

## 2015 Carbon Neutral Action Report

Providence Health Care



### Executive Summary: Providence Health Care, CNAR 2015

Dianna Doyle, President & Chief Executive Officer

It gives me great pleasure to present Providence Health Care's (PHC) sixth annual Carbon Neutral Action Report (CNAR) for 2015.

For six consecutive years, PHC has been proud to be carbon neutral. As an organization driven by innovation and social justice, we believe that our role as health care providers goes beyond caring for individuals and to caring for the environment, too.

With over one hundred years of service to the local community, we consider our role as stewards to be one of our most deeply held responsibilities. For us, that includes taking personal responsibility for the carbon footprint produced by our operations and facilities.

In 2015, PHC had a carbon footprint of 10,677 tonnes of carbon dioxide equivalent (tCO<sub>2</sub>e), which was offset at a cost at a total cost of \$280,271. This represents a 7.4 percent decrease from the 2007 PHC carbon footprint. Compared to 2010, PHC's carbon offset cost has reduced by \$47,973.

In 2016, we will continue to improve our environmental performance through improved energy efficiency, coordinated efforts, and education. These projects have a positive impact; saving energy, decreasing air pollution, and ultimately adding to the health and wellness of facilities, workplaces and the communities we serve.



# Our CO<sub>2</sub> Footprint

## 2015 GREENHOUSE GAS EMISSIONS BREAKDOWN AND OFFSETS APPLIED TO BECOME CARBON NEUTRAL

Providence Health Care (PHC) reports its organizational carbon footprint based on guidelines provided by the Carbon Neutral Government Regulation (CNGR) and B.C. Climate Action Secretariat (CAS).

CAS uses various elements of reporting, based on the GHG Protocol Corporate Standard, which has classified carbon reporting into three scopes. Of these three scopes and various elements within each, CAS has determined Providence Health Care carbon footprint to comprise of six different greenhouse gases, which are converted to tonnes of carbon dioxide equivalent (tCO<sub>2</sub>e). These gases are categorized in three main categories:

1. Stationary Fuel Combustion
2. Mobile Fleet Combustion
3. Supplies (Paper)

### Providence Health Care

PHC's 2015 Carbon footprint offset was 10,677 tonnes of carbon dioxide equivalent (tCO<sub>2</sub>e). That represents a 7.4% decrease in PHC's carbon footprint since 2007.

Over 95% of Providence Health Care's in-scope emissions are attributed to the building portfolio.

To become carbon neutral in 2015, Providence Health Care purchased carbon offsets at a total cost of \$280,271.



## CHANGES TO PROVIDENCE HEALTH CARE'S PORTFOLIO AND WEATHER INFLUENCE

PHC's useable facility space (measured in usable square meters) has increased by almost 2 percent since 2007. During the same time, the number of staff (measured in full time equivalents) has increased by 20%.

PHC's 2015 emissions per full-time employee (2.14 tCO<sub>2</sub>e/FTE) have decreased by 22.8% since 2007. PHC's 2015 emissions per unit of floor area (0.06 tCO<sub>2</sub>e/m<sup>2</sup>) have decreased 9.1% since 2007.

The carbon emissions reported are not adjusted for changes in climate temperatures. The use of Heating Degree Days (HDD's) is a metric designed to reflect the demand for energy required to heat a building. The HDD's for 2015 were 13% below those recorded in 2007, thus the demand for space heating, and hence natural gas use would have been lower compared to the demand in 2007.

| PHC   |                 |         |         |         |         |         |         |         |
|---|-----------------|---------|---------|---------|---------|---------|---------|---------|
| BUILDINGS, FTE AND WEATHER                                      |                 | 2007    | 2010    | 2011    | 2012    | 2013    | 2014    | 2015    |
| <b>Distinct PHC Buildings</b>                                   |                 | n/a     | 35      | 39      | 37      | 40      | 40      | 36      |
|   | <b>% Owned</b>  | n/a     | 94%     | 93%     | 93%     | 91%     | 92%     | 92%     |
|   | <b>% Leased</b> | n/a     | 6%      | 7%      | 7%      | 9%      | 8%      | 8%      |
| <b>Usable Square Meters</b>                                     |                 | 174,002 | 182,161 | 182,994 | 176,186 | 179,222 | 178,157 | 177,216 |
| <b>Full-Time Employee Equivalents *</b>                         |                 | 4,160   | 4,311   | 4,627   | 5,026   | 4,882   | 4,898   | 4,987   |
| <b>Weather (summarized in Heating Degree Days) <sup>1</sup></b> |                 | 2,870   | 2,621   | 2,963   | 2,859   | 2,820   | 2,627   | 2,489   |

<sup>1</sup> Building energy consumption is influenced by climate conditions. Vancouver has a climate which predominantly requires heating to satisfy internal building temperatures. Heating Degree Days (HDD's) is a measurement designed to reflect the demand for energy needed to heat a building.

| PHC   |   |               |                   |                   |                   |                   |                   |                   |
|---|---|---------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| Our Carbon Footprint (in tCO <sub>2</sub> e)                      |   | 2007          | 2010              | 2011              | 2012              | 2013              | 2014              | 2015              |
| CO <sub>2</sub>   | Mobile Fuel Combustion (Fleet & other mobile equipme  | 15            | 15                | 21                | 47                | 47                | 43                | 45                |
|   | Stationary Fuel Combustion & Electricity (Buildings)  | 11,448        | 11,265            | 11,892            | 12,081            | 11,440            | 11,145            | 10,267            |
|   | Supplies (Paper)                                      | 70            | 70                | 72                | 271               | 260               | 358               | 371               |
|   | <b>Total Carbon Footprint (tCO<sub>2</sub>e)</b>      | <b>11,533</b> | <b>11,351</b>     | <b>11,985</b>     | <b>12,400</b>     | <b>11,747</b>     | <b>11,546</b>     | <b>10,682</b>     |
|   | Emissions Which Do Not Require Offsets <sup>1,2</sup> | -1            | -1                | -4                | -7                | -5                | -5                | -5                |
|   | <b>Total Carbon Footprint (tCO<sub>2</sub>e)</b>      | <b>11,532</b> | <b>11,350</b>     | <b>11,981</b>     | <b>12,393</b>     | <b>11,742</b>     | <b>11,542</b>     | <b>10,677</b>     |
| Adjustments / Corrections   |   | 0             | 0                 | 0                 | 0                 | 0                 | 0                 | 0                 |
| <b>Total Carbon Footprint - for offsetting (tCO<sub>2</sub>e)</b> |   | <b>11,532</b> | <b>11,350</b>     | <b>11,981</b>     | <b>12,393</b>     | <b>11,742</b>     | <b>11,542</b>     | <b>10,677</b>     |
| \$  | Purchased Carbon Offsets                              | \$ -          | \$ 293,075        | \$ 289,550        | \$ 309,575        | \$ 294,525        | \$ 288,550        | \$ 266,925        |
|   | <b>Purchased Carbon Offsets +HST / GST</b>            | <b>\$ -</b>   | <b>\$ 328,244</b> | <b>\$ 324,296</b> | <b>\$ 325,054</b> | <b>\$ 309,251</b> | <b>\$ 302,978</b> | <b>\$ 280,271</b> |
| KPI   | Emissions per Full-Time Employee                      | 2.77          | 2.63              | 2.59              | 2.47              | 2.41              | 2.36              | 2.14              |
|   | Emissions per Meter Square Facility Space             | 0.066         | 0.062             | 0.065             | 0.070             | 0.066             | 0.064             | 0.060             |

<sup>1</sup> It was estimated that Fugitive Emissions from cooling equipment comprise less than 0.01% of Providence Health's total emissions and an ongoing effort to collect or estimate emissions from this source would be disproportionately onerous. For this reason, emissions from this source have been deemed out-of-scope and have not been included in our total greenhouse gas emissions profile.

<sup>2</sup> As outlined in the Carbon Neutral Government Regulation of the Greenhouse Gas Reductions Target Act, some emissions do not require offsets.



# Actions Taken To Reduce Our CO<sub>2</sub> Footprint

## 2015 LIST OF ACTIONS TAKEN TO REDUCE CO<sub>2</sub> FOOTPRINT

### Stationary Fuel Combustion, Electricity (Buildings)

- PHC completed the investigation phase of two energy savings projects in 2015; at St. Vincent's Hospital: Langara, and Holy Family Hospital, as part of BC Hydro's Continuous Optimization Program.
- PHC's Energy Management team were involved in updating GreenCare's Energy and Environmental Sustainability Design Guidelines for New Construction and Major Renovation projects with the intent of ensuring health care related new construction and major renovation projects are built to the highest standard of human / environmental health, performing efficiency, and financial investment.
- Initiated the development of an engagement and integration strategy with Facilities Strategic Planning and Capital Project teams to embed energy conservation principles in their process and projects.
- PHC's energy team continue to promote energy conservation and GHG emissions reduction through awareness and behaviour change programs, such as Green+Leaders, GreenCare Community website and the BC Hydro Workplace Conservation Agreement program



## Mobile Fleet Combustion (Fleet and other vehicles)

In 2015, PHC's Transportation Demand Management Coordinator worked to improve, promote and establish alternative transportation

- PHC installed one 120v electric vehicle charging station at St. Paul's Hospital, which is located downtown Vancouver in the West End (51 regular plug-ins are also available throughout the parkade).
- PHC partners with Provincial Health Services Authority and Vancouver Coastal Health to provide a shuttle service between sites. In 2014, PHC had 23,980 (112,716 overall total for 2015) health care staff used the shuttle from various Vancouver sites.
- 67 PHC staff participated in the 2015 Clean Commuter & Wellness Challenge (CCWC); a campaign to motivate PHC staff to leave their car at home and commute in an active and clean way.
- PHC has 226 bike parking stalls.

## Supplies (Paper)

- As part of the Green+Leader program, a paper/waste reduction campaign supports volunteers with Paperless Meeting Toolkits to encourage their colleagues to reduce paper use.
- PHC encouraged teleconferencing for meetings by installing web-conferencing hardware / software at various sites.



## Paperless Meetings Toolkit

### Objective

A paperless meeting is characterized by the absence of paper copies of the agenda, minutes, presentations or other documents. The goal is to decrease paper use by eliminating the practice of printing documents to hand out at meetings.

### Why paperless meetings

A paperless meeting eliminates paper and its related expenses. Required documents are distributed digitally ahead of time so people can review them or project them onto a screen. When a paper version is required, stop and think about how many copies you actually need: can people share or can they read on a laptop or from a projector? Paperless meetings can also assist your department in eliminating the risk associated with printing confidential information. If you can use virtual meetings, this further reduces expenses related to travel and employee impacts.

## Actions That Fall Outside the Scope of the Carbon Neutral Government Regulations

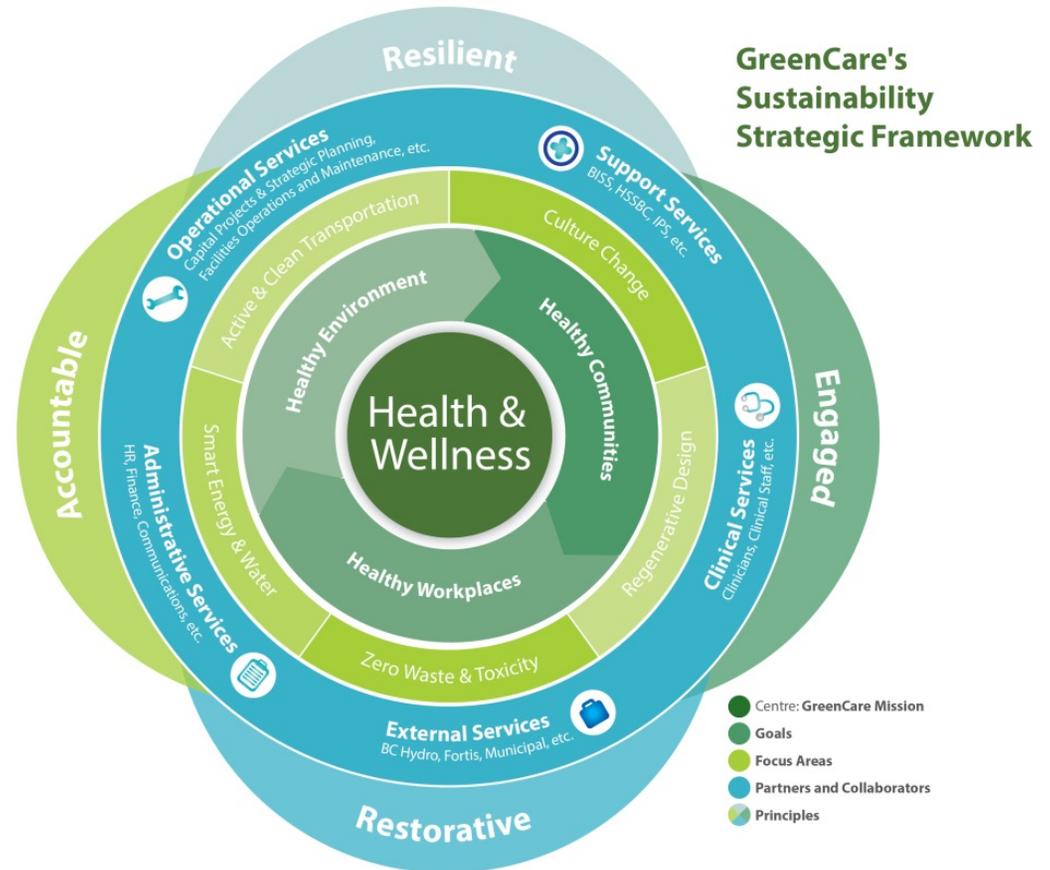
- The **Green+Leaders** (G+L) behaviour change program at PHC now has a total of nine active staff volunteers who help improve the environmental sustainability of PHC operations.
- PHC continues to support the **GreenCare Community** (GCC) site, which provides tips and toolkits on using less paper, as well as other environmental sustainability initiatives linked to health and wellness. In 2015, PHC had 461 staff registered on the site.
- Education and awareness communication via the **GreenCare Community**, as well as stories published in PHC news and other communication channels various internal communication channels, continue to champion behaviour change and celebrate environmental sustainability success.
- Provided training, resources, toolkits and recognition to support the **Green+Leader program** and various green teams in PHC.
- Support professional development through workshops and educational sessions sponsored by **BC Hydro** and **Fortis BC**.



## 2016 WORK TO REDUCE THE ORGANIZATION'S CO<sub>2</sub> FOOTPRINT

Providence Health Care's plans to continue reducing GHG emissions and Energy use in the following ways:

- **Optimizing our Existing Buildings:** Planning and implementing GHG / Energy reduction projects in our existing building portfolio by utilizing the Carbon Neutral Capital Program (CNCP) as our primary funding source.
- **Influencing New Construction:** Implementing aggressive project-specific energy performance targets to ensure that our new buildings are as energy efficient as possible.
- **Systemic Change:** Implementing standards, guidelines, and processes to embed energy management principles further into standard operations.
- **Behaviour Change:** Engaging and educating our staff, via the existing Green + Leaders program, GreenCare Community and the BC Hydro Workplace Conservation Agreement.
- **Innovation and Demonstration:** Leveraging the innovative Green Revolving Fund approach that has been initiated for PHC to support ongoing investment in energy conservation through utility cost avoidance achieved through conservation.
- **Align with our Core Mandate:** Working with GreenCare's refreshed Strategic Framework; Providence Health Care will strive to advance health care practices that respect environmental stewardship, noting that the environmental impact from health care facilities, operations and services influence the health of populations and patients we serve. Providence Health Care will engage in a collaborative approach to create a sustainable and environmentally responsible health care system, which continues to advance health and wellness in its broadest sense.



## SUCCESS STORY PROFILE:

### Surjit Heer, Mechanical Engineer at Holy Family Hospital, PHC.

The Facilities Maintenance and Operations (FMO) staff at Providence Health Care are pivotal in their role of supporting energy efficiency projects and upgrades that contribute to healthier facilities, stronger communities and a healthier environment.

Read our profile of Surjit Heer, as we learn how his can-do, solution-focused attitude saves money for PHC, ensures patient comfort, and simultaneously seeks energy saving opportunities.

#### Q. Tell us about yourself and describe your role within health care.

I work in PHC's Holy Family Hospital as a Maintenance Engineer. I started working at this facility about two years ago. Before this, I worked at Mount St. Joseph's Hospital for about one and half years and before that at St. Vincent's Hospital, Langara for about four and half years.

Before joining PHC I worked at Telus World of Science for 19 years as an operating engineer. The experience I got from that work has been invaluable in my work with PHC.

#### Q. As a Maintenance Engineer with PHC, what do you do?

I do everything in relation to running the heating, ventilating, and air conditioning (HVAC) system, which means ensuring that the temperature of the hospital is comfortable for patients and staff, while also considering energy savings, and costs.

I make sure that I set all the heating and cooling systems to a comfortable level and make sure that I check with staff and residence living in this facility. By optimizing the controls and scheduling, I am able to set fans so that they run when the area is occupied and turn off when the area is empty. As a result of controlling the HVAC systems, I am able to save electricity and gas, which ultimately saves money on operational costs.

Sometimes this job involves a lot of running around, as I am the go-to guy in terms of fixing and keeping systems and equipment working. Luckily, I am part of the Vancouver soccer league, which means that I keep fit for the demands of this job!

#### Q. What support do you receive for energy management at PHC?

One thing I have learnt in this role is how to fix all sorts of equipment. I have acquired new skills that I am able to apply this to my work, which in the end saves us from having to hire external contractors.

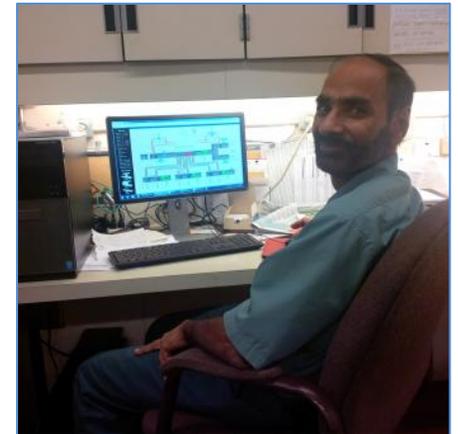
I really appreciate working with the FMO team at St. Paul's, and I have received support to expand my skill set and been encouraged in the work that I do. It is also positive to work with the Energy Management team at PHC. It is good to be in contact with them so that we can help each other to identify energy saving projects.

#### Q. What are you proud of in your work?

The thing I am proud of in my work is that I am able to save a lot of gas, heat, emissions and pollutions. We are saving money, and we are also reducing pollution, which is good for the organization and really good for the whole world, and the environment.

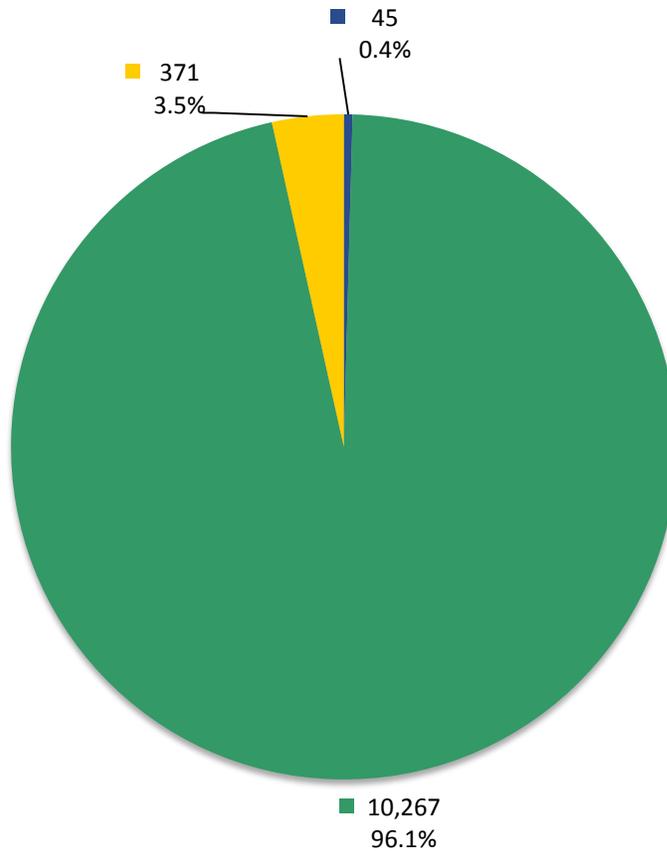
As well, I feel really happy to respond to people. I do really want to make sure people are comfortable. When someone tells me that it's too hot, or too cold, I want to fix it. If you have a problem let me know, I can find a solution.

A happy guy makes a healthy guy. And there is a way to have a healthy building that is positive for residents and is energy efficient.



**Surjit Heer, Maintenance Engineer,  
Holy Family Hospital, PHC.**

**Providence Health Care  
Greenhouse Gas Emissions by Source  
for the 2015 Calendar Year (tCO<sub>2</sub>e\*)**



**Total Emissions: 10,682**

- 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 2015 (Generated May 26, 2016 8:58 AM)**

Total offsets required: **10,677**. Total offset investment: **\$266,925**. Emissions which do not require offsets: **5** \*\*

\*Tonnes of carbon dioxide equivalent (tCO<sub>2</sub>e) is a standard unit of measure in which all types of greenhouse gases are expressed based on their global warming potential relative to carbon dioxide.

\*\* Under the *Carbon Neutral Government Regulation of the Greenhouse Gas Reduction Targets Act*, all emissions from the sources listed above must be reported. As outlined in the regulation, some emissions do not require offsets.

# 2015 Carbon Neutral Action Report Survey

Organization Name:

*Providence Health Care*

Please select your sector:

- Health Authority or Affiliate

1) Stationary Sources (Buildings, Power Generators, Ext. Lighting) Fuel Combustion, Electricity use, Fugitive Emissions:

Please indicate which actions your PSO took in 2015:

Have developed an overall strategy/plan to reduce energy use in your organization's buildings inventory:

*Yes*

If Yes, please describe:

*We have a Strategic Framework complete with areas of focus, comprising of associated goals, targets and priority actions. One of the main focus areas is "Energy Conservation and Carbon Neutral" and this encompasses the entire Energy Management program, including the Strategic Energy Management Plan (SEMP). The SEMP is updated on a yearly basis with respect to energy use data, targets/goals and planned actions.*

Undertook evaluations of building energy use:

*Yes*

Performed energy retrofits on existing buildings:

*Yes*

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

*Yes*

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

*PHC takes a holistic approach to Strategic Energy Management, which includes efforts in these five areas:*

*1: Optimize our Existing Buildings:*

*Planning and implementing GHG / Energy reduction projects in our existing building portfolio by utilizing the Carbon Neutral Capital Program (CNCP) as our primary funding source.*

*2: Influence New Construction:*

*Continue to make efforts to ensure new construction and major renovation projects are built to the highest standard of human / environmental health, performing efficiency, and financial investment. This is achieved in part through the Lower Mainland Facilities Management (LMFM) Energy and Environmental Sustainability (EES) Design Guidelines for New Construction and Major Renovation projects. Specifically, we implement aggressive project-specific energy performance targets to ensure that our new buildings are as energy efficient as possible.*

*3: Systemic Change:*

*Implementing standards, guidelines, and processes to embed energy management principles further into standard operations. The EES Design Guidelines are example of such a guideline.*

*4: Behaviour Change:*

*Continue engaging and educating our staff, via the existing Green + Leaders program, GreenCare Community and the BC Hydro Workplace Conservation Agreement.*

*5: Innovation and Demonstration:*

*Continuing to plant seeds today to enable more significant progress moving forward. For example, leveraging the innovative Green Revolving Fund approach that has been initiated for PHC to support ongoing investment in energy conservation through utility cost avoidance achieved through conservation*

2) Mobile Sources (Fleet, Off-road/Portable Equipment) Fuel Combustion:

Indicate which actions your PSO took in 2015:

Have put in place an operations policy/program to support systematic reductions in fleet related emissions:

(e.g., program to convert fleet to renewable fuels)

No

If Yes, please describe:

*(No response)*

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

No

Replaced existing vehicles with hybrid or electric vehicles:

No

Took steps to drive less than previous years:

No

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

*PHC installed one 120v electric vehicle charging station at St. Paul's Hospital, which is located downtown Vancouver in the West End (51 regular plug-ins are also available throughout the parkade).*

*PHC partners with Provincial Health Services Authority and Vancouver Coastal Health to provide a shuttle service between sites. In 2014, PHC had 23,980 (112, 716 overall total for 2015) health care staff used the shuttle from various Vancouver sites.*

*67 PHC staff participated in the 2015 Clean Commuter & Wellness Challenge (CCWC); a campaign to get motivate PHC staff to leave their car at home and commute in an active and clean way.*

*PHC has 226 bike parking stalls.*

3) Supplies (Paper):

Indicate which actions your PSO took in 2015:

Have put in place an operations policy/program to facilitate a systematic reduction in paper-related emissions:

(e.g., policy to purchase 100% Recycled Content; default to double-sided printing)

No

If yes, please describe:

*(No response)*

Have put in place an operations policy/program to facilitate behavioural changes from paper use:

(e.g. awareness campaign to reduce paper use):

*Yes*

If yes, please describe:

*As part of the Green+Leader program, a paper/waste reduction campaign supports volunteers with Paperless Meeting Toolkits to encourage their colleagues to reduce paper use.*

*PHC encouraged teleconferencing for meetings by installing web conferencing hardware / software at various sites.*

Used only 100% recycled paper:

*No*

Used some recycled paper:

*Yes*

Used alternate source paper:

(e.g., bamboo, hemp, wheat etc.)

*No*

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

*(No response)*

4) Other Sustainability Actions:

Please note that this section is optional

Business Travel

Created a low-carbon travel policy or travel reduction goal:

(low-carbon = lowest emission of greenhouse gas per kilometer per passenger)

No

Encouraged alternative travel for business:

(e.g. bicycles, public transit, walking)

Yes

Encouraged or allow telework/working from home:

Yes

Other:

*Continued with the successful Clean Commuter Challenge in 2015. Many PHC staff participated in the Challenge (campaign to encourage staff to choose alternative healthier modes of commuting).*

Education Awareness

Have a Green/Sustainability/Climate Action Team:

Yes

Supported green professional development:

(e.g. workshops, conferences, training)

Yes

Supported or provided education to staff about the science of climate change, conservation of water, energy and/or raw materials:

Yes

Other:

1. The Energy and Environmental Sustainability (EES) team from the Lower Mainland Facilities Management department operate a staff leadership and behaviour change program designed to foster a culture of environmental sustainability in health care facilities. The Green+Leaders (G+L) program, recruits, trains and supports staff volunteers to carry out behaviour change and education campaigns within their departments. The program focuses on fostering sustainable behaviours in four key areas: Zero Waste, Energy Conservation and Climate Neutral, Active & Clean Transportation and Social Sustainability.

2. In 2015, the EES team continued to utilize the BC Hydro Workplace Conservation Awareness Program (WCA). This program supports the G+L program and also provides tools and resources for other awareness initiatives, such as our Facilities Maintenance and Operations (FMO) engagement strategy.

## Adaptation Planning for Climate Risks

Have assessed whether increased frequency of extreme weather events and/or long term changes in climate will affect your organization's infrastructure, its employees and/or its clients:

No

Have incorporated these anticipated changes in climate into your organization's planning and decision making:

No

Other:

*The Energy and Environmental Sustainability (EES) Team has begun a process to evaluate the extent to which PHC is prepared for climate change impacts.*

## Other Sustainability Actions

Established a water conservation strategy which includes a plan or policy for replacing water fixtures with efficient models:

No

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

(e.g., composting, collection of plastics, batteries)

Yes

Established green standards for goods that are replaced infrequently and/or may require capital funds to purchase:

(e.g., office furniture, carpeting, etc.)

No

Incorporated lifecycle costing into new construction or renovations:

Yes

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

- 1. Continued to roll out the Recycling Renewal Program. There are now 6 sites in PHC and average diversion rate in 2015 was 41%. In addition, 42 Recycling Champions were recruited and trained in 2015.*
- 2. The review and re-issue of the Lower Mainland Facilities Management (LMFM) Environmental Accountability Report, including updated goals and targets for 10 strategic focus areas.*
- 3. A dedicated team within the LMFM Energy and Environmental Sustainability department was formed to review and refresh our overall GreenCare Strategic Framework.*