



2012 Carbon Neutral ACTION REPORT



A document from the department of
Lower Mainland Facilities Management
Energy & Environmental Sustainability
the home of GreenCare

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EXECUTIVE SUMMARY

Dr. David N. Ostrow

President and Chief Executive Officer



It is my pleasure to present the 2012 Vancouver Coastal Health Carbon Neutral Action Report. This is our fifth year of tracking our carbon footprint and we are proud to claim carbon neutrality for the third year in a row.

A key to achieving sustainable health care is establishing economic, social, and environmental stewardship. This is a vital balance in a time of rising costs, population growth, and the results of negatively impacting the natural environment.

Vancouver Coastal Health has included GreenCare in its organizational Strategic Framework and included "innovation for sustainability" as part of its True North goals.

The following report will highlight key accomplishments in energy & environmental conservation. Most notably in 2012 we:

- **Reduced our energy consumption** by 3 GWh & 23,000 GJ
- **Reduced waste** by implementing the recycling renewal program at 13 acute care and residential care sites
- **Increased staff engagement** through the recruitment of 41 Green+Leaders staff volunteers and the BC Hydro sponsored Workplace Conservation Program
- **Decreased staff commuting**, via single occupancy vehicles, through a *Clean Commuter Challenge*

We are very excited about the progress we've made and look forward to continuing our leadership in the greening of health care.

Peter Goldthorpe

VP Capital Projects, Real Estate & Facilities



There is much evidence linking environmentally sustainable behaviours to healthy communities and ultimately to the health of the individuals we serve. As a provider of health services for the citizens of British Columbia...but also a material contributor to greenhouse gas emissions, we must demonstrate leadership and continually seek ways to reduce our ecological footprint to improve population health. In other words, we must practice what we preach. To this end, our Energy & Environmental Sustainability team has created a strong vision for reducing the health sector's environmental impact. The 2012 Carbon Neutral Action Report highlights many of the initiatives that are currently underway to accomplish this goal.

Please join us in this quest to transform health care into a more environmentally-responsible sector focused on both human and environmental health. Please take a moment to check out our vision at the GreenCare Community website <bcgreencare.ca>. We welcome your feedback and your active participation!

ABOUT VCH

Vancouver Coastal Health is a health care provider that serves over one million people in British Columbia

We serve one in four British Columbians

Vancouver Coastal Health (VCH) is one of six publicly funded healthcare regions within the Canadian province of British Columbia. One in four of British Columbia's population of 4 million people are served by Vancouver Coastal Health.

We provide direct and contracted health services including:

- **Primary health care**
- **Secondary, tertiary and quaternary care**
- **Home and community health care**
- **Mental health and addiction services**
- **Population and preventive health services**

Thirteen hospitals and 230+ facilities

We operate in part of Greater Vancouver and in the Coast Garibaldi area. We administer 103 VCH-owned facilities and 127 leased facilities. This includes 9 hospitals, 3 diagnostic and treatment centers, and 15 community health centers. We also contract our services to third parties, primarily long term care facilities.

As a health authority in British Columbia, the Provincial Government, through the British Columbia Ministry of Health, sets province-wide goals, standards and performance agreements for health service delivery. This includes a mandate for Vancouver Coastal Health to reduce its carbon emissions.

"The delivery of public health care has complex and far reaching ecological reverberations. Thus, the health care sector must take responsibility and ensure it isn't contributing to the very environmental problems that need to be addressed locally and globally."

Duncan Campbell
Former CFO & VP Systems Development & Performance
Vancouver Coastal Health



Quick Facts

\$3.1 billion

Operating budget 2012/13

22,000 staff

Including 13,293 full-time equivalents (FTE)

2 FTE for projects

To reduce our footprint

1 FTE to measure

Our energy/carbon use

0 small vehicles

In our fleet (forklifts, gators etc)

48 medium vehicles

(Cars, ambulances etc.)

8 large vehicles

(Buses, transport trucks)

Our Communities

Vancouver

Richmond

The North Shore

North and West Vancouver

Coast-Garibaldi

Sea-to-Sky (including Whistler),
and the Sunshine Coast, Powell
River, Bella Bella, and Bella
Coola.

CHANGES IN OUR OPERATIONS

We created a new Energy & Environmental Sustainability group dedicated to reducing the environmental impact of all the Lower Mainland health authorities

Four health authorities are working together

Established in 2010, the following four health organizations began formally working together to manage and deliver administrative and clinical support services:

- **Fraser Health Authority (FHA)**
- **Providence Health Care (PHC)**
- **Provincial Health Services Authority (PHSA)**
- **Vancouver Coastal Health (VCH)**

This partnership allows us to consolidate operations across the four health organizations for greater efficiency, so our health care dollars can be effectively focused on patient care.

Facilities Management was one of the ten administrative and clinical support services areas consolidated. Now, the new Lower Mainland Facilities Management team has a mandate that includes 27 acute care hospitals and 50 residential care facilities, which serve over 2.5 million British Columbians living in 37 municipalities and regional districts.

Coordinating our sustainability work

Consolidation enabled the creation of an Energy & Environmental Sustainability (EES) group in 2010 within the Lower Mainland Facilities Management department.

This has presented new opportunities to coordinate our environmental and sustainability work across Vancouver Coastal Health, FH, PHC, and PHSA.

Advisory Committees

Vancouver Coastal Health is a part of two groups dedicated to collaborating on energy & environmental sustainability work across the health care sector.

Environmental Sustainability Advisory Committee (ESAC)

The ESAC group is made up of various Health Authority key leaders across the lower mainland. These individuals provide strategic counsel and key decisions on energy & environmental sustainability work within health care.

Provincial Environmental Tech Team (PETT)

The PETT group is made up of key stakeholders across all BC Health Authorities, the Ministry of Health, and the Climate Action Secretariat. This group provides strategic collaboration and sharing of best practices to enable more efficient energy & environmental sustainability work within health care.

Net Space -0.5%

Even though our site portfolio and square meters of space decreased by 0.5% in 2012, Vancouver Coastal Health still strives to reduce our carbon footprint in line with our target reduction goals.

Building Space Change

	2010	2011	2012
Distinct VCH Health Buildings	270	255	230
% Owned	81%	81%	81%
% Leased	19%	19%	19%
Usable Square Meters	817,753	816,880	812,792
Full-Time Employee Equivalents	13,600	12,936	13,293

ENERGY AND ENVIRONMENTAL SUSTAINABILITY

We consider energy and environmental sustainability to be important components of organizational, human and environmental health

Reducing our environmental impact

Our Energy & Environmental Sustainability (EES) group includes Energy Managers and Sustainability Managers tasked with reducing the waste and environmental impact of our health organizations.

It's the goal of this EES group to unite all four organizations in their commitment towards Economic Stewardship Environmental Stewardship, and Health & Social Stewardship.

Increasing our staff's environmental stewardship

Vancouver Coastal Health is committed to reducing health care's impact on the environment, while increasing the health and wellbeing of British Columbians by maintaining the important link between health and the environment.

Vancouver Coastal Health has endorsed an Environmental Sustainability Policy, along with the other Lower Mainland health organizations, that includes a Vision Statement and Sustainability Conservation Goals.

Creating a conscious work culture

Mission Statement: Promote a health care community that is actively aware and engaged in creating sustainable and environmentally-conscious health care delivery.



GreenCare

GreenCare is the brand name for all the environmental sustainability activities across the Lower Mainland health organizations. This includes work done through our EES group, our Green+Leaders staff champions, our recycling program, and through our online GreenCare community website

www.bcgreencare.ca.

10 Focus Areas

Our EES group aims to create greater sustainability in ten key areas of focus:

1. Culture of Stewardship
2. Energy Conservation & Climate Neutral
3. Zero Waste
4. Active Transportation
5. Regenerative Design
6. Water Conservation & Restoration
7. Sustainable Procurement
8. Zero Toxicity
9. Healthy Land & Food
10. Transparent Reporting

Our Sustainability Goals

	2015	2020
Energy Reduction	10%	20%
Green House Gas Reduction	15%	33%
Water Reduction	7%	10%
Alternate Commute Increase	10%	20%
Staff Engagement (GreenCare)	40%	75%
Waste Diversion (Recycling) *	70%	80%
Waste Reduction (Biomedical)	10%	20%

* Goals aligned to Metro Vancouver targets.

Targets use a 2009 baseline, except Green House Gas Emissions which uses 2007.

Facilities Commitment

Vancouver Coastal Health is committed to designing, constructing, and operating all facilities to a minimum of LEED standards and current best practices.



GREEN BUILDINGS

Construction projects on new or existing facilities are built to sustainability standards: LEED (Leadership in Energy and Environmental Design) for new buildings, and BOMA BEST (Building Environmental Standards) for existing buildings

Buildings are rated BOMA BEST

- **Leased Sites**
 - 520 6th Avenue West, Vancouver
 - 1669 East Broadway, Vancouver

Three facilities are being built to be certified LEED Gold

- **Owned Facilities**
 - St Mary's Hospital extension in Sechelt – Completed and will be occupied on March 35, 2013
 - The HOpe Centre Mental Health Residential Care – North Vancouver – Under construction and planned for occupancy in , 2014
 - Joe and Rosalie Segal Care Centre at the VGH Campus – currently in the planning stage – Construction to start in the Summer of 2013 and occupancy planned for 2014/2015

Vancouver Coastal Health

LEED Building Site	City	Targeted / Achieved		Certification Date
		Certification	Status	
Joe and Rosalie Segal Care Centre	Vancouver	Gold	(construction)	TBD
Lions Gate Hospital - HOpe Centre	North Vancouver	Gold	(construction)	TBD
St. Mary's Hospital	Sechelt	Gold	(operational)	TBD

2012 GREEN HOUSE GAS EMISSIONS

Vancouver Coastal Health is committed to setting aggressive targets for the reduction of Greenhouse Gas Emissions

“There are major health benefits from low carbon lifestyles, which can reduce obesity, heart and lung disease, diabetes and stress.”

Prof. Anthony Costello
Institute for Global Health

Our Goal: An 18% drop in GHG emissions by 2016

As a government funded organization VCH must abide by the Provincial Government of British Columbia's *Greenhouse Gas Reduction Targets Act* (Bill 44), passed in 2007.

Under the Act, our Green House Gas emissions are to be reduced below our 2007 levels as follows:

- **18% by 2016**
- **33% by 2020**
- **80% by 2050**

The Act also laid the foundation for the *Emission Offsets Regulation* and the *Carbon Neutral Government Regulation*, both enacted in December 2008, which guides VCH.

Our 2012 carbon footprint: 45,568 tCO₂e

VCH has calculated our 2012 carbon footprint, in accordance with the Greenhouse Gas Reduction Targets Act (as reported in SMARTTool), to be 45,568 tonnes. This represents a non-adjusted **2.75% reduction** from our 2011 footprint.



Our Carbon Footprint (in tCO₂e)

	2010	2011	2012 ¹
Mobile Fuel Combustion (Fleet & other mobile equipment)	107	49	88.2
Stationary Fuel Combustion & Electricity (Buildings)	44,882	45,719	44,853
Supplies (Paper)	1,392	1,425	627
Total Carbon Footprint (tCO ₂ e)	46,382	47,192	45,568
Emissions per Full-Time Employee	3.41	3.65	3.43
Emissions per Meter Square Facility Space	0.057	0.058	0.056
Weather (summarized in Heating Degree Days) ²	2,853	2,963	2,874

¹ Carbon Footprint adjusted for 2011 in 2012, due to building data corrections from the Climate Action Secretariat.

² Building energy consumption is heavily influenced by weather patterns. Heating Degree Days (HDD's) provide a summary of annual weather patterns (a higher value indicates a cooler winter). HDD's listed are for Vancouver specifically, using a base temperature of 18 deg C.



CARBON OFFSETS

In 2012
we were
carbon
neutral
for the third
year in a
row

Vancouver Coastal Health purchased carbon offsets to become carbon neutral in 2012

Offsets applied to be carbon neutral in 2012

Vancouver Coastal Health was carbon neutral in 2012. We achieved this through our commitment to reduce energy, paper, travel and CO₂ emissions, and by purchasing offsets.

The offsets, for in-scope emissions, were purchased from the Pacific Carbon Trust and amounted to \$ 1,199,468 (pre-adjustment for missing paper data).

Carbon Footprint since 2011

The **3.57% reduction** in emissions per meter square of floor space have been achieved by mechanical and electrical energy retrofits, policy development, and behavior change programs.

Our Carbon Offsets ¹	2010	2011 ⁴	2012 ⁴
Carbon Footprint in tCO ₂ e	46,382	47,192	45,568
Emissions Which Do Not Require Offsets ²	0	-12	-16
Carbon Footprint (needing offsetting) in tCO ₂ e	46,382	47,180	45,552
Purchased Carbon Offsets ³	\$ 1,147,124	\$ 1,188,675	\$ 1,142,350
Purchased Carbon Offsets +HST / GST	\$ 1,284,779	\$ 1,331,316	\$ 1,199,468

¹ It was estimated that Fugitive Emissions from cooling equipment do not comprise more than 0.01% of VCH'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.

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

³ Purchased carbon offsets for 2011 include payment credit and space adjustments from 2010.

⁴ Purchase Carbon Offsets for 2011 and 2012 include Carbon Footprint adjustment from 2010 and 2011, due to building data corrections from the Climate Action Secretariat.

EMISSIONS REDUCTION ACTIVITIES 2012

Vancouver Coastal Health continued to take strides to reduce our carbon footprint. In 2012 we undertook multiple projects, including the following highlights

ENERGY CONSERVATION & CLIMATE NEUTRAL: We improved efficiency

Energy Saved

Vancouver Coastal Health completed **20** energy projects in 2012 which led to big annual savings for us...and the environment.

2.95 GWh

Electricity saved

22,700 GJ

Natural gas saved

1,218 tCO₂e

Greenhouse gas reduction

- **All owned VCH buildings have a Building Energy Performance Index (BEPI - kWh/m²/yr)** for Acute, and Extended/Residential Care facilities. Building Energy Performance Index (BEPI - kWh/m²/yr) for Core VCH Acute Care facilities (9) and Nursing and Residential Care facilities (7) are updated quarterly
- **Twenty (20) energy retrofit projects** were completed in 2012 in 16 buildings for an estimated annual savings of 2.95 million kWh of Electricity, 22,700 GJ of natural gas and a reduction of 1,218 tCO₂e of GHG emissions per annum.
- **Initiated the investigation phase of BC hydro's Continuous Optimization Project (COP)** in seven (7) separate (1,584,716 sq ft) VCH buildings.
- **5 real time Pulse meters** were implemented in 5 VCH buildings in 2012.
- **Virtualization of servers** within the Lower Mainland Health Authorities (FHA, VCHA, PHSA, and PHC) is in progress. This will affect four (4) VCH core sites (VGH, LGH, Squamish Hospital, and Powell River Hospital) with a potential savings of 450,000 kWh. Progress report for the BC Health Shared Services (HSSBC) indicates that they were 30% completed in 2012
- **All computer desktops, laptops, and flat screen monitors**, purchased and/or leased in 2012, are ENERGY STAR models and replace energy inefficient units.

EMISSIONS REDUCTION ACTIVITIES 2012 CONT'D

Clean Commuter Challenge

During May of 2012, as part of our new GreenCare Community website bcgreencare.ca, we ran a Clean Commuter Challenge and asked Lower Mainland staff at Fraser Health, the Provincial Health Services Authority, Providence Health Care and Vancouver Coastal to commit to taking actions to reduce their personal commuting carbon footprint.

The Clean Commuter Challenge by numbers:

11 teams

participated in the challenge

48% reduction

in participating staff's commuting carbon footprint

249 goals

made by staff to support sustainable commuting

70% increase

in kilometers biked by VCH staff

REGENERATIVE DESIGN: We use green standards

- **It's now mandatory to incorporate an Integrated Design Process** for all new construction and major renovation projects at VCH. New projects, currently in various stages of development in 2012, incorporated Integrated Design Process and LEAN principles.
- **LEED NC Gold standards are being used** in the construction of a residential care facility extension (4,830 square meters) of St Mary's Hospital in Sechelt.
- **Design and planning was completed for the HOpe Centre**, a mental health residential care facility in North Vancouver. Construction was started in December, 2012. Completion and occupancy is scheduled for 2014.

ZERO WASTE: We recycled and reduced

- **Implemented a recycling renewal program** at 13 acute care and residential sites since 2010.
- **Implement kitchen food diversion and composting** at various sites.
- **Rechargeable batteries are used in ARAMARK-staff pagers**, instead of disposable batteries. ARAMARK is VCH's contracted housekeeping provider.
- **We held a Food Waste Forum** with acute care stakeholders to plan food waste reduction initiatives.

ACTIVE TRANSPORTATION: We facilitated greener commutes

- **We collaborated with VCH, PHSA, and PHC to conduct a Clean Commuter Challenge**, which encouraged staff to become more active in their commutes. Staff competed to reduce their commute carbon footprint.
- **IPS created a Transportation Demand Management Coordinator position.**





GREEN+LEADERS

We've recruited **265** staff volunteers throughout the Lower Mainland including **41** VCH staff

300 G+L campaigns

Green+Leaders carried out 300 campaigns in LMHA departments in 2012 to reduce waste, energy and promote sustainable transportation

31 special projects

G+L staff volunteers implemented an additional 31 projects in LMHA departments; examples include implementing battery recycling programs, setting up paperless timekeeping procedures, rolling-out a hospital-wide recycling program at a P3 site and creating a working group for Laboratory staff to reduce waste and energy use.

22 Educational Events

The program offered 22 different educational events to support and provide additional training for the volunteers. Topics included:

- **The founding of Greenpeace**
- **The carbon footprint of food and,**
- **Energy reduction**

EMISSIONS REDUCTION ACTIVITIES 2012 CONT'D

CULTURE OF STEWARDSHIP: We engaged staff

- **We incorporated GreenCare messaging into staff orientations** at Vancouver General, Richmond and Lion's Gate Hospitals.
- **We ran energy awareness campaigns** to encourage staff:
 - To use stairs to save energy and encourage fitness
 - To "Turn Off Lights" when not in use (through a sticker prompt)
 - To "Turn off the Monitor" when not in use
- **Issued a "Green Playbook"** document to provide sustainability principles and guidelines to the Lower Mainland Facilities Management (LMFM) teams.
- **Over 2,956 Lower Mainland staff, including 1,236 Vancouver Coastal Health employees, signed up for our Cut the Carbon Community** campaign. They committed to take actions that would reduce over 500 tonnes of carbon emissions through this Fortis sponsored site.
- **We expanded our Green+Leaders program** and recruited 41 staff volunteers to champion and run behavior change campaigns at their hospitals, care facilities and offices focusing on:
 - **waste and paper reduction; energy reduction; and sustainable transportation.**
- **Staff have access to real-time power usage per hospital** through our online GreenCare Community and our partnership with Pulse Energy. This builds awareness of the success of initiatives and retrofits.
- **As part of the BC Hydro Workplace Conservation Agreement (WCA),** Energy Awareness fairs were organized during 2012 at 5 core VCH sites.

SUSTAINABLE PROCUREMENT: We prioritize sustainability in procurement

- Health Shared Services BC (HSSBC) developed sustainability criteria for consumables and equipment RFPs. The department also initiated a scanning project involving 4 million documents to digitize processes for accounts payable and receivable, records, and benefits. Customers can now view documents online rather than printing everything out.

EMISSION REDUCTION GOALS 2013-14

Our plans to continue reducing greenhouse gas emissions 2013-2014

The four Lower Mainland health organizations, Vancouver Coastal Health, Fraser Health, Provincial Health Services Authority, and Providence Health Care, will continue to coordinate, collaborate and integrate energy and environmental initiatives within all our operational clinical and non-clinical work.

As part of those efforts, the following is a list of tasks to be achieved by Vancouver Coastal Health in 2012.

ENERGY CONSERVATION & CLIMATE NEUTRAL: We improved efficiency

Server virtualization project to continue and will hopefully be completed in 2013.

Additional Pulse meters will be installed in other buildings pending the additional implementation of BC Hydro's Continuous Optimization Program (COP) in other VCH facilities

Implement lighting retrofits in 8 VCH owned facilities (1,660,000 square feet) at the VGH site, Richmond Hospital and Evergreen House in North Vancouver. Retrofits will include T12 lamps and magnetic ballasts replacement, installation of lighting controls, emergency exit signs as well as occupancy sensors. These facilities went through a detailed lighting audit process in 2010/2011. Estimated savings of 1.44 million kWh per annum and reduction of GHG emissions by 37 tCO₂e per annum

Eighteen (18) BC hydro Continuous Optimization Projects (COP) will be completed during 2013-2014-2015. Twelve (67%) will be completed during 2013 and 2014 and all will include mechanical retrofits/updates energy measures for heating, cooling and ventilation. Estimated annual savings from these energy measures are 26,159 GJ from natural gas, 4.3 million kWh of electricity, and 1,428 tCO₂e GHG emissions reductions

per annum, an estimated reduction of 3.1% from our 2012 carbon footprint

CULTURE OF STEWARDSHIP: We will engage staff?

Recruit more staff volunteers and continue to support our Green+ Leaders.

Hold a Food Waste Forum for residential care stakeholders to reduce food waste.

Run Green+Leaders materials reduction campaign in 120 departments across all four health authorities by the end of 2013.

Run energy reduction campaigns in 120 departments across all four health authorities by end of 2013.

Continue agreement with BC Hydro and participate in their Workplace Conservation Program.

Re-brand and re-launch the staff engagement website. The Cut the Carbon Community (C3) will transform to become the GreenCare Community (GCC), which will continue to be a website that offers stories, tips, challenges, incentives, and collaboration for staff around energy and environmental conservation.

Launch a "badge" program where staff, on the GCC, can earn badges, which are awarded for various commitments in energy & environmental conservation.



Energy Conservation



Walk, Bike, Ride



LEED & Living Building Design

EMISSIONS REDUCTION GOALS 2013 CONT'D

REGENERATIVE DESIGN: We improve building efficiency

Continue to use the GOLD LEED standard in new facility design and construction, and the LEED standard for all major renovations.

Continue to encourage the BOMA BEST standard in our leased buildings.

Investigate using Evidence Based Design and LEAN principles in building designs.

Evaluate using Perkins Will Precautionary List and the Living Building Challenge's Red List in all project design.

Joe and Rosalie Segal Care Centre at the VGH Vancouver, a 100 bed mental health care centre, currently in the design and planning stage, will be opened in Vancouver at the VGH site in 2014/2015

HOpe Centre in North Vancouver, a mental health residential care facility, currently under construction, will be opened in 2014 / 15.

ACTIVE TRANSPORTATION: We facilitated greener commutes

Continue the Clean Commuter Challenge in 2013.

Continue the Green+Leaders sustainable transportation focus including a campaign to encourage walking, cycling or public transit for work commute.

ZERO WASTE: We reduced waste to incineration

Roll out recycling renewal programs to 20 Community Health Centres.

Implement Food Services recycling and composting at other VCH sites.

HEALTHY LAND & FOOD: We are healthier with our land & food usage

Pilot 2 additional community gardens, and integrate them into health care services with the intention of community engagement and enhanced health care.

WATER CONSERVATION & RESTORATION: We reduce water waste

A water conservation plan will be developed over the next 3 years

Two (2) VCH facilities are currently undergoing comprehensive water consumption audits. Results and recommendations will be incorporated in our future water consumption plans and initiatives



ASSURANCES AND RESOURCES

Health Authority Resources

- **Vancouver Coastal Health**
<http://www.vch.ca/>
- **Providence Health Care** <http://www.providencehealthcare.org>
- **Fraser Health**
<http://www.fraserhealth.ca>
- **Provincial Health Services Authority**
<http://www.phsa.ca>
- **GreenCare Community**
www.bcgreencare.ca

External Resources

- **LiveSmart BC: 2010 Carbon Neutral Action Reports: Health Authorities**
http://www.livesmartbc.ca/government/carbon_neutral/health_authorities.html
- **Bill 44 – 2007; Greenhouse Gas Reduction Targets Act**
http://www.leg.bc.ca/38th3rd/1st_read/gov44-1.htm
- **Canadian Green Building Council LEED description**
<http://www.cagbc.org/>
- **ASHRAE 189.1 standard for new buildings and renovations**
<http://www.ashrae.org/resources--publications/bookstore/standard-189-1>
- **BOMA BEST Environmental Certification**
<http://www.bomabest.ca/>
- **Natural Resources Canada**
<http://www.nrcan.gc.ca/home>

Partner Resources

- **Fortis**
<http://www.fortisbc.com>
- **BC Hydro**
<http://www.bchydro.com/>

Assurance

As part of meeting the Carbon Neutral Government Regulations, all Public Sector Organizations (POS) are now required to annually self-certify, i.e. declare that the data entered into SMARTTool is accurate and complete.

Beginning in 2012, each year a cross section of PSOs will undergo an independent verification process.

In 2011, our Energy and Environmental Sustainability team volunteered for the Climate Action Secretariat's pilot self-certification program.

Feedback from the auditors was good, indicating the Lower Mainland Health Authorities' new process for self-certification is sound.



Vancouver Coastal Health Authority (VCHA) - 2012 Carbon Neutral Action Report

Actions Towards Carbon Neutrality					
The actions listed below contribute to a reduction in greenhouse gas emissions from sources for which public sector organizations are responsible under the carbon neutral government regulation of the Greenhouse Gas Reduction Targets Act.					
Action	Status	Steps Taken	Steps Planned	Start Year	End Year
Mobile Fuel Combustion (Fleet and other)					
Behaviour change program					
Introduce anti-idling policy and/or raise anti-idling awareness for fleet drivers (e.g., signs, stickers, messages)	Completed (in Previous Year)				No End Date (Continuous)
Encourage carpooling in fleet vehicles	Not Yet Evaluated				No End Date (Continuous)
Vehicle fuel efficiency					
Replace vehicles with more fuel-efficient models	Not Yet Evaluated				No End Date (Continuous)
Replace larger vehicles with smaller models according to fleet "right-sizing" principles	Not Yet Evaluated				No End Date (Continuous)
Perform regular fleet maintenance to improve fuel-efficiency	Ongoing/In Progress	All vehicles are maintained regularly to ensure vehicle safety and optimize fuel efficiency. Stringent annual AirCare, a motor vehicle inspection/maintenance (IM) program implemented in BC in 1992, requires all vehicles to undergo emissions testing prior to licence renewals. Other vehicle maintenance includes regular oil changes and oil filter replacements as well as checking tire pressures at every fuel purchase	Maintain practice	2008	No End Date (Continuous)
Stationary Fuel Combustion, Electricity					
Behaviour change program					
Help staff reduce personal energy use through ""workstation tune-ups""	Not Yet Evaluated				No End Date (Continuous)
Ask staff to unplug electrical equipment or switch off power bars when not in use	Ongoing/In Progress	"Stop the Energy bleed, Turn off lights no one is using" book marks are provided by energy management staff to employees during energy fairs and other Energy Awareness sessions. Cut the Carbon Community (C3) provides tips for staff to unplug and switch off electrical devices when not in use	Maintain practice	2009	No End Date (Continuous)
Ask staff to unplug electrical equipment or switch off power bars when not in use	Ongoing/In Progress	"Stop the Energy bleed, Turn off lights no one is using" book marks are provided by energy management staff to employees during energy fairs and other Energy Awareness sessions. Cut the Carbon Community (C3) provides tips for staff to unplug and switch off electrical devices when not in use	Maintain practice	2009	No End Date (Continuous)
Ask staff to close blinds at end of work day to reduce heating/cooling demands	Ongoing/In Progress	Information provided to staff during Energy Awareness and education sessions. Also included in the Green+Leaders energy reduction campaigns.	Maintain practice	2009	No End Date (Continuous)
Provide tips to staff on saving energy in the office while working outside	Ongoing/In	"Stop the Energy bleed, Turn off lights no one is using" book marks	Maintain practice and awareness initiatives. Use the Green+Leaders	2010	No End Date

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Actions Towards Carbon Neutrality					
The actions listed below contribute to a reduction in greenhouse gas emissions from sources for which public sector organizations are responsible under the carbon neutral government regulation of the Greenhouse Gas Reduction Targets Act.					
Action	Status	Steps Taken	Steps Planned	Start Year	End Year
of regular business hours	Progress	are provided by Energy and Environment Sustainability staff to employees during energy fairs and other Energy and Sustainability awareness sessions. Staff are encouraged to only use power and/or lighting in ones work area rather than the whole suite.	behaviour change program which focuses on energy reduction throughout the year. Target is to recruit 120 volunteers by end of 2013 for the Lower Mainland Health Authorities (VCH, PHC, PHSA, and FHA)		(Continuous)
Encourage use of stairs instead of elevators	Ongoing/In Progress	Energy awareness campaigns encourage staff to use stairs where feasible to save energy and encourage personal fitness. "Take the Stairs" awareness is incorporated into the Green+Leaders program	Maintain practice and awareness initiatives.	2010	No End Date (Continuous)
Provide reminders for turning off lights (e.g., signs, stickers, messages)	Ongoing/In Progress	"Stop the Energy bleed, Turn off lights no one is using" book marks are provided by Energy and Environment Sustainability staff to employees during energy fairs and other Energy and Sustainability awareness sessions. Non-wall damaging stickers to turn off lights when not in use have been installed by light swtiches to encourage electricity savings. Green+Leaders ran an energy reduction campaign to promote energy conservation by turning off unnecessary lights and other electrical equipment.	Green+Leaders will continue running energy reduction campaigns in their departments to encourage staff to turn off lights and equipment. Will be implemented in 120 departments by end of 2013.	2010	No End Date (Continuous)
Promote hot water conservation	In Development	The Energy and Environment Sustainability team initiated a water conservation assessment trial in 2011 using water saving device at one VCH Hospital in preparation for a hot water conservation plan at other Lower Mainland Health Authorities (FH, VCA, PHSA, PH). No other initiative was undertaken in 2012	A water Conservation plan will be developed over the next 3 years Two (2) VCH facilities are currently undergoing a comprehensive water consumption audits. Results and recommendations will be incorporated in our future water consumption plans and initiatives	2011	2014
IT power management					
Install power management software which shuts down computers outside of regular business hours	In Development	No new developments in 2012	Under review by Customer Technology and Services department of the Health Shared Services BC (HSSBC) for potential implementation in 2013-2014	2012	No End Date (Continuous)
Implement server virtualization	Ongoing/In Progress	Virtualization of servers within the Lower Mainland Health Authorities (FHA, VCHA, PHSA, PHC) was in progress in 2012. This will affect four (4) VCH core sites (VGH, LGH, Squamish Hospital, and Powell River Hospital) with a potential savings of 450,000 kWh. Progress report for the BC Health Shared Services (HSSBC) indicated that they were 30% completed in 2012	Virtualization project to continue for potential 100% completion in 2013.	2012	2013
Apply auto-sleep settings on computer monitors and CPUs	Ongoing/In Progress	No new developments in 2012 Auto-sleep settings are the standard configuration settings for all new and older CPUs and monitors that support this functionality.	Maintain practice	2008	No End Date (Continuous)

Vancouver Coastal Health Authority (VCHA) - 2012 Carbon Neutral Action Report

Actions Towards Carbon Neutrality					
The actions listed below contribute to a reduction in greenhouse gas emissions from sources for which public sector organizations are responsible under the carbon neutral government regulation of the Greenhouse Gas Reduction Targets Act.					
Action	Status	Steps Taken	Steps Planned	Start Year	End Year
Remove stand-alone printers, copiers, and/or fax machines and install multi-function devices as part of a print management strategy	Ongoing/In Progress	All new and replacement printers, copiers, and fax machines purchased and/or leased in 2012 are multi-function devices as part of a print management strategy.	Maintain practice	2008	No End Date (Continuous)
Apply auto-sleep settings on printers, fax machines, and/or multi-function devices	Ongoing/In Progress	Auto-sleep settings are applied to all new and replacement multi-function devices incorporating printing, copying, and faxing functionalities in 2012. Auto-sleep settings are the standard configuration setting for all devices that support this functionality. All new printers, copiers, fax machines and/or MFPs (Multi-function Printers) had auto-sleep settings applied.	Maintain practice	2008	No End Date (Continuous)
Replace computers with ENERGY STAR models during regular computer upgrades	Ongoing/In Progress	All computer desktops, laptops, and flat screen monitors, purchased and/or leased in 2012, were ENERGY STAR models and replaced energy inefficient units.	Maintain practice	2011	No End Date (Continuous)
Leased buildings					
Establish energy performance baseline for leased buildings	Not Yet Evaluated				No End Date (Continuous)
Lease space with operations and maintenance performance labelling/certification (e.g., LEED EB:O&M)	Ongoing/In Progress	Two leased buildings were certified as BOMA Best 520 West 6th Ave ¿ BOMA Best Level 1 Robert and Lily Family Community Health Care ¿ BOMA Best Level 2	None at this time	2012	No End Date (Continuous)
Lease space with commercial interiors performance labelling/certification (e.g., LEED CI)	Not Yet Evaluated				No End Date (Continuous)
Lease space in buildings with new construction performance labelling/certification (e.g., LEED NC)	Not Yet Evaluated				No End Date (Continuous)
Develop a green lease policy that requires green features to conserve energy be included in all lease negotiations	Ongoing/In Progress	A Tenant Improvement Handbook, incorporating some elements of Green Lease policies developed in 2007 and updated in 2009, is in the process of additional updates to incorporate the different standards for all of 2012 consolidation of the Lower Mainland Facilities Management (VCH, FHA, PHSA, PHC) No further developments in 2012	Final review and approval of the Tenant Improvement Handbook by the Steering Committee. Maintain and improve green leasing practices, energy consumption, buildings efficiency, sustainability, and occupant satisfaction and comfort.	2012	No End Date (Continuous)
Other Stationary Fuel Combustion					
Implement a BC Hydro Strategic Energy Management Plan (SEMP) to identify and plan for annual energy reductions	Ongoing/In Progress	The BC Hydro Strategic Energy Management Plan (SEMP) was updated in 2012. Energy savings were identified for projects completed in 2012 and compared with established targets. Annual savings targets were projected to 2020.	Maintain reporting	2009	No End Date (Continuous)
Implement Facilities Maintenance and Operations (FM&O)Energy Savings Workshops	Ongoing/In Progress	A "Spot the Energy Savings Workshop" was initiated in 2012 and coordinated with the help of NRCan and PRISM Engineering.	Implement similar annual energy savings awareness education sessions	2012	No End Date (Continuous)

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Action	Status	Steps Taken	Steps Planned	Start Year	End Year
		There were 20 participants from the VCH Facilities Maintenance and Operations staff from 5 facilities in Vancouver, Richmond, the North Shore and Sechelt. This workshop was specifically targeted for Facilities Maintenance and Operations staff of the VCH , PHSA, and PHC.			
Develop and issue of an Energy and Environmental Sustainability Green Guidelines (Playbook)	Ongoing/In Progress	The Lower Mainland Facilities Management (LMFM) Energy and Environmental Sustainability team developed and issued a "Green Playbook" to provide sustainability principles and guidelines to all of the LMFM teams.	Maintain, improve and encourage the use of the "Green Playbook".	2012	No End Date (Continuous)
Owned buildings					
Establish energy performance baseline for owned buildings	Ongoing/In Progress	All owned VCH buildings have a Building Energy Performance Index (BEPI - ekWh/m2/yr) for Acute, and Extended/Residential Care facilities. Building Energy Performance Index (BEPI - ekWh/m2/yr) for Core VCH Acute Care facilities (9) and Nursing and Residential Care facilities (7) are updated quarterly	Maintain Practice	2008	No End Date (Continuous)
Register for performance labelling/certification for operations and maintenance of owned buildings (e.g., LEED EB:O&M)	Not Yet Evaluated				No End Date (Continuous)
Register for performance labelling/certification for commercial interiors of owned buildings (e.g., LEED CI)	Not Yet Evaluated				No End Date (Continuous)
Achieve LEED NC Gold certification at a minimum for new construction or major renovations	Ongoing/In Progress	St Mary's Hospital extension in Sechelt, a 38 bed extension, was completed in 2012 and is currently being commissioned and will be opened for occupancy by the end of March, 2013. This facility will be LEED Gold NC certified. Design and planning were completed for the HOpe Centre, a mental health residential care facility in North Vancouver. Construction was started in December, 2012. Completion and occupancy is scheduled for 2014. This facility will be LEED Gold NC certified.	Joe and Rosalie Segal Care Centre at the VGH site in Vancouver, a 100 bed mental health care centre, currently in the design and planning stage, will be opened for occupancy in 2014/2015. This facility will be LEED Gold NC certified. HOpe Centre in North Vancouver, a mental health residential care facility, currently under construction in North Vancouver. Will be opened for occupancy in December 2014. This facility will be LEED Gold NC certified.	2008	No End Date (Continuous)
Perform energy retrofits on existing, owned buildings	Ongoing/In Progress	Twenty (20) energy retrofit projects were completed in 2012 in 16 buildings for an estimated annual savings of 2.95 million kWh of Electricity, 22,690 GJ of natural gas and a reduction of 1,218 tCO2e of GHG emissions per annum. A major renovations retrofit of a 60,000 sq ft 1929 building at the VGH site in Vancouver, initiated in 2011, was completed in June 2012. Previously heated by inefficient steam, the retrofited building incorporates a high efficiency condensing boiler for building heating, increased building envelope and wall insulation, high performance glazing. low flow DHW (domestic hot water) and high efficiency	Seven (7) lighting retrofits in 7 buildings (1.9 million sq ft) are scheduled for implementation and completion in 2013 for estimated savings of 1.4 million kWh and a reduction of 36 tCO2e of GHG per annum. Implement lighting retrofits, pending funding, in 3 VCH owned buildings (860,000 sq ft)in 2014 for a total annual estimated electricity savings of 1.02 million kWh and 27 tCO2e of GHG emissions reductions per annum. Initiate and complete the Implementation phase of BC hydro's	2008	No End Date (Continuous)

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Action	Status	Steps Taken	Steps Planned	Start Year	End Year
		HVAC system. This building retrofit went through a BC hydro Energy Modeling process to maximize energy savings. Initiated the investigation phase of BC hydro's Continuous Optimization Project (COP) in seven (7) separate VCH buildings (1,584,647 sq ft). Most energy measures will be to upgrade and optimize mechanical as well DDC building control systems.	Continuous Optimization Program (COP) in 18 facilities over the calendar years 2013, 2014. 2015 for estimated annual savings of 4.3 million kWh of electricity, 26,000 GJ of natural gas and a reduction 1,428 tCO2e in GHG emissions per annum.		
Incorporate a refrigerant management strategy into regular building management/maintenance to reduce fugitive emissions	Ongoing/In Progress	A refrigerant management strategy is in place in the regular building management/maintenance procedures to reduce fugitive emissions. Chiller and refrigeration maintenance contracted services incorporate refrigerant leak detection and monitoring, leak repair, system retirement and retrofitting, and appropriate bleeding of banned refrigerants.	Maintain practice	2008	No End Date (Continuous)
Planning/management					
Reduce office space (square meters) per employee	Ongoing/In Progress	Leases reviews and consolidation of some under-utilized leased facilities was undertaken to reduce energy utilities consumptions, the organization's carbon footprint, square footage footprint and leasing costs. Based on staff occupancy and square footage of leased facilities, the square footage of leased facilities at the end of 2012 was 22.5 square meters per employee.	Continue consolidation of under utilized leased facilities and reduce leased space inventory	2010	No End Date (Continuous)
Install a real time metering system (e.g. Pulse, Reliable Controls, Houle Controls)	Ongoing/In Progress	Total of 5 real time Pulse meters were installed in 5 VCH buildings in 2012.	Additional Pulse meters and submetering will be installed in other buildings pending the additional implementation of BC Hydro's Continuous Optimization Program (COP) as well as part of construction of new buildings and major systems upgrades	2009	No End Date (Continuous)
Retrofit details for owned buildings					
Upgrade mechanical systems (heating, cooling, ventilation) during retrofits	Ongoing/In Progress	Of the twenty (20) energy retrofit projects and energy measures completed in 2012, sixteen (16 = 80% of projects) included mechanical systems energy measures. including heating and cooling upgrades as part of the retrofits.	Eighteen (18) BC hydro Continuous Optimization Projects (COP) Implementation phase will be completed during 2013-2014-2015. Twelve (12 = 67%) will be completed during 2013 and 2014 and all will include Mechanical retrofits/updates energy savings measures for heating, cooling and ventilation. Annual savings from these 18 energy projects are estimated at 4.3 million kWh, 26,159 GJ from natural gas and 1,428 tCO2e of GHG emissions reductions per annum. Savings for 2013-2014 are estimated at 3.7 million kWh, 20,076 GJ of natural gas and 1,020 tCO2e of GHG emissions reduction	2008	No End Date (Continuous)

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Action	Status	Steps Taken	Steps Planned	Start Year	End Year
Upgrade lighting systems during retrofits	Ongoing/In Progress	<p>Of the 20 energy projects completed in 2012, four (4 = 20%) included energy lighting retrofits and measures, including lighting design and controls, for a total estimated savings of 226,253 kWh per annum</p> <p>Nine (9) buildings (2,395,983 sq ft) at the VGH site were re-audited for lighting retrofits planned for implementation in 2013.</p> <p>"</p>	<p>Plans are in place to implement lighting retrofits in 13 VCH owned facilities (2,500,000 sq ft) in 2013-2014 at the VGH site, Richmond hospital, the North Shore and in Sechelt. Retrofits will include replacement of all T12 lamps and magnetizing ballasts, installation of lighting controls, emergency exit signs as well as occupancy sensors. These facilities went through a detailed lighting audit process in 2011.</p> <p>Estimated savings of 2.5 million kWh per annum and reduction of GHG emissions by 65 tCO2e per annum</p>	2008	No End Date (Continuous)
Upgrade/adjust control systems during retrofits	Ongoing/In Progress	<p>Of the 20 energy projects completed in 2012, twelve (12 = 60%) resulted in programming and optimization of the buildings Control systems. This included three (3) completed BC hydro Continuous Optimization Programs (COP) projects (Richmond Hospital, UBC Hospital and Mount St Joseph Hospital). Nine (9) others were for other energy retrofits in 5 owned VCH facilities.</p>	<p>Twelve (12) other BC hydro Continuous Optimization Programs (COP), scheduled for completion at 7 VCH owned facilities in 2013-2014 will have their building control systems optimized.</p> <p>All BC Hydro Continuous Optimization Programs (COP) include optimization of the building control systems during the implementation phase of the program. Where needed, implementation of other mechanical energy retrofits require optimization/adjustment of building control systems</p>	2012	No End Date (Continuous)
Improve building insulation (including windows) during retrofits	Ongoing/In Progress	<p>A new 65,000 sq ft building completed in June, 2012 at the VGH site in Vancouver, included windows high performance glazing and increased wall and roof R-value insulation for an estimated savings of 70,000 kWh of electricity.</p>	<p>All new buildings in the planning/Design stage or are currently under construction will have increased wall and roof insulation as well as high performance glazing. These include:</p> <p>Joe and Rosalie Segal Care Centre at the VGH Vancouver, a 100</p>	2012	No End Date (Continuous)

Vancouver Coastal Health Authority (VCHA) - 2012 Carbon Neutral Action Report

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Action	Status	Steps Taken	Steps Planned	Start Year	End Year
		A LEED-Gold addition to St Mary's Hospital in Sechelt included R12 Wall and R20 Roof insulation	bed mental health care centre, currently in the design and planning stage, will be opened in Vancouver at the VGH site in 2014. This will be built to LEED-Gold NC construction standards. The HOpe Centre in North Vancouver, a mental health residential care facility, currently under construction to a LEED-Gold NC standard, will be opened in December 2013 or early 2014. The Powell River Willingdon Village Residential Care Centre, a 100 bed Complex Care residential care facility, while not being built to a LEED-Gold NC construction will have increased levels of roof and wall insulation as well as high performance windows glazing. Construction of this facility will be starting in 2013 and completed in 2015		
Supplies (Paper)					
Behaviour change program					
Train staff to use collaborative software for electronic editing (e.g. SharePoint, Groove, etc.)	Ongoing/In Progress	Some training was made available to staff.	Health Shared Services BC (HSSBC) to review training needs and develop action plan	2008	No End Date (Continuous)
Encourage staff to hold paperless meetings or presentations (i.e., no handouts)	Ongoing/In Progress	Practice was encouraged. Green+Leaders materials reduction campaign included a focus on paper reduction.	On-going and part of the paper reduction campaigns strategies. Green+Leaders program includes a paper reduction campaign that includes a tool on paperless meetings.	2008	No End Date (Continuous)
Electronic media in place of paper					
Install collaborative software for electronic editing (e.g. SharePoint, Groove, etc.)	Ongoing/In Progress	Current use of MS Sharepoint Collaborative software for Electronic editing is available to staff where required.	Initiative in place to enhance use of a centralized web based MS SharePoint 2010 electronic editing and make available to all approved facilities staff across the Lower Mainland Health Authorities (VCH, PHC, FHA, PHSA).	2010	No End Date (Continuous)
Use electronic document library for filing common documents	Ongoing/In Progress	Shared drives and electronic document libraries were available to most staff at VCHA	Practice will continue. Enhance and extend use in Facilities, including Planning, Construction and Engineering"	2008	No End Date (Continuous)
Switch to an electronic payroll notification system in place of paper pay stubs	Completed (in Reporting Year)	Electronic payroll notification in place of pay stubs was implemented for all VCHA employees		2012	No End Date (Continuous)
Paper Type					
Purchase 30% post-consumer recycled paper	Not Yet Evaluated				No End Date (Continuous)
Purchase 40% post-consumer recycled paper	Not Yet Evaluated				No End Date (Continuous)
Purchase 100% post-consumer recycled paper	Not Yet Evaluated				No End Date (Continuous)
Printer/document settings					
Switch networked printers and photocopiers to automatic double-sided	Ongoing/In	All new and replacement Multifunction printers and photocopiers	Maintain practice	2009	No End Date

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Action	Status	Steps Taken	Steps Planned	Start Year	End Year
	Progress	since 2009 have automatic double sided printing as the default setting unless required otherwise			(Continuous)

Vancouver Coastal Health Authority (VCHA) - 2012 Carbon Neutral Action Report

Actions to Reduce Provincial Emissions and Improve Sustainability					
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Action	Status	Steps Taken	Steps Planned	Start Year	End Year
Business Travel					
Behaviour change program					
Train staff in web-conferencing	Ongoing/In Progress	Limited staff training at this time due to lack of staff resources	Staff training for web-conferencing is now part of the HSSBC mandate and responsibility. Staff Training will be expanded	2010	No End Date (Continuous)
Encourage staff to consider virtual attendance/presentation at events where possible	Ongoing/In Progress	Green+Leaders sustainable transportation campaign includes a tool to encourage staff to hold virtual meetings. Staff are encouraged to participate in video conferencing and other virtual attendance presentations sessions.	Maintain practice where possible. Part of the Green+Leaders program will include encouraging staff to hold virtual meetings as part of the sustainable transportation focus.	2009	No End Date (Continuous)
Encourage carpooling to meetings	Ongoing/In Progress	Green+Leaders sustainable transportation campaign includes a tool to encourage staff to carpool to meetings. Staff are encouraged to carpool to meetings	Practice to continue. Green+Leaders program will include encouraging staff to carpool as part of the sustainable transportation focus.	2010	No End Date (Continuous)
Encourage alternative travel to meetings (e.g., bicycles, public transit, walking)	Ongoing/In Progress	Green+Leaders sustainable transportation campaign includes a tool to encourage staff to use sustainable alternatives to meetings.	Practice to continue. Part of the Green+Leaders program will continue to encourage alternatives to SOVs when travelling to meetings.	2010	No End Date (Continuous)
Policy and budgeting					
Create a low-carbon travel policy or travel reduction goal	Not Yet Evaluated				No End Date (Continuous)
Virtual meeting technology					
Install web-conferencing software (e.g., Live Meeting, Elluminate, etc.)	Ongoing/In Progress	Web conferencing software is installed as may be needed on some management desktop as well as in major conference rooms.	The installation of Office Communication System (OCS), including web-conferencing software, is now part of HSSBC mandate and responsibility. Use will be expanded	2010	No End Date (Continuous)
Make desktop web-cameras available to staff	Not Yet Evaluated				No End Date (Continuous)
Install video-conferencing units in meeting rooms or provide mobile video-conferencing units	Ongoing/In Progress	Most main conference rooms in the larger facilities had video-conference units installed in 2012	The installation of Office Communication System (OCS), including video-conferencing , is now part of HSSBC's mandate and responsibility. Installation of video-conferencing units will continue to be installed across VCH	2010	No End Date (Continuous)
Education, Awareness, and Engagement					
Awards/Recognition					
Establish a sustainability/green awards or recognition program	Ongoing/In Progress	Annual recognition events are incorporated for Green+Leaders volunteers	Maintain event Launch a "badge" program where staff, on the "Green Care Community" (GCC), can earn badges, which are awarded for various commitments in energy and environmental conservation.	2011	No End Date (Continuous)
Staff Professional Development					
Support green professional development (e.g., workshops, conferences, training)	Ongoing/In Progress	The Green+Leaders program recruits, trains and supports staff volunteers to run behaviour change campaigns in their departments. The program is supported by Executive Team	Maintain practice Implement annual energy savings awareness education sessions	2010	No End Date (Continuous)

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The actions listed below contribute to a reduction in greenhouse gas emissions from sources that fall outside of the reporting requirements defined in the carbon neutral government regulation of the Greenhouse Gas Reduction Targets Act. Public sector					
Action	Status	Steps Taken	Steps Planned	Start Year	End Year
		A "Spot the Energy Savings Workshop" was initiated in 2012 and coordinated with the help of NRCan and PRISM Engineering. There were 20 participants from the VCH Facilities Maintenance and Operations staff from 5 facilities in Vancouver, Richmond, the North Shore and Sechelt. This workshop was specifically targeted for Facilities Maintenance and Operations staff of the VCH , PHSA, and PHC.			
Include green options in employee performance measurement system	Not Yet Evaluated				No End Date (Continuous)
Staff awareness/education					
Provide education to staff about the science of climate change	Not Yet Evaluated				No End Date (Continuous)
Provide education to staff about the conservation of water, energy, and raw materials	Ongoing/In Progress	Green+Leaders energy reduction campaign provides training on energy conservation and sustainability issues through behaviour change.	Maintain practice	2009	No End Date (Continuous)
Provide green tips on staff website or in newsletters	Ongoing/In Progress	Monthly newsletters sent to Green+Leaders featuring resources and suggested readings on various green sustainability topics. A version of the online Cut the Carbon Community (C3) will be redesigned and launched in May 2013 as the "The GreenCare Community" (GCC) to make it more user friendly and provide more content.	Maintain practice	2010	No End Date (Continuous)
Provide sustainability education during new staff orientation	Ongoing/In Progress	Conducted physical GreenCare presentations at the VGH new staff (monthly) orientations. A Power Point presentation was developed and used for the monthly new staff orientations at the Lions Gate Hospital and Richmond General Hospital	Maintain practice and expand the GreenCare Power Point presentations to other VCH sites	2010	No End Date (Continuous)
Team-building					
Create Green, Sustainability, Energy Conservation, or Climate Action Teams with executive endorsement	Ongoing/In Progress	The Green+Leaders program recruits, trains and supports staff volunteers to run behaviour change campaigns in their departments. The program is supported by the Executive Team	Practice to continue	2010	No End Date (Continuous)
Provide resources and/or dedicated staff to support teams	Ongoing/In Progress	The Green+Leaders program has one FTE dedicated to training and supporting volunteers	Practice to continue	2010	No End Date (Continuous)
Providing behaviour change education/training to teams (e.g., community-based social marketing)	Ongoing/In Progress	The Green+Leaders program provides training on Community-Based Social Marketing (CBSM) and CBSM is integrated into its tools	Continue practice	2011	No End Date (Continuous)
Other Sustainability Actions					
Building construction, renovation					
Establish a policy to reuse materials where possible and divert	Not Yet				No End Date

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Action	Status	Steps Taken	Steps Planned	Start Year	End Year
construction and demolition debris from landfills and incineration facilities	Evaluated				(Continuous)
Incorporate lifecycle costing into new construction or renovations	Not Yet Evaluated				No End Date (Continuous)
Commuting to and from home					
Introduce telework/work from home policy	Not Yet Evaluated				No End Date (Continuous)
Offer staff a compressed work week	Not Yet Evaluated				No End Date (Continuous)
Encourage commuting by foot, bicycle, carpool or public transit	Ongoing/In Progress	During May 2012, as part of our new Cut the Carbon Community at c3community.ca, we ran a Clean Commuter Challenge and asked Lower Mainland staff at Fraser Health Authority, the Provincial Health Services Authority, Providence Health Care and Vancouver Coastal Health to commit to taking actions to reduce their personal commuting carbon footprint. Eleven (11) teams participated in the challenge resulting in 48% reduction in participating staff's commuting carbon footprint, 249 goals were made by staff to support sustainable commuting and 70% increased in kilometers biked by VCH staff.	Maintain sustainable commuting initiatives.	2008	No End Date (Continuous)
Provide shower or locker facilities for staff/students who commute by foot or by bicycle	Ongoing/In Progress	No Change	Promote shower and locker room facilities to meet increase in demand pending availability of space and funds	2010	No End Date (Continuous)
Provide secure bicycle storage	Ongoing/In Progress	Most VCH facilities have implemented secure bicycle cages/rooms for staff use.	Increase secure bicycle storage at various sites pending available funding.	2008	No End Date (Continuous)
Other Sustainability Actions					
To enhance our Green+Leaders program, to recruit staff volunteers, and to engage staff to commit to and participate in sustainability, recycling and energy savings initiatives	Ongoing/In Progress	We incorporated GreenCare messaging into staff orientations at Vancouver General, Richmond and Lions Gate Hospitals. We recruited 265 staff volunteers throughout the Lower Mainland including 41 VCH staff Green+Leaders carried out 300 campaigns in the Lower Mainland Health Care departments in 2012 to reduce waste, energy and promote sustainable transportation, including the implementation of 31 special projects; examples include battery recycling programs, rolling out a hospital-wide recycling program at a P3 site and creating a working group for Laboratory staff to reduce waste and energy use. Twenty two (22) educational events were implemented to support and provide additional training for volunteers. Topics included the founding fo GreenPeace, the carbon footprint of food, and energy reduction	Recruit more staff volunteers and continue to support our Green+Leaders. Hold a Food waste Forum for residential care stakeholders to reduce food waste Run Green+ Leaders materials reduction campaign in 120 departments across all four health authorities (VCH, PHC, FH, PHSA) by the end of 2013. Re-brand and re-launch the staff engagement website. The Cut the Carbon Community (C3) will transform to become the GreenCare Community (GCC), which will continue to be a web site that offers stories, tips, challenges, incentives, and collaboration for staff around energy and environmental conservation. Launch a "badge" program where staff, on the GCC, can earn badges which are awarded for various committments in energy and environmental conservation	2008	No End Date (Continuous)

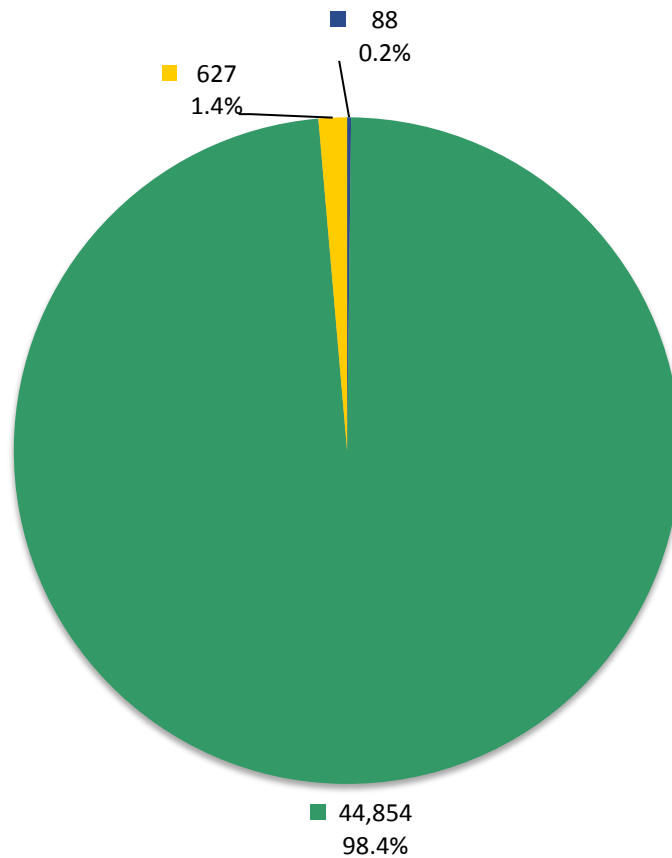
Vancouver Coastal Health Authority (VCHA) - 2012 Carbon Neutral Action Report

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Action	Status	Steps Taken	Steps Planned	Start Year	End Year
		We issued a "Green Playbook" document to provide sustainability principles and guidelines to the Lower Mainland Facilities Management teams (VCH, FH, PHC, PHSA health authorities) Over 2			
Procurement (non-paper supplies)					
Incorporate minimum recycled content standards into procurement policy for consumable, non-paper supplies (e.g., writing instruments, binders, toner cartridges, etc.)	Not Yet Evaluated				No End Date (Continuous)
Establish green standards for goods that are replaced infrequently and/or may require capital funds to purchase (e.g., office furniture, carpeting, etc.)	Not Yet Evaluated				No End Date (Continuous)
Implement sustainable purchasing program for cleaning products, disposable paper products and trash bags	Ongoing/In Progress	70% of paper consumables purchased in 2012 by ARAMARK (contracted housekeeping services provider) were EcoLogo-certified ; an additional 10% of paper products have a recycled content of 80% or higher. 60% of cleaning products used by ARAMARK (contracted housekeeping services provider) will be Environmental Choice certified at all VCH sites where ARAMARK provides housekeeping services; Purchasing practices to be reviewed regularly and new green products added where available, pending approval for use in healthcare facilities by infection control authorities."	Purchasing practices to be reviewed regularly and new green products added where available, pending approval for use in healthcare facilities by infection control authorities.	2010	No End Date (Continuous)
Waste reduction/diversion					
Put in place an operations policy to facilitate the reduction and diversion of building occupant waste from landfills or incineration facilities	Ongoing/In Progress	A Coordinator, Reduction and Recycling position implemented recycling strategies at major acute sites; Visited recycling plants in order to understand processes and what materials can be recycled; developed indicators for recycling reporting; designed surveys to assess staff awareness and satisfaction; Compiled waste and recycling data; Conducted staff education; Initiated recycling programs at a number of VCH authorities sites. Recyclable materials include paper, confidential paper, plastics, soft drink cans, cardboard, batteries, Mercury, electronics, and fluorescent and HID lighting. Rolled out recycling renewal program at 13 acute care and residential care sites since 2010 Implemented kitchen food services diversion and composting at various sites.	Maintain, enhance and roll out recycling programs and implement Food Services recycling and composting at other VCH sites	2010	No End Date (Continuous)

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Action	Status	Steps Taken	Steps Planned	Start Year	End Year
		We held a Food Waste Forum with axcute care stakholders to plan food waste reduction initiatives			
Implement a hazardous waste reduction and disposal strategy	Ongoing/In Progress	Maintained compliance levels. The 2012 developed Energy and Environmental Sustainability "Green PlayBook", which provides principles and guidelines to the Lower Mainland Facilities Management Management (LMFM) teams, includes our commitment to the Metro Vancouver Zero Waste Challenge and the identification of hazardous waste materials	Maintain compliance levels. Business Initiatives and Support Services (BISS) has developed a biomedical waste reduction initiative with a waste reduction target of 10% by April 2014. Funding has been for a Hazardous Waste Co-ordinator.	2008	No End Date (Continuous)
Water conservation					
Establish a water conservation strategy which includes a plan or policy for replacing water fixtures with efficient models	In Development	Comprehensive water audits were undertaken at two (2) VCH facilities with planned completion in early 2013.	A water conservation plan will be developped over the next 3 years. Results and recommendations from our 2 comprehensive water audits will be incorporated in our future water conservation plans and initiatives	2010	No End Date (Continuous)
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	Not Yet Evaluated				No End Date (Continuous)
Introduce a stormwater management landscape strategy (e.g., vegetated roofs, permeable paving, rain gardens, bioswales)	Not Yet Evaluated				No End Date (Continuous)

Vancouver Coastal Health Authority Greenhouse Gas Emissions by Source for the 2012 Calendar Year (tCO₂e*)



Total Emissions: 45,569

- 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 2012 (Generated May 27, 2013 11:16 AM)

Total offsets required: **45,552**. Total offset investment: **\$1,138,800**. Emissions which do not require offsets: **16** **

*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.