

BC Housing 2014 Carbon Neutral Action Report



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Photos from cover:

Christine Lamb Residence in Abbotsford.
Sorella Housing for women in Vancouver.
Pacific Coast Apartments in Vancouver.

Declaration Statement

This *Carbon Neutral Action Report* for the period January 1st to December 31st, 2014 summarizes our emissions profile, the amount of offsets purchased to reach net zero emissions, the actions we have taken in 2014 to reduce our greenhouse gas emissions and our plans to continue reducing emissions in 2015 and beyond.

By June 30 BC Housing's final Carbon Neutral Action Report will be posted to our website.

Executive Summary

BC Housing develops, manages and administers a wide range of subsidized housing options across the province. We partner with public and private housing providers, local government and community agencies to create the best system of housing and supports for those in greatest need. In 2010, our mandate grew to include the Homeowner Protection Office (HPO) that administers licensing of residential builders, home warranty insurance, and research and education to improve the quality of residential construction and consumer protection for buyers on new homes.

Sustainability continues to be at the core of our social housing and homeowner protection mandate and a key component of our business strategy. Our largest source of greenhouse gas (GHG) emissions is from social housing sites owned or managed by BC Housing across the province.

We recognize that basic daily needs such as heating and electricity are the major contributing factors to our GHG emissions. Our initiatives over the past year coupled with previous years' efforts have resulted in a 26 per cent decrease in GHG emissions in 2014 compared to our 2005 baseline.

As outlined in our current Service Plan and *livegreen* Housing Sustainability Plan – leadership in sustainability and residential construction is one of our four strategic priorities shaping our sustainability efforts. Our commitment to reducing GHG emissions is evident with the implementation of new energy and sustainability design and construction standards for all new social housing projects. We also strive to build to LEED standards and design projects that meet our High Performance Greenhouse Gas Neutral Strategy.

BC Housing has an active *livegreen* Employee Council that encourages staff to be more sustainable at work, home and in their communities. Every action, no matter how small, helps to reduce GHG emissions. Our employees use alternative transportation for business meetings, use carpool and/or transit to commute to work, and have reduced their paper consumption.

We will continue our efforts to reduce our carbon footprint. In 2015 and beyond we aim to promote and raise participation in our energy efficiency programs and work alongside our housing partners to increase awareness about energy conservation.



Shayne Ramsay
Chief Executive Officer
BC Housing

May 15, 2015

2014 Greenhouse Gas Emissions and Offsets Overview

BC HOUSING'S GHG EMISSIONS AND OFFSETS FOR 2014 (TCO₂E)

GHG EMISSIONS CREATED IN CALENDAR YEAR 2014	
Total Emissions (TCO ₂ E)	21,942
Total Offsets (TCO ₂ E)	21,928
ADJUSTMENTS TO GHG EMISSIONS REPORTED IN PRIOR YEARS	
Total Emissions (TCO ₂ E)	108
Total Offsets (TCO ₂ E)	116
TOTAL EMISSIONS FOR OFFSET FOR THE 2014 REPORTING YEAR	
Total Offsets (TCO ₂ E)	22,044

ADJUSTMENTS TO TOTAL EMISSIONS REPORTED IN PRIOR YEARS

We reported 23,172 tonnes of CO₂e emissions in 2013. Following the release of BC Housing's 2013 Carbon Neutral Action Report, it was determined that the total emissions for the previous years were under reported by 108 tonnes and that the required offsets were under reported by 116 tonnes. The difference in required offsets has been purchased and applied against our 2014 emissions.

TOTAL EMISSIONS FOR OFFSETS FOR THE 2014 REPORTING YEAR

BC Housing purchased carbon offsets from the Government of B.C. for the equivalent of 22,044 tonnes of CO₂e to obtain carbon neutral status for 2014.

Thirteen tonnes of CO₂e emissions from the combustion of biomass and biomass-based fuels were reported as part of our greenhouse gas emissions profile in 2014. However, while CO₂e emissions from these sources must be reported, they do not require offsets.

Actions Taken to Reduce Greenhouse Gas Emissions in 2014

BUILDINGS

BC Housing's property portfolio includes 562 social housing sites located across the province with more than one million square meters of floor area. Some of the buildings are directly managed, while others are operated by non-profit societies. In 2014, nine housing sites were added to BC Housing's property portfolio through new construction and the purchase of new buildings, and five sites were divested.

GHG RESULTS FOR BUILDINGS

In 2014, our GHG emissions related to energy used to heat, provide water and electricity for our buildings totaled 21,623 tonnes of CO₂ equivalent¹. Since 2005, we have seen a 26 per cent decrease in emissions from our buildings and a six percent decrease from 2013².

2014 BUILDINGS GHG EMISSIONS COMPARED TO 2005 BASELINE AND 2013 RESULTS

Emission Source	2014 GHG Emissions (Tonnes of CO ₂ e)	2014 Results Compared to 2005 Baseline	2014 Results Compared to 2013
Buildings (Stationery Combustion)	21,623	26% Decrease	6% Decrease

These results are based on absolute emissions and do not factor in weather conditions. Based on additional analysis, it was determined that the year to year reductions can be mainly attributed to warmer weather in 2014 compared to 2013. Warmer weather is linked to less use of gas for heating and therefore lower GHGs. The comparison with our 2005 baseline has not been affected in a significant way by the difference in weather, and is a result of our energy conservation and reduction efforts described in the following section of this report.

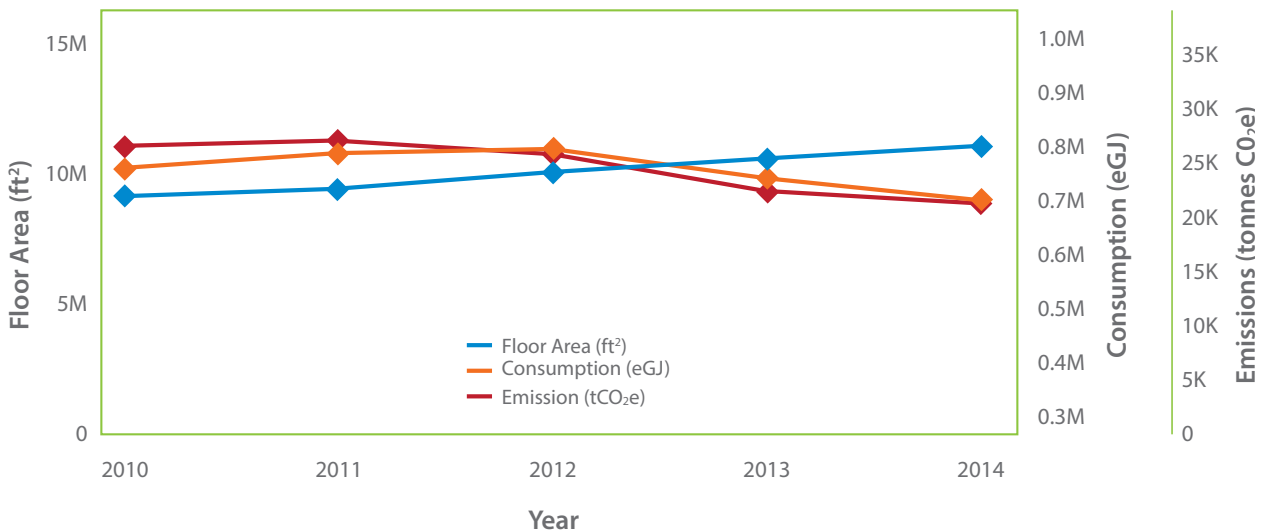
Actions taken resulted not only in lower energy consumption and GHG emissions, but also in a significant overall increase in energy efficiency across the building portfolio. The graph below shows how over the last few years our total floor area has increased, while at the same time our total energy consumption and related emissions has decreased.

¹ Stationary fugitive emissions from air conditioning at BC Housing's offices do not comprise more than 0.01 per cent of total emissions and have been deemed out of scope and are not included in the total GHG profile.

² Due to a change in energy data collection methodology this year implemented by one of the major utility companies, we are not able to conduct more detailed analysis of energy consumption and related GHG emissions as we have done in previous years.

Actions Taken to Reduce Greenhouse Gas Emissions in 2014 *(continued)*

BC HOUSING – FLOOR AREA, CONSUMPTION AND EMISSIONS CHANGE (2010 – 2014)



While our total floor area increased by 16 per cent, our energy consumption decreased by seven per cent, and GHG emissions have decreased by 19 per cent since 2010.

ACTIONS TAKEN IN 2014

The GHG emission reductions and increases in energy efficiency in our building portfolio can be attributed to a number of initiatives taken in the following areas: energy conservation and retrofit programs for older buildings, increased efficiency of new construction, adoption of new standards and development of new tools and resources, training and education for our staff, partners and the building construction sector. Specific actions taken within each of these areas are described below.

ENERGY CONSERVATION INITIATIVES FOR BUILDINGS

- Through the Energy Efficiency Retrofit Program, a substantial effort was made to replace windows, upgrade heating and lighting systems, as well as replacing old appliances with new energy efficient models at close to 100 building sites. The program has been expanded in partnership with BC Non-Profit Housing Association, BC Hydro and Fortis BC to help non-profit housing providers make energy upgrades to enhance tenant comfort and safety, realize energy savings, and reduce greenhouse gas emissions. It builds on the BC Hydro Power Smart Partner Express and Fortis BC efficient boiler programs and provides funds to enable housing providers to complete small scale energy retrofits on items such as light fixtures and boilers. Last year the program led to approximately 1.1 GWh in electrical and 7,000 GJ savings.

Actions Taken to Reduce Greenhouse Gas Emissions in 2014 *(continued)*

- Replaced inefficient boilers with high performance ones in collaboration with Fortis BC's energy efficiency incentive programs. It is estimated that last year we saved 167 tonnes of greenhouse gas emissions on BC Housing sites, and 475 tonnes of emissions on sites operated by our non-profit housing partners.
- Under the SRO Renewal Initiative we are renovating 13 provincially owned single room occupancy hotels in Vancouver. Three buildings were completed last year. This included the replacement and renewal of building systems (i.e. heat and ventilations systems), installation of energy efficient boilers, windows and insulation. This initiative is expected to contribute to our GHG reduction targets in the years ahead.
- Continued to implement the Energy Conservation Assistance Program with BC Hydro and Fortis BC for all group homes across the province. Group homes account for only four per cent of the building portfolio but create eight per cent of our overall GHG emissions. Through this program approximately 1,200 GJ were saved.

ENERGY STANDARDS AND TOOLS

- Continued to participate in BC Hydro's new construction ENERGY STAR appliance program that promotes energy savings through the incentivized purchase of ENERGY STAR-rated refrigerators, dishwashers, exhaust fans, lights and clothes washers.
- Distributed guidelines to staff for renovation and HVAC upgrade projects to improve energy performance and reduce GHGs.
- Developed and distributed tools to make the purchase and maintenance of the most widely used appliances and equipment more cost effective and easier by providing specification documents with links to make and model information based on ENERGY STAR, Fortis BC and NRCan ratings.

ENERGY CONSERVATION TRAINING AND EDUCATION

- Provided ongoing support to encourage BC Housing's building managers and site staff to play a leadership role in creating and enhancing a culture of energy conservation among staff and tenants.
- Continued the development of the Building Operations Training program for public and non-profit housing providers jointly with the BC Non-Profit Housing Association. The work included developing a program that fosters an energy management culture among building operations staff, builds capacity, enhances energy and greenhouse gas savings, and promotes tenant engagement.

Actions Taken to Reduce Greenhouse Gas Emissions in 2014 *(continued)*

- The Homeowner Protection Office delivered two Building Smart seminars, “*New Energy Provisions in the BC Building Code*” and “*Soils, Excavation & Below Grade Assemblies*” in over 21 communities with more than 1,200 in attendance.
- Incorporated a focus on energy conservation and other sustainability related initiatives in our new community development framework, as well as some of our key partnership contracts for service providers working with our tenants.
- Developed guidelines for non-profit housing providers undertaking new construction projects that are not required to pursue a LEED standard. These include tools and resources for non-profit housing societies to ensure efficient operations and maintenance procedures to optimize GHG savings throughout the building’s lifetime.

NEW CONSTRUCTION

- In the last several years BC Housing has adopted high environmental and energy performance standards for building construction, such as Optimized Energy Performance points for the LEED rating systems for large buildings, EnerGuide 82 for small buildings, and caps on maximum energy use from fossil fuels.
- To date, BC Housing and its non-profit housing partners have over 50 buildings registered with the Canadian Green Building Council and 26 have received certification.

Certified in 2014 (BC Housing owned or leased):

1. Sorella, Vancouver (LEED Gold)
2. Pacific Coast Apartments, Vancouver (LEED Gold)
3. Quibble Creek & Phoenix Transition House Centre, Surrey (LEED Gold)

Certified in 2014 (owned or leased by non-profit housing partners):

1. Marguerite Ford Apartments, Vancouver (LEED Gold)
2. Driver House, Dawson Creek (LEED Gold)
3. Christine Lamb Residences, Abbotsford (LEED Gold)

ACTIVITIES IN THE RESIDENTIAL CONSTRUCTION SECTOR

- The HPO provides information about energy programs, green building rating systems and assessment tools to reduce energy consumption and impacts on the environment for residential builders.
- In partnership with the Building and Safety Standards Branch, the HPO developed three illustrated guides to assist residential builders and industry stakeholders in understanding the new BC Building Code energy efficiency requirements for housing and small buildings.
- The HPO collaborated with BC Hydro and other organizations to produce a Building Envelope Thermal Bridging Guide to help industry address the impact of thermal bridging to reduce energy use.
- The HPO launched its new Building Excellence Research & Education Grants program designed to encourage research and education to improve the quality of residential construction. The program fosters projects that will help improve the durability and sustainability of housing in B.C.

Fleet

In 2014, BC Housing had 52 fleet vehicles, most of which are trucks and vans used by grounds and building maintenance staff. Office pool vehicles include Smart Cars and hybrid vehicles. Whenever possible, new vehicles added to the fleet are fuel efficient. Last year 23 per cent of our fleet vehicles were fuel efficient.

GHG RESULTS FOR FLEET

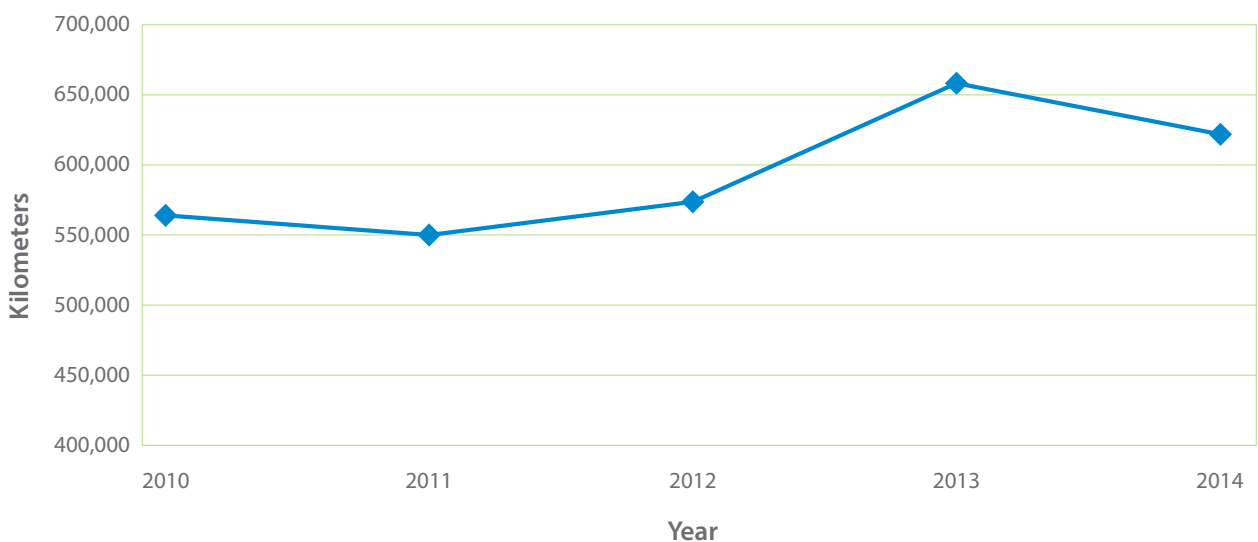
In 2014 our total GHG emissions for fleet were 296 tonnes.

We are not able to directly compare GHG emissions in 2014 against a 2010 baseline due to changes in methodology between 2012 and 2014. A partnership with a fleet vehicle management organization in 2013 allowed for more accurate reporting of fuel consumption; however, services were discontinued in 2014.

For the 2014 reporting year, fuel consumption and GHG emissions were estimated using fuel consumption data from 2013 and distances travelled in 2014. Due to the nature of the BC Housing fleet and the weight of the equipment that the maintenance vehicles carry, it is estimated that using standard fuel efficiency factors resulted in previous underreporting of fuel usage by 30 per cent for some vehicles.

The reported increase in 2014 fleet emissions was due to the addition of nine new vehicles since 2010, an increase in distance travelled, and the addition of mobile bed bug heat treatment trailers.

KILOMETERS DRIVEN BY BC HOUSING FLEET, 2010 – 2014



Fleet *(continued)*

ACTIONS TAKEN IN 2014

- The Lower Mainland grounds and maintenance fleet continued to use a GPS fleet tracking system to reduce fleet mileage. This allowed fleet managers to reduce kilometers driven by allocating resources more efficiently.
- The fuel intensive mobile bed bug treatment trailers were used less extensively in 2014 in preference to other methods of pest control.
- Fleet mileage was reduced by approximately 36,000 kilometers between 2013 and 2014, due in part to reduced vehicle usage at an office location that closed in March 2014.

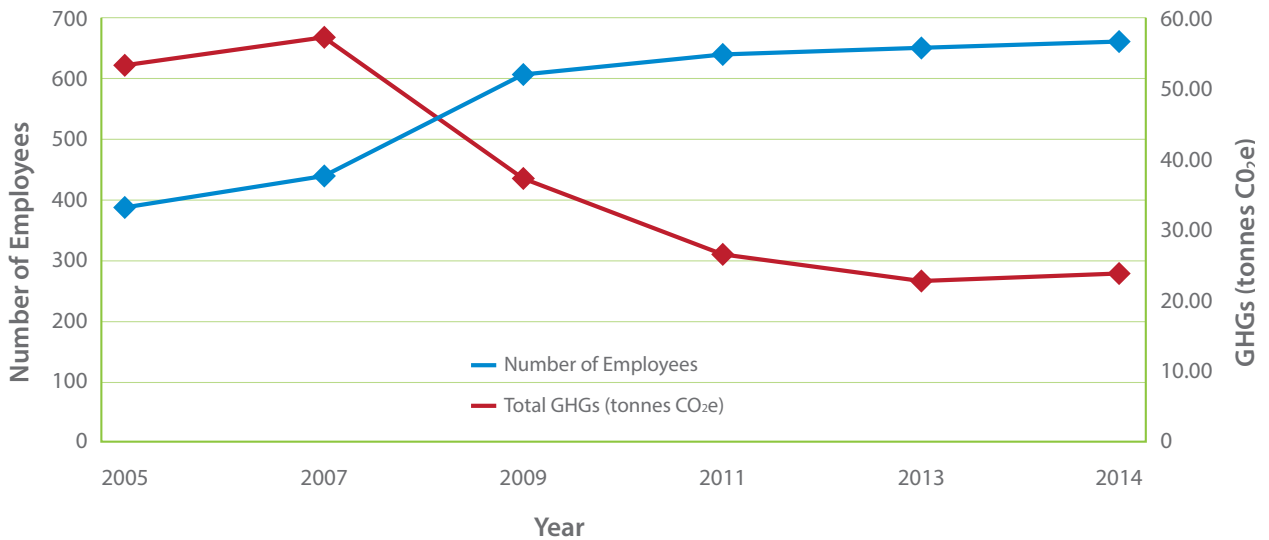
Paper

Our 2014 GHG emissions for office paper were 23 tonnes. Since 2005, we have seen a 58 per cent decrease in our paper consumption that can be largely attributed to promoting a paperless organizational culture, and changes to our procurement practices.

Paper	2014 GHG Emissions (Tonnes of CO ₂ e)	Change in Absolute GHG Emissions in 2014 (against 2005 baseline)	Change in Absolute GHG Emissions in 2014 against 2013	Change in GHG Emissions in 2014 (against 2005 baseline) Per Employee
	23	58% Decrease	No Change	75% Decrease

In 2014, 94 per cent of all the paper purchased was recycled paper, an eight percent increase from 2013. This compares favorably to 89 per cent in 2013 and zero per cent in 2005. Unfortunately, at the same time, we used eight per cent more paper in 2014 than in 2013. As a result we have not observed any year to year changes in our GHG emissions.

TOTAL GHG EMISSIONS FOR OFFICE PAPER AND NUMBER OF EMPLOYEES



Since 2005, BC Housing has grown significantly as an organization and our number of employees has increased by 73 per cent. In the same period, the total amount of office paper used decreased by 60 per cent and related GHG emissions per employee decreased by 75 per cent.

ACTIONS TAKEN IN 2014

In 2014, BC Housing built on initiatives introduced in previous years, such as switching to paperless meetings, employee educational campaigns, and changes in procurement practices that require purchasing paper with recycled content.

Last year's employee survey revealed a 17 per cent increase in number of employees making an effort to reduce printed materials in our offices when compared with our 2009 baseline.

BC Housing launched a Paperless Initiative in February 2013 to enable non-profit housing providers to receive and send documents and correspondence via email instead of through Canada Post. This initiative was expanded in 2014 and, to date, 96 per cent of BC Housing's providers are using the encryption system to send and receive the majority of their information via email. The next phase of the Paperless Initiative will be to launch it to other branches of the organization in 2015.

Other Actions

BC Housing's commitment to sustainability goes beyond reduction of greenhouse gas emissions and touches on areas such as procurement, waste management, community development, education and engagement, and others. Our actions in those areas are described in our *livegreen* Sustainability Report. Below are just a few highlights of our work in those other areas.

PROCUREMENT

An increasing number of our public tenders include sustainability criteria related to proponents' commitment and actions to reduce negative impacts on local communities and the environment.

WASTE MANAGEMENT

In 2014 BC Housing conducted a pilot program on food scraps diversion among the public housing tenants. This program is being rolled out to all of the public housing sites in Lower Mainland and Vancouver Island in 2015.

We diverted 79 per cent of our building construction waste from landfills last year.

EMPLOYEE ENGAGEMENT

BC Housing's *livegreen* Employee Council with representatives from all branches and regions works collaboratively on sustainability projects to educate and engage employees. Its annual survey measures the impact on individual behaviour change in four areas: Commuting, Food, Home and Work. Last year 78 per cent of our employees indicated that they feel supported by BC Housing in making sustainable choices at home and at work.

COMMUNITY CONNECTIONS

Through our employer supported volunteerism program, BC Housing's staff donated over 800 hours to charities such as food banks and the Food Sharing Farm in Richmond. This program provided opportunities for education and team building, while contributing to local communities.

Plans to Continue Reducing Greenhouse Gas Emissions 2015

While our plans for next year do not include any capital projects that will have significant GHG reduction potential, they do include more energy retrofit initiatives and programs for both BC Housing's own building stock and the non-profit sector. Some of these initiatives will result in longer term savings through optimized operations. Some of the key initiatives planned for the next year include:

BUILDINGS

- Conducting evaluations of overall building energy use for 10 of our buildings. The buildings will be selected based on several factors, including Building Energy Performance Index, location, timing and availability of staff to support the assessment teams.
- To better facilitate strategic capital planning, we will be investigating opportunities to incorporate potential energy and GHG savings in the list of factors that contribute to a project's ranking in the list of capital priorities.
- Implementation of a pilot project with the Squamish Nation on skills training, asset management training, and homeowner education.
- Renovation and restoration of the remaining single room occupancy hotel renewal sites in Vancouver improving living conditions and restoring the buildings' heritage value. The project agreement includes skills training for 60 people, as well as providing development and employment opportunities in construction and building maintenance for the community.
- Development and publication of case studies about energy conservation in new social housing projects and the lessons learned from specific projects.
- Building Smart seminars about innovation in construction and design for licensed residential builders in the home building industry providing practical information on the latest in building science and best practices on various topics, including energy efficiency and green buildings.
- Collaboration with utility, municipal and industry partners, and Natural Resources Canada to complete the "Builder Local Energy Efficiency Partnership (LEEP) Technology Assessment and Selection Report" for the Lower Mainland and South Vancouver Island.

Plans to Continue Reducing Greenhouse Gas Emissions 2015 *(continued)*

FLEET

- Renewing our membership in E3 Fleet (Energy, Environment, Excellence) and conducting Fuel Smart Driving presentations and online training. Consulting with E3 fleet on new fleet purchases in 2015 to determine what fuel efficient options are available and initiate improvements to the vehicle fuel data collection methodology to achieve yearly comparisons.
- Continued use of a GPS tracking system to plan routes in the most effective manner.

PAPER

- Employee engagement campaigns to continue reduction of office paper.
- Continued implementation of the Recycled Paper Only policy for office paper procurement.

For information about our actions and plans in other sustainability areas, please visit:

www.bchousing.org/Initiatives/Sustainability

www.hpo.bc.ca

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

Organization Name

BC Housing

Actions Taken to Reduce Emissions

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

Performed energy retrofits on existing buildings

Yes

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

Yes

Undertook an evaluation of overall building energy use.

Yes

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

- Through the Energy Efficiency Retrofit Program, a substantial effort was made to replace windows, upgrade heating and lighting systems, as well as replacing old appliances with new energy efficient models at close to 100 building sites. The program has been expanded in partnership with BC Non-Profit Housing Association, BC Hydro and Fortis BC to help non-profit housing providers make energy upgrades to enhance tenant comfort and safety, realize energy savings, and reduce greenhouse gas emissions. It builds on the BC Hydro Power Smart Partner Express and Fortis BC Efficient Boiler programs and provides funds to enable housing providers to complete small scale energy retrofits on items such as light fixtures and boilers.
- Replaced inefficient boilers with high performance ones in collaboration with Fortis BC energy efficiency incentive programs. It is estimated that last year we saved 167 tonnes of greenhouse gas

emissions on BC Housing sites, and 475 tonnes of emissions on sites operated by our non-profit housing partners.

- Under the SRO Renewal Initiative (SRI) to renovate and restore 13 provincially owned Single Room Occupancy hotels (SROs), the renovation of three buildings in Vancouver's Downtown Eastside was completed last year. This included the replacement and renewal of building systems (i.e., heat and ventilations systems), installation of energy efficient boilers, windows and insulation. This initiative is expected to contribute to our GHG reduction targets in the years ahead.
- Continued to implement the Energy Conservation Assistance Program with BC Hydro and Fortis BC for all group homes across the province. Group homes account for only four per cent of the building portfolio but create eight per cent of our overall GHG emissions. Through this program approximately 1,200 GJ were saved.
- Continued to participate in BC Hydro's new construction ENERGY STAR appliance program, which promotes energy savings through the incentivized purchase of ENERGY STAR-rated refrigerators, dishwashers, exhaust fans, lights and clothes washers.
- Distributed guidelines to assist staff with budgeting and project management for renovations and HVAC upgrades projects to enhance GHG reductions, increase the energy performance and tenant comfort.
- Developed and distributed tools to make the purchase and maintenance of the most widely used appliances and equipment more cost effective and easier by providing specification documents with links to make and model information based on ENERGY STAR, Fortis BC and NRCan ratings.
- Provided ongoing support to encourage BC Housing's building managers and site staff to play a leadership role in creating and enhancing a culture of energy conservation among staff and tenants.
- Continued the development of the Building Operations Training program for public and non-profit housing providers jointly with the BC Non-Profit Housing Association. The work included developing a program that fosters an energy management culture among building operations staff, builds capacity, enhances energy and greenhouse gas savings, and promotes tenant engagement.
- The Homeowner Protection Office branch of BC Housing delivered two Building Smart seminars, "New Energy Provisions in the BC Building Code" and "Soils, Excavation & Below Grade Assemblies" in over 21 communities across the province. We also offer free online webinars and workshops that can be accessed any time and cover such topics as: energy efficiency requirements for large residential buildings, energy efficiency in new and retrofit buildings, best practices for window installation, and others. More than 1,200 professionals involved in residential construction attended to learn about the impact the new requirements will have on construction practices.
- Developed guidelines for non-profit housing providers undertaking new construction projects that are not required to pursue a LEED standard. These include tools and resources for non-profit housing societies to ensure proper operations and maintenance procedures when the building is handed over for GHG savings throughout the building's lifetime.

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

Do you have a fleet?

Yes

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

No

Replaced existing vehicles with hybrid or electric vehicles

No

Reduced the overall number of fleet vehicles

No

Took steps to drive less than last year

No

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

- The Lower Mainland grounds and maintenance fleet continued to use a GPS fleet tracking system to reduce fleet mileage. This allowed fleet managers to reduce kilometers driven by allocating resources more efficiently.
- The fuel intensive mobile bed bug treatment trailers were used less extensively in 2014 in preference to other methods of pest control.
- Fleet mileage was reduced by approximately 36,000 kilometers between 2013 and 2014, due in part to reduced vehicle usage at an office location that closed in March 2014.

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

Used less paper than previous year

Yes

Used only 100% recycled paper

No

Used some recycled paper

Yes

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

No

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

In 2014, BC Housing built on initiatives introduced in previous years, such as switching to paperless meetings, employee educational campaigns, and changes in procurement practices that require purchasing paper with recycled content.

BC Housing launched a Paperless Initiative in February 2013 to enable non-profit housing providers to receive and send documents and correspondence via email instead of through Canada Post. This initiative was expanded in 2014 and, to date, 96 per cent of BC Housing's providers are using the encryption system to send and receive the majority of their information via email. The next phase of the Paperless Initiative will be to launch it to other branches of the organization in 2015.

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Actions Taken to Reduce Emissions - continued

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

BC Housing's livegreen Housing Sustainability Plan includes short- and long-term goals for reducing our greenhouse gas emissions and other negative environmental impacts, as well as providing leadership in sustainable housing. While our plans for next year do not include any capital projects that will have significant GHG reduction potential, they do include more energy retrofit initiatives and programs for both BC Housing's own building stock and the non-profit sector. Some of these initiatives will result in longer term savings through optimized operations. Some of the key initiatives planned for the next year include:

- Conducting evaluations of overall building energy use for 10 of our buildings. The buildings will be selected based on several factors, including Building Energy Performance Index, location, timing and availability of staff to support the assessment teams. The information collected from these audits will be used to help prioritize capital upgrade needs for energy and GHG consumption reductions, and to better inform building staff about building operations and maintenance.
- Renovation and restoration of the remaining single room occupancy hotel renewal sites in Vancouver's Downtown East. This will improve the living conditions for the buildings' residents and restore the heritage value of these buildings. The project agreement includes skills training for 60 people, as well as providing development and employment opportunities in construction and building maintenance for the community.
- To better facilitate strategic capital planning, we will be investigating opportunities to incorporate energy and GHG savings potential in the list of factors that contribute to a project's ranking in the list of capital priorities. We will also continue to utilize the Facilities Condition Index of existing social housing in our planning activities.
- Development and publication of case studies about energy conservation in new social housing projects and the lessons learned from specific projects.
- Employee engagement campaigns to continue reduction of office paper and energy use, as well as emissions from business travel and commuting.
- Renewing our membership in E3 Fleet (Energy, Environment, Excellence) and conducting Fuel Smart Driving presentations and online training. Consulting with E3 fleet on new fleet purchases in 2015 to determine what fuel efficient options are available.

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

Yes

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

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

Yes

Virtual Meeting TechnologyInstalled web-conferencing software (e.g., Live Meeting, Elluminate, etc.)

Yes

Made desktop web-cameras available to staff

No

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

Yes

Encourage carpooling to meetings

Yes

Education and AwarenessHave created Green, Sustainability, Energy Conservation, or Climate Action Teams.

Yes

Provided resources and/or dedicated staff to support these teams

Yes

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

Yes

Established a sustainability/green awards or recognition program

Yes

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

Yes

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

Yes

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

No

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Actions to Promote Sustainability and Conservation - Optional (continued)

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

Yes

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

Yes

Provided green tips on staff website or in newsletters

Yes

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

Yes

Staff have the option of a compressed work week

Yes

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

Yes

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

Yes

Secure bicycle storage is provided

Yes

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

Yes

Put in place a potable water management strategy to reduce potable water demand of building-level uses such as cooling tower equipment, toilet fixtures, etc. and landscape features

No

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

Yes

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

Yes

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

No

**Established green standards for goods that are replaced infrequently and/or
may require capital funds to purchase (e.g., office furniture, carpeting, etc.)**

Yes

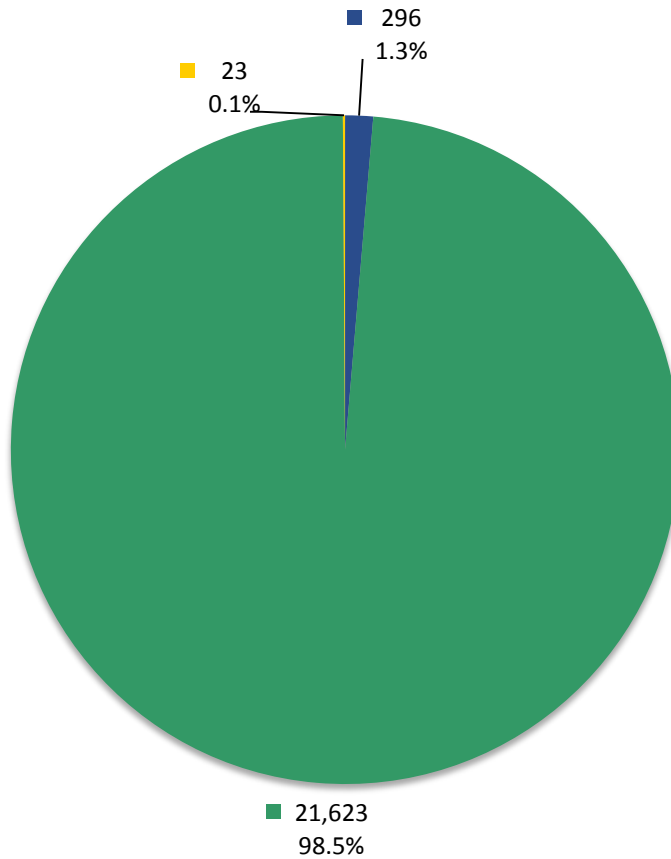
Incorporated lifecycle costing into new construction or renovations

Yes

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

- * 46% of our public tenders included sustainability criteria;
- * encourage staff consider sustainability in their choice of vacation by promoting local options;
- * encourage staff to eat less meat;
- * conducted staff commuting survey
- * promoted local food production through gardening

**BC Housing Management Commission
Greenhouse Gas Emissions by Source
for the 2014 Calendar Year (tCO₂e*)**



Total Emissions: 21,942

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

Offsets Applied to Become Carbon Neutral in 2014 (Generated June 22, 2015 12:38 PM)

Total offsets required: **21,928**. Total offset investment: **\$548,200**. Emissions which do not require offsets: **13** **

*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.