our atmosphere is like an ocean of gases, reduction of carbon emissions at any one location benefit the whole system.

THE GOVERNMENT OF B.C.'S INVESTMENT IN CARBON OFFSETS supports innovative projects that create economic opportunities across the regions of the province. These projects have spurred the use and development of clean technologies and supported jobs in greenhouses, lumber mills, waste management facilities and transit systems, for example. Investments made in forest sequestration projects have underpinned conservation efforts in ancient B.C. rainforests, resulting in significant social, economic and ecological benefits. Since the inception of B.C.'s carbon neutral commitment, the Province has purchased offsets from 40 different offset projects.

For the 2015 calendar year, a total of 625,044 tonnes CO_2e of offsets were used to bring emissions from B.C.'s 127 provincial public sector organizations to net-zero. These offsets were sourced from 16 different projects across the province.

EMISSION SOURCES



These emission sources are measured, reduced, offset and reported each year, as required under the Carbon Neutral Government Regulation.

Offset Project Success Story

CANADIAN FOREST PRODUCTS LTD. (Canfor) has implemented offset projects across B.C. to reduce the GHG emissions at several of its sawmills. The projects involved the conversion of a total of 21 natural gas heated lumber dry kilns to biomass based heat energy systems at five locations – Prince George, Chetwynd, Fort St. John, Mackenzie and Elko. These projects offset about 70,000 tonnes of CO_2e annually.

The sawmills process logs into finished wood products; logs are debarked and sawn, and the rough lumber is dried in kilns and planed in the planer mill. This process produces biomass residuals, including bark, chips, sawdust and shavings.

Heat energy systems are required for drying the lumber prior to planing and for space heating in the mills. Before implementing these offset projects, Canfor used natural gas-heated kilns for lumber drying. Biomass residuals produced during mill operations were previously transported to other nearby operations, such as pulp and paper mills, combined heat and power plants, wood pellet plants and the oil patch, or stockpiled on site.

The Projects

To replace natural gas used in the kilns, Canfor installed heat energy systems that utilize a portion of the bark residuals generated on-site. The natural gas-heating systems were replaced with efficient biomass combustion units that heat thermal oil in a closed loop system. Kilns were converted to thermal oil and new kiln control systems were installed to maintain correct lumber drying temperatures. Using the residual biomass for fuel not only replaced natural gas, but also eliminated the GHGs associated with transporting the biomass offsite, or stockpiling biomass on site.

To minimize particulate emissions to the air from the biomass combustion, Canfor installed state-of-the-art emission control equipment that removes the coarse and fine particulate matter. DelTech, a B.C. clean technology firm based in Prince George, supplied the heat energy system technology and pollution control technology.

Supply and demand for lumber and price vary in domestic and international markets creating revenue uncertainty. Canfor was reliant on external parties to dispose of its biomass, which posed a risk. Natural gas, while secure and abundant, experiences price fluctuations. The cost of the projects also posed a barrier, and without the combination of revenues from the sale of offsets, avoided purchase of natural gas and avoided B.C. carbon tax, the projects would not have met Canfor's required rate of return and would not have proceeded.

Canfor Fort St. John

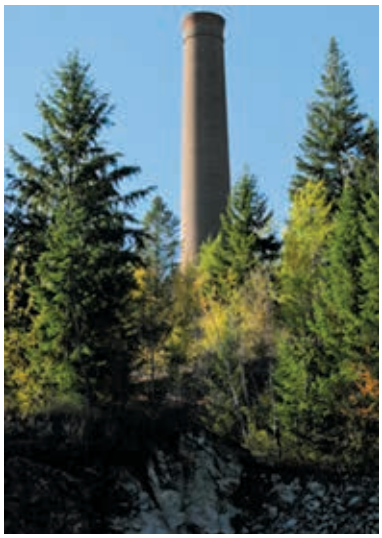
Canfor Chetwynd

Independent auditor (validation): KPMG Performance Registrar Inc.

Independent auditor (verification): Ruby Canyon Engineering, Inc.

Meeting B.C.'s Stringent Quality Requirements

SINCE VERIFICATION began in the 2011 reporting year, 31 public sector organizations have had their emissions data verified.



All offset projects and public sector organizations are required to meet rigorous standards set by legislation and regulations.

Public Sector Organizations

To ensure the integrity of the data used to report GHG emissions, public sector organizations annually self-certify that their emissions data is complete and accurate. A number of public sector organizations are selected annually for independent, third-party reviews of their data collection and input practices. The reviewer looks for errors in the emissions data; errors are considered material if, when added together, they will change the final emission total by five percent or more.

From reviews conducted in 2014, no material errors were found; only some general quality control issues were identified resulting in recommendations such as:

- Update estimated data with real data when available.
- Ensure a quality control process is in place to cross-check third-party invoices.
- Be sure to file invoices for seven years for audit and cross-checking purposes.

The Province has worked with these organizations to ensure their reporting processes address these issues and updated information has been provided to the entire public sector to ensure these types of small errors do not persist.

Meeting B.C.'s Stringent Quality Requirements *continued*

Carbon Offset Projects

Rigorous standards ensure B.C. offsets are of the highest quality. Offset project developers use a set of instructions on how to carry out an offset project and calculate the reductions. These instructions are called protocols. In the B.C. system, only protocols established by government may be used to develop an offset project. In order to qualify as an offset, developers must prove that revenues from the sale of offsets help overcome barriers to the implementation of the project. This is to ensure that the emissions reductions associated with the project go above and beyond normal business practices – a requirement in leading offset systems worldwide.

Offset projects must undergo two independent third-party audits. The first is a validation of the project plan. Because the project plan is developed before an offset project is implemented, the role of the validator is to confirm that the project is expected to result in the forecasted GHG reductions and meet regulatory requirements.

Once the project has been implemented, actual emission reductions will be calculated and summarized in a project report. A second independent auditor will verify these reported reductions and confirm whether they have met the requirements of the regulation and protocol.

Without these third-party audits, the reductions will not be recognized under the B.C. offset system.

If the project successfully passes the two-stage independent auditing process, the offset developer is eligible to submit an application to the Ministry of Environment for the issuance of offsets. Once issued, the offsets are registered on the BC Carbon Registry and may be purchased by the Province for its carbon neutral commitment.

REPORT

School Districts

2015 EMISSIONS AT A GLANCE: *B.C.'s School Districts*

- TOTAL GHG EMISSIONS: 162,705 *tonnes CO_2e*
- EMISSIONS THAT DO NOT REQUIRE OFFSETS: 20,836 *tonnes CO_2e*[*]
- TOTAL OFFSETS PURCHASED: 141,869 *tonnes CO_2e*[**]
- OFFSET INVESTMENT: $3,546,725
- TOTAL CARBON NEUTRAL CAPITAL FUNDING DISTRIBUTED: $5,000,000
- TOTAL ENERGY COSTS: $80,000,000

* As per the Carbon Neutral Government Regulation, some of the reported emissions in the total do not require the purchase of offsets in order to reach carbon neutrality. This includes emissions from mobile or stationary combustion of biomass as well as emissions from bus fleets.

** This does not include prior year adjustments.

School District 72 solar panels.

School District 72 – Meeting targets through a culture of sustainability

With the introduction of the *Greenhouse Gas Reduction Targets Act* in 2007, School District 72 (Campbell River) used B.C.'s carbon neutral government commitment as an opportunity to address both rising energy costs and their commitment to teaching environmental sustainability as an educational priority.

School District 72's senior management team and board of trustees adopted an environmental responsibility policy, supporting the development of sustainability guidelines and sponsoring initiatives such as renewal of a strategic partnership with BC Hydro. Under the umbrella of BC Hydro's Energy Manager Program, an energy management assessment identified priority areas to decrease energy consumption and GHG emissions. Guided by annual strategic energy management plans, School District 72 has undertaken a wide variety of infrastructure projects, promoted initiatives to engage students and staff, and facilitated community outreach efforts.

KEY CONDITIONS FOR SUCCESS

- ✓ Leadership commitment
- ✓ Goal setting
- ✓ Creating a sustainability culture
- ✓ Investing in knowledge
- ✓ Communication

Projects undertaken by the district to reduce emissions and increase energy efficiency have included:

- lighting upgrades
- heating and domestic boiler replacements
- solar hot water installations
- building envelope improvements
- direct digital control for HVAC systems

School Districts *continued*

In keeping with School District 72's commitment to education and engagement, staff and students come together to promote sustainability throughout the calendar year. Through the District's partnership with BC Hydro, teachers in the district are teaching kids about hydroelectricity, conservation and electrical safety. Student eco-teams have led energy conservation challenges and school assemblies. Energy Star labelling keeps energy efficiency top of mind, while custodial staff are provided with training on green cleaning products and energy efficiency.

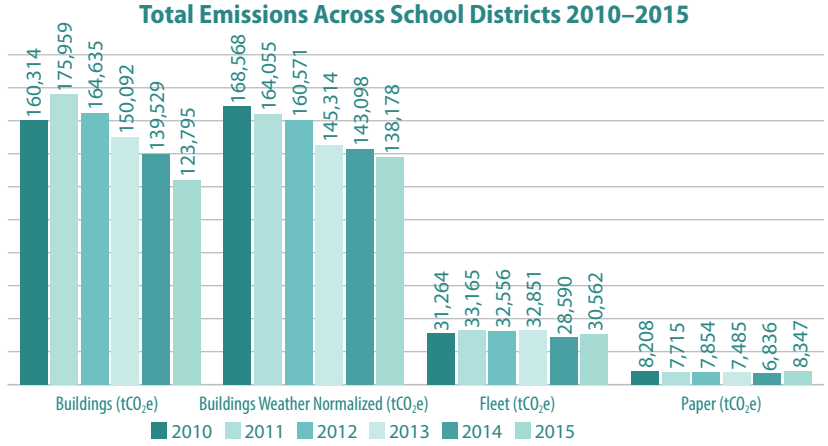
Collaboration with the City of Campbell River has also been ongoing. Projects have included:

- The use of school sites for wind energy feasibility studies.
- School submissions for the annual Earth Week Film Festival.
- Joint tendering of commercial solid waste and recycling collection (resulting in savings of over 20 percent in waste collection costs and eliminating the need to sort recyclables).
- Participation in the development of the city's Community Energy and Emissions Plan.

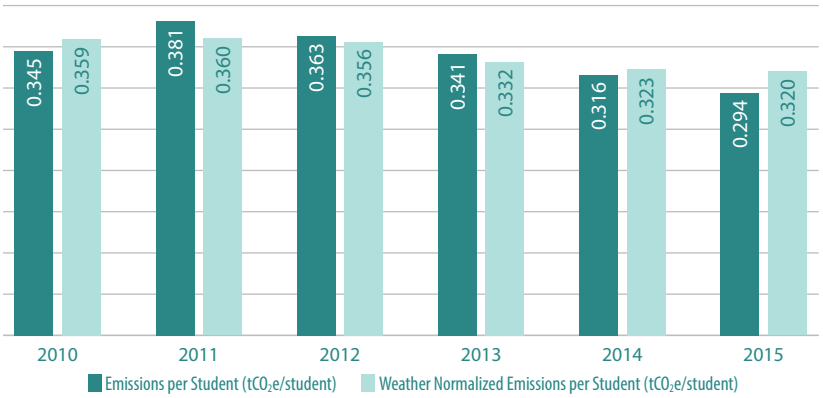
GOAL-SETTING

For School District 72, the provincial mandate of net-zero emissions and a GHG reduction target of 33 percent by 2020 provided a dual focus for climate action. Their efforts have led to the school district achieving their target five years early.

Total Emissions Across School Districts 2010–2015



Emissions Across School Districts per Student 2010–2015



Health Authorities

2015 EMISSIONS AT A GLANCE: *B.C.'s Health Authorities*

- TOTAL GHG EMISSIONS: 213,156 *tonnes CO_2e*
- EMISSIONS THAT DO NOT REQUIRE OFFSETS: 1,483 *tonnes CO_2e**
- TOTAL OFFSETS PURCHASED: 211,673 *tonnes CO_2e***
- OFFSET INVESTMENT: $5,291,825
- TOTAL CARBON NEUTRAL CAPITAL FUNDING DISTRIBUTED: $5,800,000
- TOTAL ENERGY COSTS: $110,000,000

* As per the Carbon Neutral Government Regulation, some of the reported emissions in the total do not require the purchase of offsets in order to reach carbon neutrality. This includes emissions from mobile or stationary combustion of biomass.

** This does not include prior year adjustments.

Vancouver Coastal Health Authority – Passive House project in Bella Bella, B.C.

In the fall of 2014, a fire damaged the staff housing complex for R.W. Large Memorial Hospital located in Bella Bella, B.C. on the mid-coast. Vancouver Coastal Health decided to build a new staff housing complex and take advantage of new building technology by building a modular structure to the Passive House standard. Passive House buildings typically consume about 80 percent less energy than traditional construction due to an ultra-efficient building envelope that stays cool in summer and warm in winter. This technology becomes much more significant in remote communities like Bella Bella, which burn diesel fuel to generate electricity, producing far more GHG emissions than typical hydro grid-connected communities in B.C.

The project team assembled the modular units in Agassiz, B.C., shipped them by barge 700km up the coast to Bella Bella and finished assembly on site. The project was completed at a cost of $2.6 million – about $500,000 less than it would have cost to construct the development on site (due to the remote location). On the coldest day of the year, each unit in this complex will have a peak heating load of about 600 watts. This means that the entire unit is heated with the equivalent of the heat generated from six 100-watt light bulbs. No additional heating (such as a furnace or boiler) is required. All the air in the building is replaced every

KEY CONDITIONS FOR SUCCESS

- ✓ Leadership commitment
- ✓ Being implementation-ready
- ✓ Investing in knowledge
- ✓ Communication

Bella Bella Passive House

Health Authorities *continued*

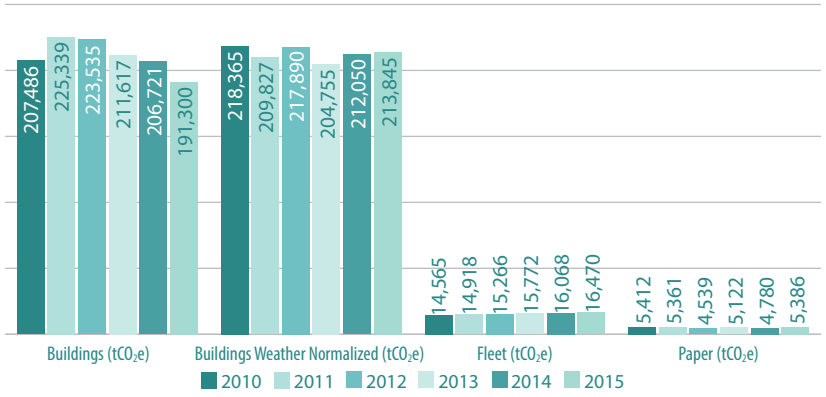
three hours or less, and 92 percent of the heat in that air is recovered and transferred to fresh air. Thanks not only to insulation, but also very careful attention to sealing and ventilation, the heat of the sun – or even the body heat of the people inside – is enough to keep a Passive House comfortable year-round.

This innovative project demonstrates that high quality, energy efficient buildings can be made to work in remote communities, resulting in extremely low energy consumption and much higher building quality than often exists in smaller remote communities. On a long-term basis, this building will use 75 percent less energy and produce 80 percent fewer GHG emissions than a similar sized standard construction building, thereby saving Vancouver Coastal Health significant operational costs for this location.

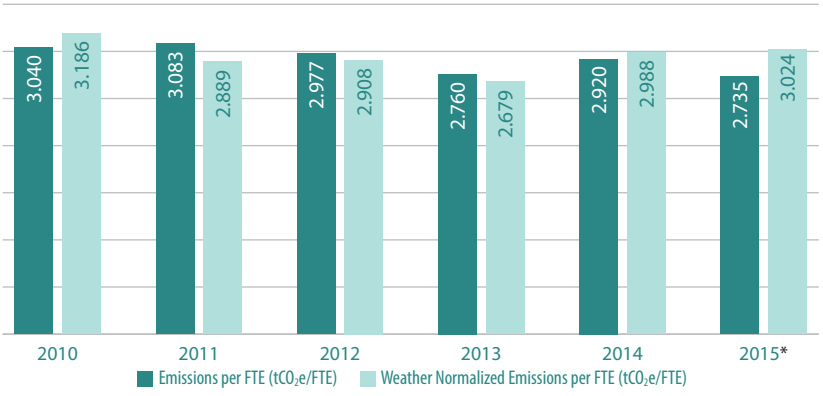
BC Cancer Research Centre

South Cariboo Health Centre

Total Emissions Across Health Authorities 2010–2015



Estimated Health Sector Emissions per Full Time Equivalent Employee (FTE) 2010–2015



* Based on previous years' FTEs.

Crown Corporations

2015 EMISSIONS AT A GLANCE: *B.C.'s Crown Corporations*

- TOTAL GHG EMISSIONS: 150,045 *tonnes CO_2e*
- EMISSIONS THAT DO NOT REQUIRE OFFSETS: 64,283 *tonnes CO_2e*[*]
- TOTAL OFFSETS PURCHASED: 85,762 *tonnes CO_2e*[**]
- OFFSET INVESTMENT: $2,144,050
- TOTAL ENERGY COSTS: $90,000,000

* As per the Carbon Neutral Government Regulation, some of the reported emissions in the total do not require the purchase of offsets in order to reach carbon neutrality. This includes emissions from mobile or stationary combustion of biomass as well as emissions from bus fleets.

** This does not include prior year adjustments.

B.C. Liquor Distribution Branch – Embracing energy efficiency and sustainability

The B.C. Liquor Distribution Branch (LDB) is an example of a public sector organization that has fully embraced sustainability in its day-to-day operations. As an organization that works closely with the beverage alcohol industry, and as a wholesale distributor and retailer with 198 stores across B.C., the LDB is able to have a positive influence on the environment beyond its own operations. By connecting with industry partners, their 4,000-plus employees and millions of B.C. customers, the LDB is able to promote sustainable business practices to a large audience.

In its annual service plan, the LDB committed to reducing the impact of its operations on the environment. This has been achieved through use of equipment and technologies such as:

- Equipment that allows for remote monitoring and control of industrial refrigerators by employees trained in energy efficiency.
- Air curtains over sliding entry doors or entryway vestibules installed at four BC Liquor Store locations. These air curtains and vestibules create a barrier between indoor and outdoor air to improve the efficiency of heating and cooling systems.
- Five renovation and construction projects completed in 2015 that used very efficient LED fixtures for general overhead lighting.

KEY CONDITIONS FOR SUCCESS

- ✓ Leadership commitment
- ✓ Recognizing & celebrating achievements
- ✓ Creating a sustainability culture
- ✓ Harnessing champions
- ✓ Investing in knowledge
- ✓ Communication

The LDB has seen a consistent drop in their emissions over the six years of the Carbon Neutral Government program, with an overall reduction of 20 percent from 2010 to 2015.

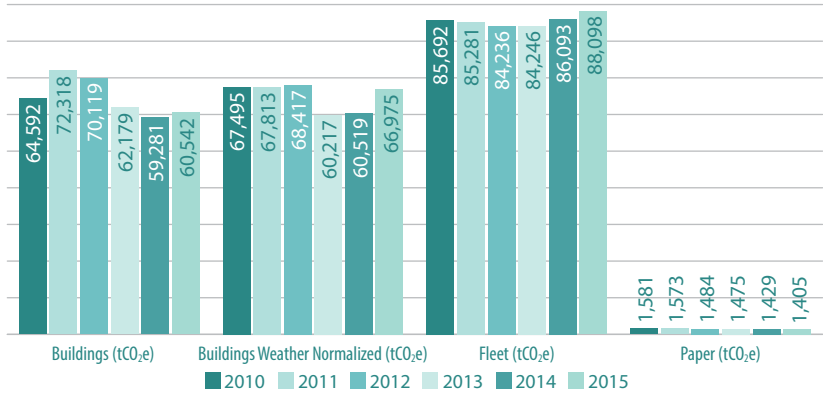
Year	Total Emissions (tCO_2e)
2010	3,875
2015	3,138

In 2014, the LDB executive approved a multi-year waste reduction and recycling strategy and formed a cross-departmental waste reduction team. Through collaborative efforts, the LDB recycled 2,375 tonnes of cardboard, 144 tonnes of plastic and 23 tonnes of mixed paper. The Vancouver distribution centre alone increased the amount of material diverted from the landfill from 79 percent to 85 percent. LDB green team has hosted "lunch and learn" events, tested employees' knowledge about recycling and set up an information booth to help staff plan bike routes for commuting to work.

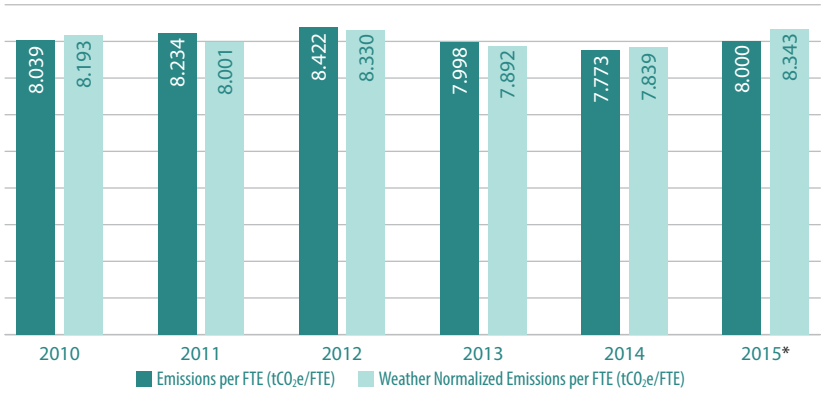
Crown Corporations *continued*

This commitment to sustainability and abundance of team spirit spills over to its customers as well. April 2015 was designated "Earth Month" in all BC Liquor Stores. In-store posters described the environmental efforts made by the LDB and the achievements of its customers. Organic products were also featured throughout the month. These and other customer engagement strategies are working. Over 90 percent of liquor bottles and cans sold in B.C. are returned and reused, and customers have returned over 95 million containers to BC Liquor Stores.

Total Emissions Across Crown Corporations 2010–2015



Emissions Across Crown Corporations per FTE 2010–2015



* Partially based on previous years' FTEs.

Universities and Colleges

2015 EMISSIONS AT A GLANCE: *B.C.'s Universities and Colleges*

- TOTAL GHG EMISSIONS: 141,985 *tonnes CO_2e*[*]
- EMISSIONS THAT DO NOT REQUIRE OFFSETS: 26,643 *tonnes CO_2e*[**]
- TOTAL OFFSETS PURCHASED: 115,342 *tonnes CO_2e*[***]
- OFFSET INVESTMENT: $2,883,550
- TOTAL CARBON NEUTRAL CAPITAL FUNDING DISTRIBUTED: $3,700,000
- TOTAL ENERGY COSTS: $80,000,000

* 2015 emissions for universities and colleges also includes 122 tCO_2e for fugitive emissions, which are not included in the graphs as they are considered an immaterial source of emissions.

** As per the Carbon Neutral Government Regulation, some of the reported emissions in the total do not require the purchase of offsets in order to reach carbon neutrality. This includes emissions from mobile or stationary combustion of biomass as well as emissions from bus fleets.

*** This does not include prior year adjustments.

Capilano University – Excellence in emission reductions

Capilano University's approach to sustainability teaches students to be socially and environmentally responsible citizens by supporting the development of skills and knowledge that have become essential in a rapidly changing and diverse global community. Their approach to sustainability has resulted in a 41 percent reduction in emissions from 2010 to 2015, which is exceptional for the B.C. public sector.

Year	Total Emissions (tCO_2e)
2010	2,172
2015	1,298

Faculty, staff and students are all engaged in this learning process and opportunities to learn about sustainability permeate life at Capilano within curriculum, operations and campus design, as well as day-to-day campus life and extracurricular activities.

In operations, Capilano has completed numerous projects that have increased building energy efficiency and decreased emissions:

Lighting

- Replacement of almost all (~92 percent) linear florescent lighting with LED technology.
- Completion of conversion of pathway lighting to LED.

KEY CONDITIONS FOR SUCCESS

- ✓ Leadership commitment
- ✓ Recognizing & celebrating achievements
- ✓ Creating a sustainability culture
- ✓ Harnessing champions
- ✓ Investing in knowledge
- ✓ Communication

HVAC Optimization

- Completion of continuous optimization heating, ventilation and air conditioning projects in four of their largest buildings (Birch, Arbutus, Library and Fir).
- Direct digital control system upgrades in the Birch, Cedar, Fir and Library buildings, which use real-time data to identify areas of waste.
- Ductwork redesign in the Bosa building.

Heating and Cooling Plant

- Replacement of the library boilers with condensing units, which consume less natural gas.
- Replacement of the domestic hot water system in the Studio Arts building, for greater energy efficiency.
- Replacement of water heaters with condensing systems in the Birch building, which use less natural gas.

Building Envelope

- Reinsulation of the north wall of the library building.

Universities and Colleges *continued*

In addition to building improvements, Capilano set conservation targets that resulted in savings of over 500,000 kWh, 75 percent greater than their expected reductions.

Sustainability & the Curriculum

At Capilano, students not only learn about sustainability through their courses – but also through involvement in campus life. They have an extensive range of ways to get involved, including:

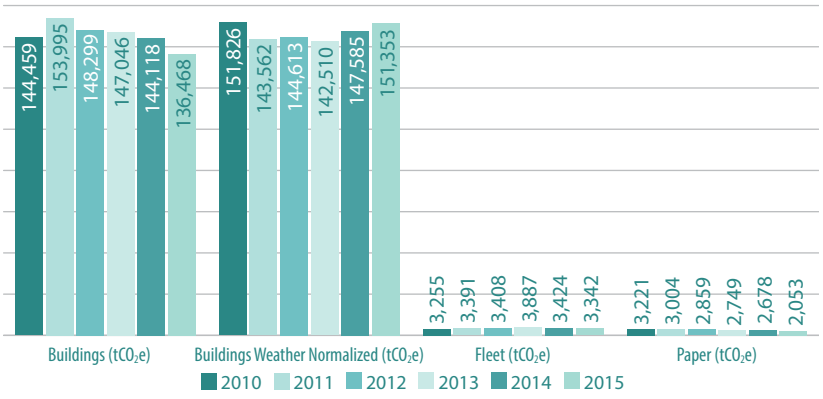
- EarthWorks – A collaboration of students, staff, management and faculty holds a series of extra-curricular environmentally themed lectures and films to educate and inspire change.
- CapU Works – Coordinated by staff but led by a team of student organizers, this action and engagement program focuses on environmental conservation and awareness.
- Campus Waste Audits – Annual audits engage several classes in improving the university's waste diversion program, while offering students the opportunity to combine experiential learning with prescribed academic assignments.
- Core Curriculum – A variety of environmental and social sustainability-focused courses are available in the arts and sciences, business, outdoor tourism and recreation, and community outreach and development programs.

While reducing emissions through improved operations is important to the institution, Capilano believes it can be much more impactful in the service of combatting climate change by building community and educating future citizens, than simply by decreasing their footprint. Capilano has proven they can be successful at both.

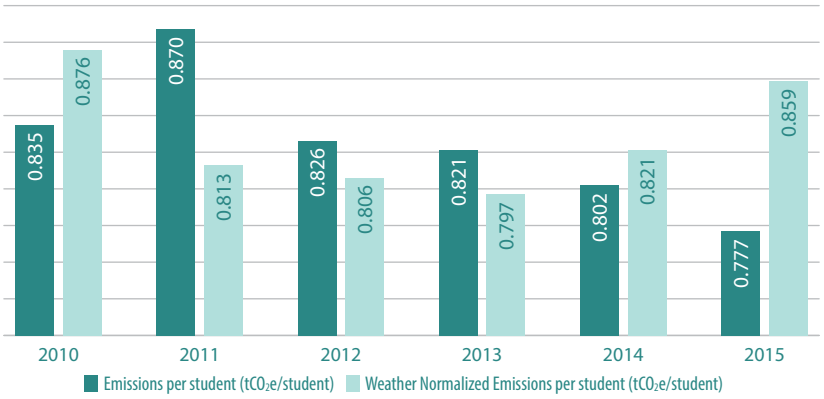
"While we strive for continuous improvement by reducing our carbon footprint, leveling social inequalities and optimizing our resource use, sustainability at Capilano is more than doing the right things well. Sustainability initiatives at Capilano create opportunities for everyone to learn while leading by example."

– Capilano University Carbon Neutral Action Report 2015

Total Emissions Across Universities and Colleges 2010–2015



Emissions Across Universities and Colleges per Student 2010–2015



Core Government

2015 EMISSIONS AT A GLANCE: *Core Government*

- TOTAL GHG EMISSIONS:
  70,806 *tonnes CO_2e*
- EMISSIONS THAT DO NOT REQUIRE OFFSETS:
  867 *tonnes CO_2e**
- TOTAL OFFSETS PURCHASED:
  69,939 *tonnes CO_2e***
- OFFSET INVESTMENT:
  $1,748,475
- TOTAL ENERGY COST:
  $40,000,000

* As per the Carbon Neutral Government Regulation, some of the reported emissions in the total do not require the purchase of offsets in order to reach carbon neutrality. This includes emissions from mobile or stationary combustion of biomass.

** This does not include prior year adjustments.

Shared Services BC – Making energy efficient gains

Shared Services BC (SSBC), a division of the Ministry of Technology, Innovation and Citizens' Services, oversees the management of all government buildings in the province. Altogether, SSBC manages over 18 million square feet of real estate over 1,700 buildings provincewide.

From November 2014 through 2015, a team of technical experts in direct digital controls championed energy efficiency in a number of government buildings. This team provided centralized oversight of building controls, collaborating with operators in the field to continually calibrate and optimize building performance and efficiency. Some of the activities performed by the team include:

- Re-setting and calibration of building heating and cooling systems based on tenant satisfaction surveys and verification and documentation of HVAC zones, which have resulted in more efficient operation of building systems.
- Enabling remote access to building management system information to immediately address temperatures that are too hot or too cold.
- Undertaking a review of building operations with on-site operators to develop strategies for optimization, including:
  - Setting calibration of controls such as outdoor air sensors and dampers, which allow operators to shut off airflow to unoccupied rooms.
  - Summer shutdown, turning off boilers as early as possible in the shoulder season.
  - Adjustment of settings and calibration of equipment to maximize the effectiveness of the HVAC system.

The energy savings and cost reductions have been impressive.

Summary of Results

43	Number of buildings optimized
4,800	Estimated energy savings in Gigajoules
$200,000	Estimated costs savings
8.0%	Average estimated performance improvement per building
500	tCO_2e total reduction

Thanks to internal leadership and champions, and collaboration with technical experts, SSBC has been successful in finding efficiencies and opportunities for energy savings.

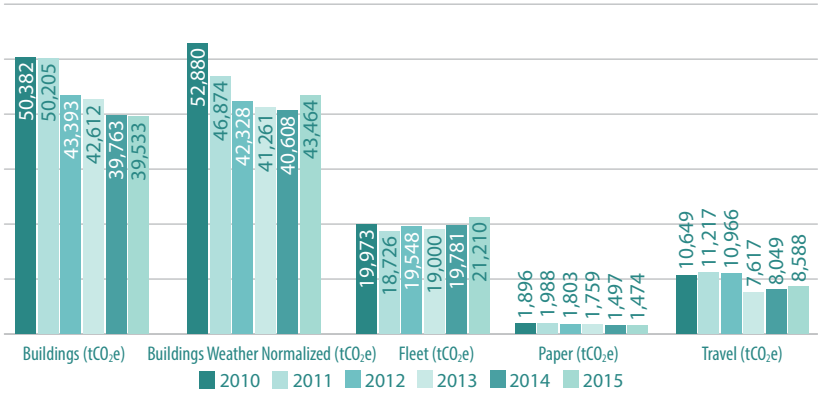
KEY CONDITIONS FOR SUCCESS

- ✓ Leadership commitment
- ✓ Goal setting
- ✓ Harnessing champions
- ✓ Investing in knowledge
- ✓ Communication

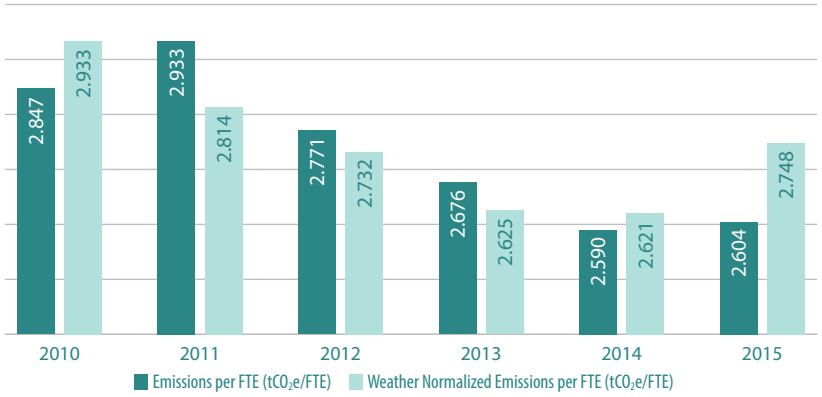
Core Government *continued*

Between 2010 and 2015, SSBC has successfully reduced government building emissions by 18 percent – far beyond their initial goal of one percent per year.

Total Emissions Across Core Government 2010–2015



Emissions Across Core Government per FTE 2010–2015



Prince George Courthouse

Fernie Courthouse

APPENDIX A

2015 Offset Portfolio

THE PROVINCE takes a targeted approach to developing its offset portfolio, ensuring that projects in the portfolio meet one or more of several objectives:

- Acquire lower-cost offsets to effectively manage public resources.
- Address key provincial emission reduction challenges such as natural gas upstream emissions and forest degradation.
- Build capacity for clean community projects.
- Achieve key government objectives, such as advancing clean technology and transforming B.C. to a low-carbon economy.

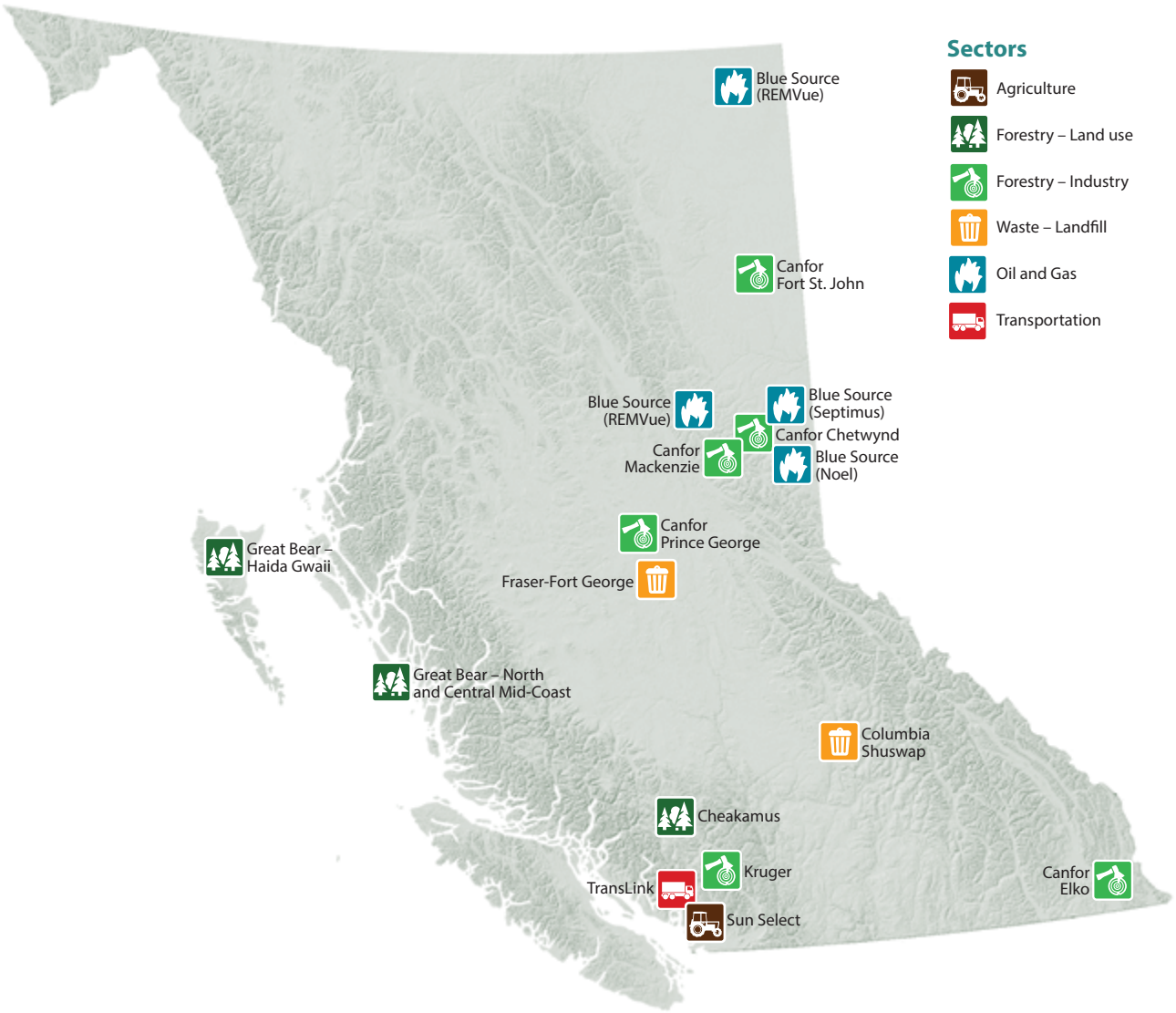
These objectives have been met or exceeded in 2015, with over $7.2 million supporting carbon offset projects that also benefit air quality, ecological integrity, cultural heritage and economic activity.

Some offset projects have been implemented using innovative, B.C.-based clean technologies that would not have been possible without offset revenue. The offsets are purchased through an open government procurement call which balances economic efficiency with other strategic objectives.

Several offset projects in B.C.'s portfolio meet more than one objective:

- Six projects address key provincial reduction challenges.
- Four projects help create green communities through infrastructure improvements.
- All projects align with government goals to transform B.C. to a green economy – such as the #BCTECH Strategy, BC Jobs Plan and the BC Climate Action Plan.
- Three projects directly support B.C.'s clean tech industry.

2015 Offset Project Map



Project List

Thompson Okanagan

- *Landfill Gas Collection, Columbia Shuswap Regional District*

Cariboo

- *Landfill Gas Management, Regional District of Fraser-Fort George*
- *Sawmill Fuel Switch, Canfor Prince George*

Lower Mainland/ Southwest

- *Bus Fuel Efficiency, TransLink*
- *Biomass Fuel Switch, Sun Select Delta*
- *Clean Tech Gasification, Kruger*
- *Improved Forest Management, Cheakamus Community Forest*

North Coast

- *Improved Forest Management, Great Bear – North and Central Mid-Coast*
- *Improved Forest Management, Great Bear – Haida Gwaii*

Northeast

- *Gas Production Electrification, Blue Source (Noel)*
- *Gas Processing Electrification, Blue Source (Septimus)*

Northeast (continued)

- *Engine Fuel Gas Management, Blue Source (REMVue)*
- *Sawmill Fuel Switch, Canfor Chetwynd*
- *Sawmill Fuel Switch, Canfor Mackenzie*
- *Sawmill Fuel Switch, Canfor Fort St. John*

Kootenays

- *Sawmill Fuel Switch, Canfor Elko*

2015 Portfolio of Offset Projects

IN ANY SINGLE YEAR, B.C. has between 14 and 25 projects in its carbon offset portfolio. In total, these projects have resulted in about 4.3 million tonnes CO_2e of emission reductions since 2010. That's the equivalent of taking about 900,000 cars off the road in a year, or not burning 10 million barrels of oil.

Since the inception of B.C.'s carbon neutral commitment, industry has become increasingly aware of the innovative emission reduction opportunities that can be supported through offset revenues. From the first successful projects, organizations across B.C. have benefited from offsets as a way to reduce GHG emissions and advance the commercialization of clean technologies while supporting B.C. jobs. Developers of forest sequestration projects have found in carbon offsets a new mechanism to help protect biodiversity and contribute to the development of a conservation economy in B.C. communities.

Sector: Forest – Industry

Clean Tech Biomass Gasification
Kruger Products/Nexterra, New Westminster

Kruger Products Ltd. installed the Canadian pulp and paper industry's first biomass gasification unit, which decreased the New Westminster tissue mill's carbon emissions by as much as 50 percent annually. Developed by Vancouver's Nexterra Systems Corp, the unit converts local wood waste into clean burning synthesis gas to provide steam for the mill. Use of this renewable resource provides a competitive advantage for the B.C. industry and underscores the province's potential to become a world leader in clean energy.

Price per tonne CO_2e: $15
Total tonnes: 15,671
Total value: $235,065

ADVANCING B.C.'S OBJECTIVES

- ✓ Clean technology
- ✓ Green economy

Photo credit: Nexterra Systems Corp

2015 Portfolio of Offset Projects *continued*

Wood Residuals Fuel Switch
Canfor, Elko, Prince George, Fort St John, Chetwynd, Mackenzie

ADVANCING B.C.'S OBJECTIVES

✓ Green economy

Canfor has installed a technology, developed by B.C.-based DelTech, that distributes heat to dry lumber through a heat energy system fuelled by wood waste from its sawmills. To remove the particulate matter generated through wood combustion, DelTech also supplied Canfor with a sophisticated electrostatic precipitator. There are now five locations that have installed the system. By using the residual wood generated on-site to fuel the new system, transportation-related emissions to truck the residues off site and storage-related emissions to keep residues on site are also reduced. These offset projects are a model for reducing B.C.'s industrial emissions in a way that supports clean, local technologies and creates new economic opportunities for local communities.

Price per tonne CO_2e: $10
Total tonnes: 112,975
Total value: $1,129,750

Sector: Agriculture

Switching to Biomass/Installing Energy Curtains
Sun Select Delta, Delta

ADVANCING B.C.'S OBJECTIVES

✓ Green economy

B.C.'s greenhouse growers grow fresh, pesticide-free vegetables – cucumbers, tomatoes and peppers. Sun Select Delta has taken additional steps to reduce their greenhouse gas emissions. Sun Select Delta installed a biomass boiler and insulating curtains to help heat their greenhouses, to significantly reduce their dependence on natural gas. The project uses an innovative scrubbing technology that upgrades CO_2 from combustion of biomass to foodgrade quality and pumps it back into the greenhouses. This technology was developed and built in the Lower Mainland by ProSelect Gas Treating Inc.

Price per tonne CO_2e: $11
Total tonnes: 11,763
Total value: $129,393

2015 Portfolio of Offset Projects *continued*

Sector: Waste – Landfill

Landfill Gas Collection
Columbia Shuswap Regional District, Salmon Arm

The Columbia Shuswap Regional District (CSRD) created an offset project in 2010 to capture and destroy methane (natural gas) produced from decomposing organic waste in the landfill. They then partnered with FortisBC who upgrades the gas in order to inject it into their gas pipeline. The CSRD also collects the rainwater that percolates through the landfill to irrigate poplar trees on the site. This award-winning project captures and converts enough energy to heat over 300 homes.

Price per tonne CO_2e: $13
Total tonnes: 6,643
Total value: $86,359

ADVANCING B.C.'S OBJECTIVES

✓ Green communities

✓ Green economy

Photo credit: FortisBC

Photo credit: FortisBC

Landfill Gas Management
Regional District of Fraser-Fort George, Prince George

The Regional District of Fraser-Fort George implemented a landfill gas capture project at the Foothills Boulevard Regional Landfill in Prince George to reduce GHG emissions from waste decomposition. First, landfill gas is collected through 24 vertical and 3 horizontal gas wells to prevent methane – a powerful greenhouse gas that is 25 times more potent than carbon dioxide – from escaping into the atmosphere. Then, the collected gas is transported through 2,100 meters of piping to be burned in an enclosed flare. Flaring at 800 – 1,000 degrees Celsius turns methane into CO_2, reducing 25,000 to 30,500 tonnes of CO_2 equivalent per year.

Price per tonne CO_2e: $12.50
Total tonnes: 30,594
Total value: $382,425

ADVANCING B.C.'S OBJECTIVES

✓ Green communities

✓ Green economy

Photo credit: Regional District of Fraser-Fort George

2015 Portfolio of Offset Projects *continued*

Sector: Forestry – Land use

Forest Conservation/Improved Forest Management
Cheakamus Community Forest, Whistler

The Cheakamus Community Forest Carbon Project is situated on a 33,018 hectare community forest tenure close to Whistler, on the traditional territories of the Squamish and Lil'wat Nations – a landscape enjoyed by millions of locals, British Columbians and international visitors each year. The project retains more carbon in the forests by increasing protected areas and using lower impact harvest techniques. Carbon offsets enable implementation of an ecosystem based management plan, overcoming barriers to environmental and economic sustainability. The project ensures long-term forestry jobs while bolstering additional uses of the forest alongside harvest – such as tourism, traditional practices, and protected habitats for important species.

Price per tonne CO_2e: $14
Total tonnes: 21,247
Total value: $297,458

ADVANCING B.C.'S OBJECTIVES

✓ Reduction challenges

✓ Green economy

Photo credit: Joseph Pallant

Forest Conservation/Improved Forest Management
Great Bear Rainforest, North and Central Mid-Coast

This project reduces timber harvest levels and protects forests in B.C.'s magnificent Great Bear Rainforest, renowned for its immense, ancient stands of trees – a result of significant effort and collaboration by local First Nation communities and the B.C. government. This not only protects existing carbon stocks, but also reduces emissions from harvesting, road building and other operations. Protecting regional ecosystems and important cultural heritage values are additional project objectives. Revenues from this project contribute directly to the development of a conservation economy in the area, co-managed by the Province and local First Nations.

Price per tonne CO_2e: $9–$12
Total tonnes: 90,897
Total value: $1,059,243

ADVANCING B.C.'S OBJECTIVES

✓ Reduction challenges

✓ Green economy

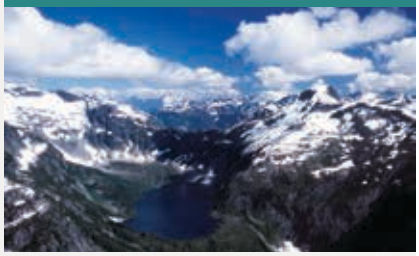


Photo credit: www.naturallywood.com

2015 Portfolio of Offset Projects *continued*

Forest Conservation/Improved Forest Management
Great Bear Rainforest, Haida Gwaii

The Great Bear (Haida Gwaii) Forest Carbon Project reduces timber harvest levels, converting forests that were previously available for logging to protected forests – a result of significant effort and collaboration by local First Nation communities and the B.C. government. The project sequesters more carbon, protects healthy ecosystems and supports important Haida cultural sites. Revenues from this project contribute directly to the development of a conservation economy in the area, co-managed by the Province and local First Nations.

Price per tonne CO_2e: $12
Total tonnes: 258,747
Total value: $3,104,964

ADVANCING B.C.'S OBJECTIVES

- ✓ Reduction challenges
- ✓ Green economy

Sector: Transportation

Bus Fuel Efficiency Project
TransLink, Metro Vancouver

The TransLink Low Carbon Vehicle Offset Project is a fuel efficiency project in the public transit sector. The project replaced conventional diesel buses with more fuel efficient diesel hybrid buses. As transportation accounts for the largest share of GHG emissions in B.C., encouraging the use of fuel efficient vehicles is good for the environment, transit users and the taxpayers who fund public transit.

Price per tonne CO_2e: $13
Total tonnes: 4,481
Total value: $58,253

ADVANCING B.C.'S OBJECTIVES

- ✓ Clean technology
- ✓ Green communities
- ✓ Green economy

2015 Portfolio of Offset Projects *continued*

Sector: Oil and Gas

Engine Fuel Gas Management
BlueSource, Northeastern BC

REM Technology Inc. is helping the natural gas industry lower its emissions through the use of two innovative new technologies called REMVue® AFR and SlipStream®. The REMVue® AFR is an engine management system used to control natural gas engines that compress natural gas from well-sites to processing plants. The system enables these engines to run more efficiently and reliably, while lowering the emissions created in the process. SlipStream® is designed to capture vented hydrocarbons like methane, and utilize them as fuel, either for a natural gas engine or process burner. Not only does this technology significantly reduce greenhouse gases, it reduces fuel costs for the engine or burner by up to 50 percent. B.C.'s provincial offset standards and carbon pricing are helping drive these innovative offset projects.

Price per tonne CO_2e: $11
Total tonnes: 6,347
Total value: $69,817

ADVANCING B.C.'S OBJECTIVES

- ✓ Clean technology
- ✓ Reduction challenges
- ✓ Green economy

Electrification of Gas Processing Plant
BlueSource, Taylor

The Septimus Electrification Project reduces GHG emissions by using grid electricity instead of natural gas to power compressors and other equipment at the Septimus Gas Processing Plant. The project was part of a new build construction and involved the entire facility. It involved the construction of 19.4 km of transmission lines, a new substation and other infrastructure to connect to the BC Hydro grid. As electricity in B.C. has a much lower GHG intensity than natural gas combustion, this project has significantly reduced GHG emissions.

Price per tonne CO_2e: $10
Total tonnes: 33,586
Total value: $335,860

ADVANCING B.C.'S OBJECTIVES

- ✓ Reduction challenges
- ✓ Green economy

2015 Portfolio of Offset Projects *continued*

Electrification of Gas Production Plant
BlueSource, Dawson Creek

The Noel Electrification Project reduces GHG emissions by using grid electricity instead of natural gas to power compressors and other equipment at the Noel gas production facilities. The project involved significant effort and expense to construct the electricity transmission infrastructure that allowed the facilities to connect to the BC Hydro grid. Once linked into the grid, electric-drive equipment was installed to replace conventional natural gas powered equipment. As electricity in B.C. has a much lower GHG intensity than natural gas combustion, this project has significantly reduced GHG emissions.

Price per tonne CO_2e: $10
Total tonnes: 18,512
Total value: $185,120

ADVANCING B.C.'S OBJECTIVES

- ✓ Reduction challenges
- ✓ Green economy

Appendix B:

2015 B.C. PUBLIC SECTOR GREENHOUSE GAS EMISSIONS AND OFFSET INVESTMENTS

The total emissions reported meet the reporting requirements set by the Carbon Neutral Government Regulation of the *Greenhouse Gas Reduction Targets Act*. As per the regulation, some of the reported emissions in the total do not require the purchase of offsets in order to reach carbon neutrality. This includes emissions from bus fleets (e.g. school buses and BC Transit buses) as well as emissions from mobile or stationary combustion of biomass or biofuels. The total offsets purchased matches the emissions requiring offsets. For information on how the B.C. public sector measures emissions, please visit the 2014/15 B.C. Best Practices Methodology for Quantifying Greenhouse Gas Emissions.

ORGANIZATION	Total Emissions (tCO_2e)	Total Offsets Purchased (tCO_2e)	Offset Investment
PUBLIC SECTOR TOTAL	738,697	624,585	$15,614,625**
CORE GOVERNMENT TOTAL	70,806	69,939	$1,748,475**
CROWN CORPORATIONS TOTAL	150,045	85,762	$2,144,050
BC Assessment Authority	368	364	$9,100
BC Council for International Education	7	7	$175
BC Games Society	3	3	$75
BC Housing Management Commission	24,766	24,752	$618,800
BC Hydro	28,053	27,277	$681,925
BC Innovation Council	2	2	$50
BC Liquor Distribution Branch	3,138	3,116	$77,900
BC Lottery Corporation	906	905	$22,625
BC Pavilion Corporation	3,345	3,344	$83,600
BC Transit	64,582	1,148	$28,700
British Columbia Securities Commission	219	219	$5,475
Columbia Basin Trust	16	16	$400
Columbia Power Corporation	27	26	$650
Community Living British Columbia	503	500	$12,500
Destination BC	124	124	$3,100
First Peoples' Heritage, Language & Culture Council	2	2	$50
Forestry Innovation Investment	240	240	$6,000
Industry Training Authority	43	43	$1,075
Insurance Corporation of BC	22,988	22,972	$574,300
Knowledge Network Corporation	104	104	$2,600
Legal Services Society	38	38	$950
Oil and Gas Commission	410	401	$10,025
Partnerships BC	4	4	$100
Private Career Training Institutions Agency	3	3	$75
Royal BC Museum	76	75	$1,875
Transportation Investment Corporation	79	79	$1,975
HEALTH AUTHORITY TOTAL	213,156	211,673	$5,291,825
BC Emergency Health Services	14,671	14,210	$355,250
Fraser Health Authority	36,403	36,384	$909,600
Interior Health Authority	40,061	39,994	$999,850
Louis Brier Home & Hospital	597	597	$14,925
Menno Hospital	479	478	$11,950
Mount St. Mary Hospital	335	335	$8,375
Nisga'a Valley Health Authority	309	305	$7,625
Northern Health Authority	21,876	21,845	$546,125
Providence Health Care	10,682	10,677	$266,925
Provincial Health Services Authority	17,467	17,458	$436,450
St. Joseph's General Hospital	1,209	1,207	$30,175
St. Michael's Centre	652	652	$16,300
Vancouver Coastal Health Authority	39,503	39,484	$987,100
Vancouver Island Health Authority	28,879	28,015	$700,375
Wrinch Memorial Hospital	31	31	$775
UNIVERSITIES AND COLLEGES TOTAL	141,985	115,342	$2,883,550
British Columbia Institute of Technology	7,762	7,759	$193,975
Camosun College	1,608	1,607	$40,175
Capilano University	1,298	1,296	$32,400
College of New Caledonia	3,346	3,344	$83,600
College of the Rockies	697	687	$17,175
Douglas College	1,590	1,590	$39,750
Emily Carr University of Art and Design	695	695	$17,375
Justice Institute of BC	574	571	$14,275
Kwantlen Polytechnic University	2,199	2,199	$54,975
Langara College	1,189	1,189	$29,725
Nicola Valley Institute of Technology	316	315	$7,875
North Island College	799	799	$19,975
Northern Lights College	1,246	1,243	$31,075
Northwest Community College	1,463	1,451	$36,275
Okanagan College	1,688	1,686	$42,150
Royal Roads University	1,032	1,030	$25,750
Selkirk College	990	989	$24,725

ORGANIZATION	Total Emissions (tCO_2e)	Total Offsets Purchased (tCO_2e)	Offset Investment
Simon Fraser University	14,284	14,275	$356,875
Thompson Rivers University	3,384	3,375	$84,375
University of British Columbia - Total	69,197	50,039	$1,250,975
University of Northern British Columbia	8,952	1,583	$39,575
University of the Fraser Valley	2,169	2,168	$54,200
University of Victoria	10,706	10,694	$267,350
Vancouver Community College	2,041	2,041	$51,025
Vancouver Island University	2,761	2,720	$68,000
SCHOOL DISTRICTS TOTAL	162,705	141,869	$3,546,725
School District 05 - Southeast Kootenay	2,832	2,236	$55,900
School District 06 - Rocky Mountain	1,898	1,330	$33,250
School District 08 - Kootenay Lake	2,818	1,907	$47,675
School District 10 - Arrow Lakes (Nakusp)	354	247	$6,175
School District 19 - Revelstoke	327	253	$6,325
School District 20 - Kootenay-Columbia	1,741	1,475	$36,875
School District 22 - Vernon	1,786	1,786	$44,650
School District 23 - Central Okanagan (Kelowna)	4,966	3,977	$99,425
School District 27 - Cariboo-Chilcotin	4,511	3,146	$78,650
School District 28 - Quesnel School	1,848	1,162	$29,050
School District 33 - Chilliwack	3,047	2,243	$56,075
School District 34 - Abbotsford	4,012	2,983	$74,575
School District 35 - Langley	5,596	5,080	$127,000
School District 36 - Surrey	15,766	15,550	$388,750
School District 37 - Delta	2,249	2,176	$54,400
School District 38 - Richmond	5,158	4,922	$123,050
School District 39 - Vancouver	14,501	14,478	$361,950
School District 40 - New Westminster	1,606	1,604	$40,100
School District 41 - Burnaby	4,610	4,602	$115,050
School District 42 - Maple Ridge	3,287	3,281	$82,025
School District 43 - Coquitlam	7,447	7,417	$185,425
School District 44 - North Vancouver	3,514	3,459	$86,475
School District 45 - West Vancouver	1,285	1,282	$32,050
School District 46 - Sunshine Coast	850	846	$21,150
School District 47 - Powell River	1,223	1,033	$25,825
School District 48 - Sea to Sky	1,707	1,316	$32,900
School District 49 - Central Coast	314	288	$7,200
School District 50 - Haida Gwaii	585	577	$14,425
School District 51 - Boundary	873	626	$15,650
School District 52 - Prince Rupert	823	802	$20,050
School District 53 - Okanagan Similkameen	827	620	$15,500
School District 54 - Bulkley Valley	1,133	761	$19,025
School District 57 - Prince George	5,220	5,207	$130,175
School District 58 - Nicola-Similkameen	1,025	827	$20,675
School District 59 - Peace River South (Dawson Creek)	3,450	2,261	$56,525
School District 60 - Peace River North (Fort St. John)	4,162	3,088	$77,200
School District 61 - Greater Victoria	4,823	4,804	$120,100
School District 62 - Sooke	2,403	1,859	$46,475
School District 63 - Saanich	1,676	1,292	$32,300
School District 64 - Gulf Islands	309	175	$4,375
School District 67 - Okanagan Skaha (Penticton)	1,570	1,491	$37,275
School District 68 - Nanaimo-Ladysmith	3,880	3,033	$75,825
School District 69 - Qualicum	1,876	1,406	$35,150
School District 70 - Alberni	955	847	$21,175
School District 71 - Comox Valley	1,981	1,975	$49,375
School District 72 - Campbell River	2,314	1,945	$48,625
School District 73 - Kamloops / Thompson	5,464	3,853	$96,325
School District 74 - Gold Trail	1,013	608	$15,200
School District 75 - Mission	1,837	1,523	$38,075
School District 78 - Fraser-Cascade	870	688	$17,200
School District 79 - Cowichan Valley	1,870	1,370	$34,250
School District 81 - Fort Nelson	574	567	$14,175
School District 82 - Coast Mountains	2,113	2,096	$52,400
School District 83 - North Okanagan-Shuswap	2,880	1,872	$46,800
School District 84 - Vancouver Island West	176	148	$3,700
School District 85 - Vancouver Island North	637	496	$12,400
School District 87 - Stikine	351	350	$8,750
School District 91 - Nechako Lakes	3,022	1,998	$49,950
School District 92 - Nisga'a	225	89	$2,225
School District 93 - Conseil Francophone	2,537	2,537	$63,425

** PLEASE NOTE that individual tonnes and dollar values are rounded to the nearest whole numbers, therefore individual numbers may not equal total values.

** PLEASE NOTE that due to routine adjustments to prior year emissions, an additional 459 tonnes CO_2e worth of emissions were offset to ensure that all public sector organization emissions were accounted for. A total of 625,044 tonnes CO_2e were offset.

ADDITIONAL IMPORTANT NOTE ON ROUNDING – Due to rounding, numbers presented throughout this appendix may not add up precisely to the sectoral totals provided. Public sector organizations offset investments are against their rounded total offsettable emissions. Sectoral totals represent the totals of the non-rounded numbers in SMARTTool. E.g. the School District total for offsettable emissions is 141,869 tonnes. This value represents all of the incremental fractions of offsettable emissions in the total. If all of the individual school district offsettable emission values were added, they would total 141,870 tonnes. This represents the summation of all the rounded offsettable emission values.

Notes

Notes

Back cover photo credit: Northern Lights College

Energy House at Northern Lights College, Dawson Creek

BRITISH COLUMBIA | Ministry of Environment