



Provincial Health Services Authority

2010 CARBON NEUTRAL ACTION REPORT (CNAR)

A document authored by
Lower Mainland Facilities Management
Energy & Environmental Sustainability (EES) department



Provincial Health Services Authority Executive Summary 2010 Carbon Neutral Action Report



We are pleased to present Provincial Health Services Authority's 2010 Carbon Neutral Action Report (CNAR) as part of our commitment to the British Columbia Greenhouse Gas Reduction Targets Act. Over the past decade, we have established a clear vision towards energy and carbon reduction as part of our sustainability strategy. This is PHSA's third year of tracking its carbon footprint and CNAR reporting.

In 2010, Provincial Health Services Authority (PHSA) expanded collaboration with the Lower Mainland Health Authorities to develop initiatives that advance our commitment to reduce Greenhouse Gas (GHG) emissions and prioritize environmental sustainability. Listed below are some of the key recent developments which strengthen our collective strategic goal of increasing resource efficiency:

- **Sustainability Policy:** PHSA, along with the other Lower Mainland health services organizations, passed and endorsed an *Environmental Sustainability Policy* in the fall of 2010 to define Sustainability in the context of health care, demonstrate senior leadership commitment and enable the reduction of carbon footprint by incorporating sustainability in decision making processes. This is the first Lower Mainland wide policy adopted in common by PHSA, Vancouver Coastal Health Authority (VCHA), Fraser Health Authority (FHA) and Providence Health Care (PHC).
- **Energy & Environmental Sustainability (EES):** The 2010 consolidation of the EES group ensures greater strategic direction and information sharing between energy management and environmental sustainability activities throughout the Lower Mainland Health Authorities.
- **GreenCare:** An umbrella initiative across the Health Authorities designed to promote an environmentally conscious culture that is actively aware and engaged in creating sustainable solutions for healthy lives and a healthy community.
- **Cut the Carbon Community (C3):** As the first health care specific online community in North America, C3 can be accessed by all Lower Mainland Health Authority staff to share information and collaborate around conservation and sustainability initiatives.

Since energy used in buildings represents 98 percent of PHSA's carbon footprint, it is a key focus of the organization's drive for carbon neutrality. Recent energy projects will decrease energy consumption by 3 percent and the organization's carbon footprint by 2 percent (equivalent to 513 tonnes of CO₂) over the coming year. By 2020, that number will have increased by 20 percent.

After initiating lighting retrofits, chiller improvements, and boiler upgrades over the last few years, in 2010, PHSA installed 175 sub meters at the Children and Women's hospital. These meters will further improve energy efficiency, reduce energy costs, and help cut our carbon footprint.

While paper and fleet emissions represent a smaller portion of the organization's carbon footprint, they are still important priority. In 2010, PHSA's Green+Leaders—staff volunteers who now reach 60 departments—have been active in fostering sustainable behaviours in materials reduction and alternative transportation, in addition to energy reduction.

Next year, PHSA aims to continue to provide the highest level of health care, while incorporating ecological, social, and economic criteria into our decision-making processes.

Thank you for your interest in our CNAR. I hope you enjoy hearing all the accomplishments we have made and join us in continuing to work towards carbon reduction and carbon neutrality.



Lynda Cranston
President and Chief Executive Officer

Provincial Health Services Authority (PHSA) is a publicly funded health service provider in the province of British Columbia. Other health authorities in the province have a regional jurisdiction. PHSA is unique in Canada as the only health authority having a province-wide mandate for specialized health services. Services are provided either directly through PHSA agencies or through funding or collaboration with regional health authorities.

PHSA operates and manages a number of well-recognized specialized agencies:

- BC Ambulance Service
- BC Cancer Agency
- BC Centre for Disease Control
- BC Children's Hospital & Sunny Hill Health Centre for Children
- BC Mental Health & Addiction Services
- BC Provincial Renal Agency
- BC Transplant Society
- B.C. Women's Hospital & Health Centre
- Cardiac Services BC

PHSA operates with an annual budget in excess of \$2 billion (CAD) and employs more than 13,000 staff.

In October 2008 and again in 2011 PHSA was named one of BC's Top Employers by Mediacorp Canada Inc., which was announced by The Vancouver Sun, The Province and the Victoria Times-Colonist.

1. Context

Provincial Health Services Authority (PHSA) understands the importance of energy and environmental sustainability towards organizational, human, and environmental health. Thus, context based performance and reporting is an important aspect to the organizational work and reporting around sustainability.

Prof. Anthony Costello of the University College London's Institute for Global Health summed up the issue of human health with environmental health when he stated: *"There are major health benefits from low-carbon lifestyles, which can reduce obesity, heart and lung disease, diabetes and stress".*

PHSA believes in and has taken strong steps to show leadership towards reducing their collective carbon footprint. Part of this commitment is to work with other Lower Mainland health organizations to establish a collaborative approach.

"The current collaborative consolidation of specific services at Vancouver Coastal Health Authority (VCHA), Fraser Health Authority (FHA), Providence Health Care (PHC), and Provincial Health Services Authority (PHSA) has enabled the creation of an Energy & Environmental Sustainability (EES) group. This group of Energy Managers and Sustainability Managers are tasked with reducing the waste and environmental impacts of the health authorities. It is the goal of this EES group to unite all four organizations in their commitment to reduce health care's impact on the environment, while increasing the health and well being of British Columbians through maintaining the important link between health and the environment. An increased focus will be placed on engaging organizational staff and work communities to take action on climate change and to reduce the organizations' overall carbon footprint." –Lower Mainland Consolidation Statement

Provincial Health Services Authority (PHSA), along with the other Lower Mainland health services organizations, has adopted the following Sustainability Policy, Vision Statement, and Sustainability Conservation Goals:

Sustainability Policy

"The Lower Mainland health organizations will act as leaders with respect to environmental stewardship while engaging the healthcare community in a collaborative approach towards sustainability."

Vision Statement

"To promote an environmentally-conscious culture that is actively aware and engaged in creating sustainable solutions for healthy lives and a healthy community."

Sustainability Conservation Targets

Tier One Targets	2010-11	2011-12	2013-14	2019-20
Energy Reduction	1%	3%	5%	20%
GHG Reduction	1%	4%	8%	* 33%
Water Reduction	2%	4%	8%	20%
% of Waste Recycled	23%	35%	* 70%	* 70%
GreenCare Behavioural - Staff Participation	15%	25%	45%	85%

* Targets aligned with Bill 44 and Metro Vancouver Targets

2. 2010 Greenhouse Gas Emissions

Provincial Health Services Authority has calculated their 2010 carbon footprint, in accordance with the *Greenhouse Gas Reduction Targets Act* (as reported in SMARTTool).

2010 Emissions by Source	Value	Unit/type
Mobile Fuel Combustion (Fleet and other mobile equipment)	195.17	tonnes of CO ₂ e
Stationary Fuel Combustion and Electricity (Buildings)	24,161.34	tonnes of CO ₂ e
Supplies (Paper)	359.76	tonnes of CO ₂ e
Fugitive Emissions	-	tonnes of CO ₂ e
Total	24,716.27	tonnes of CO ₂ e

Organizational Information (as of December 31, 2010)	Value	Unit/type
organization?	13,000	FTEs
How many vehicles (cars, trucks, SUVs, etc.) within your fleet?	73	vehicles
How much space (square meters) is within your building portfolio?	271,798	usable square meters
How many buildings are in your portfolio?	85	distinct buildings
What percentage of your building portfolio is leased?	67	percent leased
What percentage of your building portfolio is owned?	33	percent owned
Is carbon neutral/sustainability planning incorporated into other organization-wide planning?	Yes	
How many FTEs does your organization employ for implementing carbon neutral/sustainability initiatives?	4	FTEs
How many FTEs does your organization employ for measuring and monitoring energy/carbon neutral performance?	2	FTEs

It was estimated that Fugitive Emissions from cooling do not comprise more than 0.01% of PHSA'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 the PHSA total greenhouse gas emissions profile.

3. *Offsets Applied to Become Carbon Neutral in 2010*

Provincial Health Services Authority became carbon neutral in 2010 by the continued commitment to reduce energy, paper and travel CO₂ emissions.

This commitment was achieved through mechanical and electrical retrofits, policy development, behavioural programs and lastly the purchasing of carbon offsets.

The following chart indicates the tCO₂e reported for 2010. As well, the total expenditure on carbon offsets to ensure Provincial Health Services Authority was Carbon Neutral during this calendar year.

2010 Offsets	Value	Unit/type
Emissions Which Do Not Require Offsets	8.31	tonnes of CO ₂ e
Total Offsets Purchased	24,707.96	tonnes of CO ₂ e
Total Offsets Investment (before taxes)	\$ 617,699.00	\$ CDN

*The above chart covers all 2010 emissions and offsets purchased from the Pacific Carbon Trust (PCT) in 2010. Final tCO₂e emissions and costs to be confirmed once SMARTTool is fully operational.

4. *Operational Changes in 2010:*

The Senior Leadership of VCHA, PHC, PHSA and FHA outlined their firm commitment to ensure that health care dollars are focused on direct patient care by announcing that the three organizations will formally work together to manage and deliver clinical services and non-clinical support services.

This formal working relationship has resulted in the consolidation, under a Lower Mainland Consolidation leadership, of the following areas:

- Biomedical Engineering (BME)
- Business Initiatives and Support Services (BISS)
- Facilities Management (FM)
- Health Information Management (HIM)
- Information Management Information Technology Services (IMITS)
- Integrated Protection Services (IPS)
- Interpreting Services (IS)
- Medical Imaging (MI)
- Pathology & Laboratory Medicine Services
- Pharmacy Services

This partnership has allowed for new opportunities to coordinate environmental and sustainability work across VCHA, FHA, PHA and PHSA in a unified manner. These organizations oversee the operation of 25

acute care hospitals and 27 residential care facilities, which serve a total population of over 2.5 million British Columbians and include 37 municipalities and regional districts.
(Lower Mainland Consolidation Statement)

5. Emissions Reduction Activities

Actions Taken to Reduce Greenhouse Gas Emissions in 2010:

An increased focus has been placed on infrastructure improvements and engaging the PHSA staff, communities and key stakeholders to take action on climate change and to reduce our organizations' overall carbon footprint. Here is a brief list of carbon reducing actions taken in 2010.

- **Energy**
 - Children's & Women's Hospitals (C&W) site buildings are undergoing detailed metering installation, steam valves installation and detailed energy audits.
 - Continuous Optimization Programs are under development on BC Cancer Research Centre (BCRC), BC Cancer Agency (BCCA), Sunny Hill Centre, Fraser Valley Cancer Centre, Children & Family Research Institute and Mental Health building at Children's and Women's hospitals site.
 - Installation of variable speed drives, and upgrade to the Direct Digital Controls (DDC) system at the Ambulatory Care building at Children's & Women's hospitals.
 - Installation of 2 solar powered Light Emitting Diode (LED) pathway lights at C&W.
 - Ambulatory Care at C&W went under control system revision and upgrade to monitor and control lights and ventilation in some buildings.
 - A combined solar/wind powered lights post were planned to be re-installed on top of the Shaughnessy building at C&W.
 - PHSA has completely adopted server virtualization. PHSA is creating virtual servers rather than physical servers wherever possible for new installs. Existing infrastructure has already been optimized. PHSA is now refreshing the original virtualized batch with more powerful and more efficient servers.
 - All new computers are Energy Star rated. Old computers are regularly replaced with newer models.
 - Vending machines at Children's and Women's hospitals are now ENERGY STAR certified.
- **Travel**
 - Encouraging staff to participate in Jack-Bell Ride Share online car pooling coordination program.
 - Held Bike Repair Workshops in the spring
 - New bike lockers are installed where possible and on a request basis
 - Shower facilities are being developed to encourage the use of sustainable transportation by staff
 - Initiated reward program those who do not use single use occupancy vehicles to commute to/during work with incentives and information. Enrollment expanded from 180 to 310.
- **Waste**

- A Reduction & Recycling Coordinator was hired to assist with the implementation of recycling at all Lower Mainland Acute sites. The recycling program was designed and commissioned, including marketing, training and educational materials and signage. A communication plan was drafted and indicators developed for recycling reporting.
 - Recycling at PHSA facilities includes paper, confidential paper, plastics, soft drink cans, cardboard, batteries, mercury, electronics, and fluorescent and High Intensity Discharge (HID) lighting.
 - Conducted a survey to assess staff awareness and satisfaction; compiled waste & recycling invoice data; completed waste audit training.
 - A paper coffee cup reduction tool was developed and 60 staff volunteers have been trained to implement the tool within their departments.
 - Office composting in 3 PHSA office locations. BCCA Vancouver Island set up a composting program in their café and switched to compostable dishware
 - Food policy updated to include sustainability criteria.
 - Green+Leader from Facilities Maintenance & Operations at Children's and Women's initiated a project to clarify the proper disposal procedures for 22 waste categories.
- **Design - Leadership in Energy and Environmental Design (LEED)**
 - All new buildings and major renovations are being designed to meet LEED standards and certification.
 - All new construction and renovations projects, currently in various stages of development in 2010, have incorporated Integrated Design Process and LEAN principles where appropriate.
- **Behavioural**
 - A Workplace Conservation Awareness (WCA) agreement was signed with BC Hydro to implement conservation awareness initiatives at five (5) sites.
 - As part of the consolidation, the VCHA "GreenCare" branding and creative platform was refreshed and adopted to include to all the Lower Mainland Health Authorities.
 - A Coordinator was hired to lead the Green + Leaders staff engagement program for the Lower Mainland Health Authorities.
 - 60 staff volunteers (Green+Leaders) have been trained to promote energy conservation within their departments including affixing posters and stickers encouraging staff to turning off lights, monitors and other equipment during the energy reduction campaign from Jan to end of Feb. The number of lights that were left on in G+L departments decreased from 60% to 51%.
 - Developed a tool for Green+Leaders to promote PHSA print strategy and held an education event to promote PrinterWorks, the consultant contracted to carry out the strategy.
 - Green+Leaders implemented 17 unique projects to minimize environmental impact. Examples included "garage sale" to divert old equipment from the landfill, educational videos to promote energy reduction, recycling programs and decommissioning of underused equipment.
 - External website completed and includes tips on saving paper, sustainable transportation, waste reduction and sustainable purchasing.

Plans to Continue Reducing Greenhouse Gas Emissions 2011-2013:

As noted above, PHSA has adopted the term "GreenCare" as the common branding for their energy and environmental sustainability work. This common branding supports communications and tactical planning efforts going forward into 2011.

PHSA will continue to coordinate, collaborate and integrate energy & environmental initiatives within all operational clinical and non-clinical work. Within those efforts, the following is a list of tasks to be achieved in 2011 – 2013.

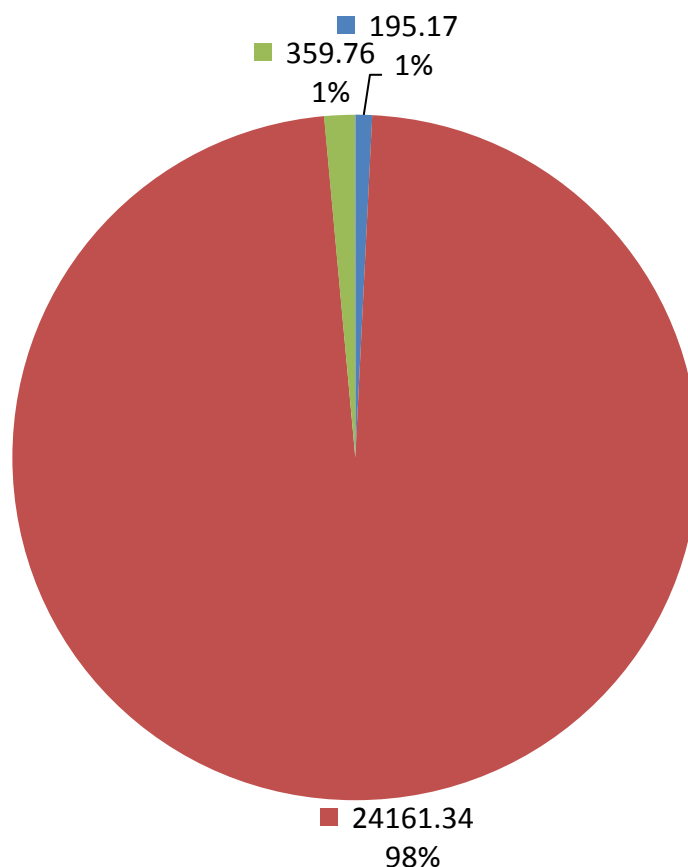
- **Energy**
 - Upgrade the chilled water plant at C&W with piping modification to optimize performance and to reduce energy consumption.
 - Continue to replace existing lighting systems with high efficiency lighting
 - Upgrade the DDC systems at other hospitals, while implementing the COP program.
 - Upgrade the DDC systems at the Sunny Hill Health Centre, Fraser Valley Cancer Centre, and C&W Mental Health Building.
 - Implement the Continuous Optimization Program at BC Cancer Research Centre and BC Cancer Agency
- **Travel**
 - Tie the Jack-Bell Ride Share program into the Cut the Carbon Community (C3) staff engagement program.
 - Coordinating an increase in the number of Bike Repair and Bike Maintenance workshops
- **Waste**
 - Basic recycling programs to be implemented at all PHSA acute care sites where waste management contracts are in place; program implementation will include planning and distribution of bins, education of staff and the public and continued support & progress reporting for all sites; investigation into additional recycling streams and systems to be implemented; it is expected recycling volumes and diversion rates, staff awareness and satisfaction with recycling will increase as the program moves forward.
 - Regarding the recycling program: host recycling promotion days at Children's & Women's hospitals; present at as many staff meetings and in-services as possible; run stories in PHSA news and provide updates through the C3 site on recycling program success and progress at Children's & Women's; post recycling materials, references and resources on the external PHSA Environmental Sustainability site (will be linked to the C3 site); report recycling progress in local media.
 - Continuation of the Bike Repair and Maintenance workshops.
 - Continue with office composting; develop a tool to guide Site Support Managers on implementation of cafeteria composting. BCCA Vancouver Island will look into developing composting program for site lunchroom.
 - Create a policy for purchasing, a strategy and workplan for implementing sustainability into purchasing practices.
- **Design - Leadership in Energy and Environmental Design (LEED)**
 - Children's Hospital Day Care, Clinical Support Building, Clinical Support Building, Ronald McDonald House, and the Prince George Cancer Agency building are all under planning for LEED Gold.
 - Final edit and approval of the Tenant Improvement Handbook by the Lower Mainland Facilities Management Steering Committee, which will promote inclusion of

sustainability standards in every tenant improvement done within the Health Care Organizations lease sites

- Maintain and improve green leasing practices to reduce energy consumption, increase buildings efficiency, sustainability, and occupant satisfaction and comfort.
- **Behavioural**
 - Recruitment of Green+Leader volunteers will continue and will expand to 150 departments.
 - An additional 90 Green+Leaders will be trained between 2011 and 2013.
 - Roll out of the “Cut the Carbon Community” online engagement program.

Provincial Health Services Authority

Greenhouse Gas Emissions by Source for the 2010 Calendar Year (tCO₂e*)



Total Emissions: 24716.27

- Mobile Fuel Combustion (Fleet and other mobile equipment)
- Stationary Fuel Combustion and Electricity (Buildings)
- Supplies (Paper)

Offsets Applied to Become Carbon Neutral in 2010

Total offsets purchased: **24707.96**. Total offset investment: **\$617,699.00**. Emissions which do not require offsets: **8.31** **

*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 Government Neutral 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.

Provincial Health Services Authority - 2010 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 <i>Greenhouse Gas Reduction Targets Act</i> .							
Action	Status (as of 12/31/10)	Performance to Date (as of 12/31/10)		Steps Taken in 2010	Steps Planned for 2011 -2013	Start Year	End Year
Mobile Fuel Combustion (Fleet and other mobile equipment)							
Vehicle fuel efficiency							
Replace vehicles with more fuel-efficient models	Ongoing/In Progress	75	% of vehicles are fuel- efficient models	No new cars bought in 2010	All new vehcilces purchases to be as fuel efficient as possible	2008	No End Date (Continuous)
Replace larger vehicles with smaller models according to fleet "right-sizing" principles	In Development	10	% of vehicles down-sized since start year indicated		All new vehicles to be optimized according to need and "right sizing"	2010	No End Date (Continuous)
Replace small maintenance vehicles with more fuel-efficient models	Ongoing/In Progress	50	% of small maintenance vehicles are fuel-efficient	This is done as appropriate. No new vehicles purchased in 2010	This practice will continue	2008	No End Date (Continuous)
Behaviour change program							
Encourage carpooling in fleet vehicles	Ongoing/In Progress			Encouraging Staff to participate in Jack-Bell Ride Share online car pooling coordination program.	Tie the Jack-Bell Ride Share program into the Cut the Carbon Community (C3) staff engagement program.	2008	No End Date (Continuous)
Promote alternatives to fleet vehicle travel where possible (e.g., bicycles, public transit, walking)	Ongoing/In Progress			Held Bike Repair Workshops in the spring	Coordinating Bike Repair and Bike Maintenance workshops	2009	No End Date (Continuous)
Stationary Fuel Combustion, Electricity and Fugitive Emissions (Buildings)							
Planning/management							
Enrol in a building energy benchmarking program (e.g., GREEN UP)	In Development	10	Contact established	Contact established with Monique Goguen [mgoguen@cagbc.org]	Continued dialogue with the CaGBC and investigating opportunities to implement the Green Up program.	2010	No End Date (Continuous)
Install a real time metering system (e.g. Pulse, Reliable Controls, Houle Controls)	Ongoing/In Progress	50	% of buildings have a real time metering system installed	Buildings on C&W Site, BCCRC, BCCA, Sunnyhill, FVCC	Continued analysis of data and identification of new sites to install real time metering	2010	No End Date (Continuous)
Owned buildings							
Establish energy performance baseline for owned buildings	Completed in 2010	100	% of owned buildings have an established energy performance baseline	All owned buildings have energy performance baseline since October 2010		2009	2010
Achieve LEED NC Gold certification at a minimum for new construction or major renovations	Ongoing/In Progress	10	% of owned buildings are certified LEED NC Gold or LEED NC Platinum	Children's Hospital Day care, Flex Building, and Ronald McDonald House. Prince George Cancer Agency building.	Currently in planning and development stage, the new Children's Hospital will be LEED Gold.	2010	No End Date (Continuous)
Complete energy retrofits on existing, owned buildings	Ongoing/In Progress	50	% of owned buildings have undergone energy retrofits since start year indicated	C&W site buildings are under metering installation, steam valves installation, energy audits. Continuous Optimization Programs are under development on BCCRC, BCCA, SHC, FVCC, CFRI, MH.	Continued work on retrofits of existing buildings.	2010	No End Date (Continuous)
Retrofitting owned buildings							
Upgrade mechanical systems (heating, cooling, ventilation) during retrofits	Ongoing/In Progress	5	% of retrofits since start year indicated had heating, cooling, and ventilation systems upgrades	Installation of variable speed drives, and upgrade to the DDC system at Ambulatory care	Upgrade the chilled water plant at C&W with piping modification to optimize performance and to reduce energy consumption.	2010	No End Date (Continuous)

Provincial Health Services Authority - 2010 Carbon Neutral Action Report

Action	Status (as of 12/31/10)	Performance to Date (as of 12/31/10)		Steps Taken in 2010	Steps Planned for 2011 -2013	Start Year	End Year
Upgrade lighting systems during retrofits	Ongoing/In Progress	5	% of retrofits since start year indicated had lighting systems upgrades	Installation of 2 solar powered LED pathway lights at C&W	Continue to replace existing lighting systems with high efficiency lighting	2010	No End Date (Continuous)
Upgrade/adjust control systems during retrofits	Ongoing/In Progress	5	% of retrofits since start year indicated had control system upgrades or adjustments	Ambulatory Care at C&W went under control system revision and upgrade to monitor and control lights and ventilation in some buildings.	Upgrade the DDC systems at the Sunny Hill Health Centre, Fraser Valley Cancer Centre, and C&W Mental Health Building, and GF Strong. Implementing the Continuous Optimization Program at BC Cancer Research Centre and BC Cancer Agency	2010	No End Date (Continuous)
Install an on-site renewable energy demonstration project	In Development	10	% of retrofits since start year indicated had on-site renewable energy components	Installation of 2 solar powered LED pathway lights at C&W. Also a combined solar/wind powered lights post were planned to be re-installed on top of Shaughnessy building	Look for opportunities to install solar systems for space and pool heating.	2010	No End Date (Continuous)
Leased buildings							
Establish energy performance baseline for leased buildings	Ongoing/In Progress	20	% of leased buildings have an established energy performance baseline	Some buildings in which we are paying the utilities have their performance baseline established	Establish base line for rest of the leased buildings where we pay the utility bills	2010	No End Date (Continuous)
IT power management							
Install power management software which shuts down computers outside of regular business hours	In Development			Software was purchased and installed at the Children's Foundation.	Evaluate, monitor, and re-adjust settings.	2009	No End Date (Continuous)
Implement server virtualization	Ongoing/In Progress	80	% of servers have been virtualized since start year indicated	PHSA has completely adopted server virtualization. PHSA is creating virtual servers rather than physical servers wherever possible for new installs. Existing infrastructure has already been optimized. PHSA is now refreshing the original virtualized batch with more powerful and more efficient servers.	Continue this process.	2006	No End Date (Continuous)
Apply auto-sleep settings on computer monitors and CPUs	Ongoing/In Progress	90	% of computers have auto-sleep settings applied	On-going process	Monitoring and evaluation	2006	No End Date (Continuous)
Remove stand-alone printers, copiers, and/or fax machines and install multi-function devices	Ongoing/In Progress	44	% reduction in printers, copiers, and/or fax machines since start year indicated	PHSA has an ongoing Print Strategy.	This strategy and its roll-out will continue.	2007	No End Date (Continuous)
Apply auto-sleep settings on printers, copiers, fax machines, and/or multi-function devices	Ongoing/In Progress	100	% of devices have auto-sleep settings applied	All new devices are preconfigured for auto-sleep.	This strategy and its roll-out will continue.	2007	No End Date (Continuous)
Replace computers with ENERGY STAR models during regular computer upgrades	Ongoing/In Progress	100	% of computers are ENERGY STAR rated	All new computers are Energy Star rated. Old computers are regularly replaced with newer models.	This strategy and its roll-out will continue.	2008	No End Date (Continuous)
Behaviour change program							
Help staff reduce personal energy use through "workstation tune-ups"	In Development				Continued roll out of the Green+ Leaders program. This program empowers staff to do work station tune-ups around energy conservation	2009	No End Date (Continuous)
Ask staff to unplug electrical equipment or switch off power bars when not in use	Ongoing/In Progress			60 volunteers are implementing this action in their departments	Recruitment of more Green+Leaders will continue and will expand to 150 departments	2009	No End Date (Continuous)
Provide tips to staff on saving energy in the office while working outside of regular business hours	Ongoing/In Progress			PHSA encourages staff to conserve energy during both regular business hours as well as after hours	This practice will continue	2008	No End Date (Continuous)
Encourage use of stairs instead of elevators	In Development				A "take the stairs" tool will be incorporated into the Green+Leaders program in Jan 2011	2011	No End Date (Continuous)

Provincial Health Services Authority - 2010 Carbon Neutral Action Report

Action	Status (as of 12/31/10)	Performance to Date (as of 12/31/10)		Steps Taken in 2010	Steps Planned for 2011 -2013	Start Year	End Year
Provide reminders for turning off lights (e.g., signs, stickers, messages)	Ongoing/In Progress			60 staff volunteers (Green+Leaders) have been trained to promote energy conservation within their departments including affixing posters and stickers re: turning off lights, monitors and other equipment during the energy reduction campaign from Jan to end of Feb. The number of lights that were left on in G+L departments decreased from 60% to 51%.	Recruitment of Green+Leader volunteers will continue and will expand to 150 departments	2009	No End Date (Continuous)
Other Stationary Fuel Combustion and Electricity Actions							
Encourage staff to turn off computer monitors when not in use or at the end of the day	Ongoing/In Progress			Green+Leaders have been trained to run a "Monitor Off" campaign in their departments and have also distributed stickers to use a prompts to remind staff to do so. There was a 22% decrease in the number of monitors left on in these departments.	This practice will continue and will expand as Green+Leaders program expands.	2009	No End Date (Continuous)
Update equipment to ENERGY STAR certified	Ongoing/In Progress			Vending machines at Children's and Women's Hospital are now ENERGY STAR certified.	N/A	2010	No End Date (Continuous)
Supplies (Paper)							
Printer/document settings							
Switch networked printers and photocopiers to automatic double-sided	Ongoing/In Progress	100	% of network printers or photocopiers are set to automatic double-sided	All new devices are set to double-sided where possible	PHSA will continue this practice and re-program older machines to double sided where possible	2009	No End Date (Continuous)
Apply "print and hold" settings to networked printers to eliminate unclaimed print jobs	In Development			This is done on a request basis	Practice will continue	2009	No End Date (Continuous)
Reduce default margin size in standard document templates (e.g., letters, briefing notes, forms, etc.)	Ongoing/In Progress			This practice is now encouraged on our sustainability website	Practice will continue	2009	No End Date (Continuous)
Electronic media in place of paper							
Install collaborative software for electronic editing (e.g. SharePoint, Groove, etc.)	Ongoing/In Progress	100	% of staff workstations with software installed	All staff can request access if they want it	This is driven by users and has been in place for several years so no steps planned for the future	2007	No End Date (Continuous)
Use electronic document library for filing common documents	Ongoing/In Progress			This practice is enabled throughout the organization	Practice will continue	2007	No End Date (Continuous)
Post materials online that were previously printed	Ongoing/In Progress			This practice is occurring more and more throughout the organization	Practice will continue	2008	No End Date (Continuous)
Switch to an electronic payroll notification system in place of paper pay stubs	In Development				Project will be launched to determine the feasibility of switching to an electronic system	2011	No End Date (Continuous)
Behaviour change program							
Train staff to use collaborative software for electronic editing (e.g. SharePoint, Groove, etc.)	Ongoing/In Progress			Training is provided on an ongoing basis	This is driven by users and has been in place for several years so no steps planned for the future	2007	No End Date (Continuous)
Encourage staff to hold paperless meetings or presentations (i.e., no handouts)	Ongoing/In Progress			60 staff volunteers (Green+Leaders) have been trained to implement the "Paperless Meetings" tool as part of their waste reduction campaign. Tool is also available on an external website for whole organization to use.	An additional 90 Green+Leaders will implement the tool between 2011 and 2013.	2009	No End Date (Continuous)
Encourage re-use of scrap paper	Ongoing/In Progress			Several departments have created a used-paper tray for scraps	Practice will continue	2008	No End Date (Continuous)

Provincial Health Services Authority - 2010 Carbon Neutral Action Report

Action	Status (as of 12/31/10)	Performance to Date (as of 12/31/10)		Steps Taken in 2010	Steps Planned for 2011 -2013	Start Year	End Year
Other Paper Supplies Actions							
Green+Leaders are trained on four paper reduction tools	Completed in 2010			Tools include: paperless meetings, electronic email filing, electronic filing on a shared drive and deskside paper recycling tool. To date, a total of 60 staff volunteers have been trained to implement these tools as part of their waste reduction campaign. Tools are also available on an external website for the whole organization to use.	An additional 90 Green+Leaders will implement the tool between 2011 and 2013.	2009	No End Date (Continuous)
Developed and delivered a new paper reduction tool for the Green+Leaders behaviour-change program	Completed in 2010			A paper coffee cup reduction tool was developed and 60 staff volunteers have been trained to implement the tool within their departments.	An additional 90 Green+Leaders will implement the tool between 2011 and 2013.	2010	No End Date (Continuous)

Provincial Health Services Authority - 2010 Carbon Neutral Action Report

Actions to Reduce Provincial Emissions and Improve Sustainability							
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 <i>Greenhouse Gas Reduction Targets Act</i> . Public sector organizations can optionally use this section to report on actions that will help British Columbia meet its provincial greenhouse gas reduction targets, engage the public, and improve environmental sustainability across all aspects of their organization.							
Action	Status (as of 12/31/10)	Performance to Date (as of 12/31/10)		Steps Taken in 2010	Steps Planned for 2011 -2013	Start Year	End Year
Business Travel							
Virtual meeting technology							
Install web-conferencing software (e.g., Live Meeting, Elluminate, etc.)	Ongoing/In Progress	1	% of computers have web-conferencing software installed	Pilot of 100 computers currently taking place.	Install conferencing infrastructure for all health authorities through SSO if funding permits.	2009	2011
Make desktop web-cameras available to staff	Ongoing/In Progress	1	% of staff have access to a desktop web-camera	Departments can buy them individually.	This will be available as part of web conferencing service noted above.	2009	No End Date (Continuous)
Install video-conferencing units in meeting rooms or provide mobile video-conferencing units	Ongoing/In Progress	20	% of meeting rooms have access to video-conferencing equipment	Some replacements to older equipment were made.	This will continue on an as needed basis.	2004	No End Date (Continuous)
Behaviour change program							
Train staff in web-conferencing	Ongoing/In Progress	100	% of staff are trained web-conferencing	All staff have access to video conference rooms and technical support staff where applicable	This practice will continue	2004	No End Date (Continuous)
Train staff in video-conferencing or provide technical support for video-conferencing set-up	Ongoing/In Progress	100	% of staff are trained in video-conferencing or have access to technical support	All staff have access to video conference rooms and technical support staff where applicable	This practice will continue	2004	No End Date (Continuous)
Encourage staff to consider virtual attendance/presentation at events where possible	Ongoing/In Progress			Green+Leaders program ran a Sustainable Transportation campaign in 60 departments designed to encourage staff to hold virtual meetings instead of travelling from site to site.	This will continue and campaign will be implemented in 150 departments by end of 2013.	2008	No End Date (Continuous)
Encourage carpooling to meetings	Ongoing/In Progress			Green+Leaders program ran a Sustainable Transportation campaign in 60 departments designed to encourage staff to consider carpooling over travelling via SOVs to meetings.	This will continue and campaign will be implemented in 150 departments by end of 2013.	2008	No End Date (Continuous)
Encourage alternative travel to meetings (e.g., bicycles, public transit, walking)	Ongoing/In Progress			Green+Leaders program ran a Sustainable Transportation campaign in 60 departments designed to encourage staff to consider alternatives to SOVs when travelling to meetings	This will continue and campaign will be implemented in 150 departments by end of 2013.	2008	No End Date (Continuous)
Education, Awareness, and Engagement							
Team-building							
Create Green, Sustainability, Energy Conservation, or Climate Action Teams with executive endorsement	Ongoing/In Progress			Green+Leaders program expanded and now includes 60 trained volunteers who encourage staff to foster sustainable behaviours around waste reduction, energy reduction and sustainable transportation.	Program will continue to expand to include 150 departments.	2009	No End Date (Continuous)
Provide resources and/or dedicated staff to support teams	Ongoing/In Progress			See above.	See above.	2009	No End Date (Continuous)
Providing behaviour change education/training to teams (e.g., community-based social marketing)	Ongoing/In Progress			A total of 60 Green+Leaders have received seven hours of training and have attended at least one additional one hour education luncheon.	See above.	2009	No End Date (Continuous)

Provincial Health Services Authority - 2010 Carbon Neutral Action Report

Action	Status (as of 12/31/10)	Performance to Date (as of 12/31/10)		Steps Taken in 2010	Steps Planned for 2011 -2013	Start Year	End Year
Awards/Recognition							
Establish a sustainability/green awards or recognition program	Ongoing/In Progress			Held six annual recognition events for the Green+Leaders.			
Staff awareness/education							
Provide education to staff about the science of climate change	Completed in 2010	50	staff attended	PHSA delivered presentation	Practice will continue		
Provide education to staff about the conservation of water, energy, and raw materials	Ongoing/In Progress			Regarding the recycling program: Designed and commissioned marketing /training/educational materials and finalized signage; drafted a communication plan; developed indicators for recycling reporting; completed power point for staff education	Regarding the recycling program: host recycling promotion days at Children's & Women's Hospital; present at as many staff meetings and in-services as possible; run stories in PHSA news and provide updates through the C3 site on recycling program success and progress at Children's & Women's; post recycling materials, references and resources on the external PHSA Environmental Sustainability site (will be linked to the C3 site); report recycling progress in local media		
Provide green tips on staff website or in newsletters	Ongoing/In Progress			External website completed and includes tips on saving paper, sustainable transportation, waste reduction and sustainable purchasing	Energy saving tips will be posted on a weekly basis in staff newsletter. Monthly updates will be sent to Green+Leaders and will include tips to reduce waste, energy and encourage sustainable transportation	2009	No End Date (Continuous)
Client/public awareness/education							
Provide education to clients/public about the science of climate change	Completed in 2010	50	staff attended	One presentation delivered to PHSA staff	Practice will continue	2010	No End Date (Continuous)
Provide education to clients/public about the conservation of water, energy, and raw materials	Ongoing/In Progress			Regarding the recycling program: Designed and commissioned marketing /training/educational materials and finalized signage; drafted a communication plan	Regarding the recycling program: host recycling promotion days at Children's & Women's; post recycling materials, references and resources on the external PHSA Environmental Sustainability site (will be linked to the C3 site); report recycling progress in local media		
Provide green tips on client/public website or in newsletters	Ongoing/In Progress			External website completed and includes tips on saving paper, sustainable transportation, waste reduction and sustainable purchasing	Additional tips will be posted on a social media website (Cut the Carbon) that will be accessible to all staff from work or home computers	2010	No End Date (Continuous)
Other Sustainability Actions							
Water conservation							
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	In Development				Investigation into on-site water resources began at C&W.	2009	2011
Waste reduction/diversion							

Provincial Health Services Authority - 2010 Carbon Neutral Action Report

Action	Status (as of 12/31/10)	Performance to Date (as of 12/31/10)		Steps Taken in 2010	Steps Planned for 2011 -2013	Start Year	End Year
Put in place an operations policy to facilitate the reduction and diversion of building occupant waste from landfills or incineration facilities	Ongoing/In Progress			Hired a Reduction & Recycling Coordinator to implement recycling at all acute sites; Designed and commissioned marketing /training/educational materials and finalized signage; drafted a communication plan; visited recycling plants in order to understand processes and what materials can be recycled; developed indicators for recycling reporting; designed survey to assess staff awareness and satisfaction; compiled waste & recycling invoice data; completed waste audit training; completed power point for staff education; Recycling at PHSA facilities includes paper, confidential paper, plastics, soft drink cans, cardboard, batteries, Mercury, electronics, and fluorescent and HID lighting	Basic recycling programs to be implemented at all PHSA acute care sites where waste management contracts are in place; Program implementation will include planning & distribution of bins, education of staff and the public and continued support & progress reporting for all sites; Investigation into additional recycling streams and systems to be implemented; it is expected recycling volumes and diversion rates, staff awareness and satisfaction with recycling will increase as the program moves forward.	2009	No End Date (Continuous)
Implement a hazardous waste reduction and disposal strategy	Ongoing/In Progress			Maintain current compliance levels for the safe disposal of all hazardous waste Audit of biomedical waste and found materials that should be in recycling or general waste; included a slide on importance of proper biohazardous waste disposal in recycling education presentation.	Maintain and improve current practice	Started before 1995	No End Date (Continuous)
Procurement (non-paper supplies)							
Implement sustainable purchasing program for cleaning products, disposable paper products and trash bags	Ongoing/In Progress			Various parts of this program are in place through our cleaning contractors who mainly use green products already. (For example, C&W's Mental Health building uses green cleaners for 80% of cleaning needs. Green cleaners are not used in only extreme cases or to prevent infections and viruses from spreading.) Green products are also currently being evaluated by PHSA if they are outside the jurisdiction of our cleaning contractors.	PHSA will continue to go green with as many cleaning/janitorial products as possible.	2009	No End Date (Continuous)
Commuting to and from home							
Introduce telework/work from home policy	In Development				Gathered information from other health authorities re: their telework programs.	2009	No End Date (Continuous)
Encourage commuting by foot, bicycle, carpool or public transit	Ongoing/In Progress			60 Green+Leaders trained to run sustainable transportation campaigns within their departments.	Program will expand to 150 departments by end of 2013	2009	No End Date (Continuous)
Provide shower or locker facilities for staff/students who commute by foot or by bicycle	Ongoing/In Progress			Shower facilities are promoted to staff to encourage the use of sustainable transportation	Practice will continue	2009	No End Date (Continuous)
Provide secure bicycle storage	Ongoing/In Progress			New bike lockers are installed where possible and on a request basis	Practice will continue	2009	No End Date (Continuous)
Modify parking fees or parking availability for staff/students	Ongoing/In Progress			Approvals secured from PHSA leadership to allocate a portion of parking rate increases to deep discount transit pass.	The new pass program will be implemented.	2009	No End Date (Continuous)
Other Sustainability Actions							
Composting Initiatives	Ongoing/In Progress			Office composting in 3 PHSA office locations. BCCA Vancouver Island set up a composting program in their café and switched to compostable dishware.	Continue with office composting; develop a tool to guide Site Support Managers on implementation of cafeteria composting. BCCA Victoria will look into developing composting program for site lunchroom	2009	No End Date (Continuous)
Sustainability Policies	Completed in 2010			Corporate sustainability policy passed by Executive Team. Food policy updated to include sustainability criteria	N/A	2010	2010

Provincial Health Services Authority - 2010 Carbon Neutral Action Report

Action	Status (as of 12/31/10)	Performance to Date (as of 12/31/10)		Steps Taken in 2010	Steps Planned for 2011 -2013	Start Year	End Year
Run Team PowerSmart prize draws to encourage energy conservation	Completed in 2010			Ran five Team PowerSmart draws and developed related publicity materials.	Continue to promote workplace energy conservation awareness	2010	No End Date (Continuous)
Encourage staff to join Team PowerSmart	Completed in 2010			CEO became a corporate leader	N/A	2010	2010
Implement print strategy to conserve paper and energy	Ongoing/In Progress			Developed a tool for Green+Leaders to promote PHSA print strategy and held an education event to promote PrinterWorks, the consultant contracted to carry out the strategy.	Will continue to promote strategy	2009	No End Date (Continuous)
Green Commuters Club	Ongoing/In Progress	310	PHSA Staff enrolled	Initiated to reward those who do not use single use occupancy vehicles to commute to/during work with incentives and information. Enrollment expanded from 180 to 310.	Will continue to promote program	2009	No End Date (Continuous)
Sustainable Procurement Strategy	Ongoing/In Progress			HSSBC commissioned Fraser Basin Council to develop a strategy.	Create a policy for purchasing, a strategy and workplan for implementing sustainability into purchasing practices	2010	No End Date (Continuous)
Bike to Work Week events	Ongoing/In Progress			Held bike repair workshops	Practice will continue	2009	No End Date (Continuous)
Clarify recycling procedures for various waste streams	Completed in 2010			Green+Leader from Plant Operations at Children's and Women's initiated a project to clarify the proper disposal procedures for 22 waste categories.	N/A	2010	No End Date (Continuous)
Implement unique sustainability initiatives	Ongoing/In Progress			Green+Leaders implemented 17 unique projects to minimize environmental impact. Examples included "garage sale" to divert old equipment from the landfill, educational videos to promote energy reduction, recycling programs and decommissioning of underused equipment.	Practice will continue	2009	No End Date (Continuous)