

Carbon Neutral Action Report Provincial Health Services Authority

Executive Summary

The five words that represent PHSA's vision; "Province Wide Solutions. Better Health" recognize our commitment to system changes that create a positive impact on the health of the population. PHSA has a responsibility and a commitment to reduce the impact of operations on the ecological footprint and to take action on climate change. We have a role in sustaining – and improving – the world around us. PHSA has a history of showing leadership in adopting environmentally-friendly initiatives and an active program to reduce energy consumption. PHSA, along with government, has now expanded our focus to include broader initiatives by demonstrating leadership in the reduction of waste and greenhouse gas emissions, reviewing our use of resources and raising awareness amongst our staff, patients and communities of the role we all have in achieving carbon neutral status by 2010.

In that vein, PHSA's first ever Carbon Neutral Action Report details actions for reducing greenhouse gas (GHG) emissions in the required areas of paper, fuels, and electricity. It also details initial steps towards our goal of reducing GHG emissions, plus other environmental impacts in a range of areas, including purchasing, waste management, and alternative transportation. In 2008 we set out with more than 25 objectives and achieved them all. The highlights of those achievements include:

Energy Reduction

- Our 2008 energy retrofits have offset total electricity use by 20 percent over 2007 while saving enough to power 400 homes annually.
- PHSA won two Power Smart awards and received more than \$500,000 in grants.
- PHSA's IT server virtualization project saved \$2.9 million and reduced GHG emissions by 1,811 tonnes annually.

Alternative Transportation

- Our 2008 improvements to cycling and carpooling infrastructure mean we are actively recognizing and encouraging PHSA's alternative transit users.
- 230 staff members are now enrolled in our Employee Transit Pass Program and we have plans to increase the number in 2009.
- PHSA's Shuttle Bus between sites now reduces the number of single occupant vehicle (SOV) trips each year by thousands.

Materials Reduction

- Several PHSA departments undertook their own paper reduction initiatives including: Human Resources at BC Women's Hospital & Health Centre and BC Children's Hospital, PHSA Labs, PHSA Corporate Communications office, BCCA Communications office, Facilities and Planning and PHSA Supply Chain.
- PHSA planned a workshop for 40 participants designed to make sure that PHSA purchases are energy efficient while encompassing other sustainability priorities such as waste reduction and cost savings.
- PHSA took initial steps to plan an employee engagement program designed to foster sustainable behaviours while reducing energy use, materials, and encouraging alternative transportation.

Finally, our Carbon Neutral Action Report does more than detail our first steps towards creating a culture of environmental sustainability at PHSA. It also outlines how we're committed to showing leadership in nurturing the health of our communities and world by reducing our environmental impacts and improving our environmental performance.

Acronyms Used in this Report

BCCA - BC Cancer Agency
CFL - compact fluorescent lamp
EPP - Translink's Employer Pass Program
GHG - greenhouse gas
HVAC - heating, ventilation and air conditioning
IMIT - PHSA's Information Management Information Technology department
LED - light-emitting diode
LEED - Leadership in Energy and Environmental Design
PHSA - Provincial Health Services Authority
PSECA - Public Sector Energy Conservation Management Agreement
SOV - single occupant vehicle
VOC - volatile organic compound

Objectives	<p>The carbon neutral objectives established by government directly align with PHSA's strategic direction to model sustainability leadership and to demonstrate PHSA's values as follows:</p> <p>Best value PHSA carbon neutral and sustainability activities:</p> <ul style="list-style-type: none"> • Evolve from a transparent, inclusive, collaborative process based on informed knowledge • Result from a consensus building process which reflects diverse views <p>Results matter PHSA carbon neutral and sustainability activities:</p> <ul style="list-style-type: none"> • Focus on excellence and achievable objectives • Will allow PHSA to lead by example • Rely on best practices <p>Improvements through knowledge PHSA carbon neutral and sustainability activities:</p> <ul style="list-style-type: none"> • Reflect the intentions of sustainability • Nurture learning and growing • Foster the ability to see systems <p>Open to possibilities PHSA carbon neutral and sustainability activities:</p> <ul style="list-style-type: none"> • Originate from and evoke an entrepreneurial spirit • Foster cross-boundary collaboration • Are based on creating desired futures (as opposed to reactive problem solving) <p>The year 2008 was a pivotal one for sustainability and reducing carbon emissions at PHSA. The year began with the formation of two new provincial health care groups: the Provincial Environmental Technical Team and the Climate Action Leads groups. PHSA enthusiastically joined both in order to maximize efficiencies, share information, and collaborate wherever mutually beneficial.</p> <p>To help PHSA demonstrate leadership in sustainability, the Facilities and Planning department also created two new positions and hired two new staff members: a Corporate Manager, Environmental Sustainability, and a Transportation and Parking Coordinator. The Alternate Service Delivery department hired a new waste management coordinator. All three positions were designed to help build on the trail blazed by PHSA's Energy Manager while expanding sustainability activities throughout the organization.</p> <p>To begin to fulfill the goal of demonstrating leadership in sustainability, PHSA also put together a Sustainability Steering Committee. This newly formed committee is a high-level cross-organizational vehicle for not only guiding PHSA's sustainability initiatives, but also for building executive-level commitment and action. The Sustainability Steering Committee is based on the foundations of seeing systems, collaboration across boundaries, and creating a desired future. The committee is sponsored by PHSA Vice President Clinical and Support Services John Andruschak, who sits on the Authority's Executive Committee.</p> <p>Besides these strategic and organizational capacity-building activities, in 2008 PHSA carried out a range of ongoing and new sustainability initiatives including:</p> <ul style="list-style-type: none"> • energy retrofits and upgrades to reduce energy and greenhouse gas emissions • alternative transportation improvements such as increasing the number of bicycle racks at facilities • reducing waste through recycling programs and purchasing practices • staff education and awareness-raising through presentations, media, and the intranet <p>These activities and more are further detailed in PART 1 of the report. PART 2 details planned actions in the same areas, as well as some additional ones, for 2009 and beyond.</p>
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1.1 Mobile Fuel Combustion			
Action	Action Taken	Outcome/Performance Measure	Notes Clarifying Action Taken
Replaced # of TYPE OF VEHICLE with MORE EFFICIENT VEHICLE/Hybrid	Complete	Initial steps towards planning a fleet emissions reduction strategy for 2009 taken. Oak Street Site's Oak Tree Clinic purchased a membership in Vancouver's car co-op for two of its outreach workers, rather than purchasing any new vehicles.	Environmental considerations are generally taken into account when purchasing new vehicles for PHSA's fleet of 68 cars/vans/buses.

Encouraged use of public transit/active transportation	Complete	230 PHSA staff members enrolled in EPP	PHSA offered Translink's Employer Pass Program which provides discounted annual transit passes to a growing number of employees. Many staff members use their passes throughout their workdays to get to meetings and visit sites.
Encouraged alternatives to travel in fleet vehicles – bicycles, scooters, electric carts	Complete	Alternative transportation plan complete. Infrastructure improvements scheduled for 2008 complete.	PHSA hired a Transportation Coordinator to create and implement an alternative transportation plan which emphasizes all forms of alternative transportation. PHSA also provided new bicycle racks and shower facilities for staff. Improvements to these facilities are planned as part of ongoing renovations.
Shuttle bus	Complete	120,000 person-trips in 2008. 85 percent of those surveyed said they would have otherwise driven.	PHSA provides a shuttle bus connecting the Oak Street campus, BC Cancer Agency-Vancouver Centre, and several Vancouver Coastal Health Authority and University of BC locations.

1.2 Stationary fuel combustion and electricity

Action	Action Taken	Outcome/Performance Measure	Notes Clarifying Action Taken
Replaced # computers with Energy Star models	Complete	Offset total electricity use by 20 percent over year 2007	All PHSA's computers when upgraded are Energy Star.
Replaced Refrigerators (Energy Star rated appliance)	Complete	Offset total electricity use by 20 percent over year 2007	All PHSA's refrigerators when upgraded are Energy Star.
Replaced other appliances (with Energy Star rated appliance)	Complete	Offset total electricity use by 20 percent over year 2007	All PHSA's appliances when upgraded are Energy Star.
Installed multi-function devices (and removed stand-alone printers/faxes)	Complete	Electricity savings are \$500,000 over five years	PHSA has a large scale Print Strategy designed to consolidate and reduce amounts of equipment in use. In 2008, the Print Strategy completed work at large parts of the Oak Street campus, among other sites.
Replaced standard bulbs with CFLs	Complete	As a result of various energy reduction work completed in 2008, more than 4 gWh/year has been saved from future electrical consumption loads in PHSA-owned facilities	Significant lighting retrofits (lower wattage T8s, not CFLs) were made in older buildings to reduce energy costs.
Installed motion activated lights	Complete	Same as above category	This is part of PHSA's site standards.
Undertaken lighting retrofit	Complete	Offset total electricity use by 20 percent over year 2007	PHSA installed LED lighting in the parking lots at several facilities
Implemented server virtualization	Complete	Reduce electricity consumption and GHG emissions. The project has saved PHSA \$2.9 million.	IMIT's server virtualization initiative virtualized its 450th server. Since most servers run at between only 10 and 15 percent capacity, the three-year old server virtualization project replaces older servers with new energy efficient ones while increasing capacity of both older and new servers.
Utilized desk-top power management settings on computer	Complete	Offset total electricity use by 20 percent over year 2007	IMIT purchased a product called "Desktop Authority" which allows the department to force power management on all PHSA computers. The software works remotely, forcing 4,000 of PHSA's 6,600 computers to go to sleep and save energy when they aren't in use.

Applied for LEED existing building rating	Complete	LEED design levels achieved	LEED certification was sought for the Mental Health Building on the Oak Street site. The new Abbotsford Regional Hospital & Cancer Centre LEED certification application was submitted.
Undertaken building energy audit at LOCATION(s)		Offset total electricity use by 20 percent over year 2007	PHSA—including all facilities—received the final report from its Power Smart Energy Management Assessment.
Initiated or completed a building energy retrofit	Complete	Offset total electricity use by 20 percent over year 2007	Significant retrofits were made in older buildings to reduce energy costs.
BC Hydro's Power Smart program and Public Sector Energy Conservation Agreement	Complete	PHSA received additional support of nearly \$525,000 for energy savings projects through the Public Sector Energy Conservation Agreement (PSECA).	These projects included: the rooftop wind-turbine, the LED lights at BCCA's parking lot (Vancouver Centre), HVAC control upgrades at the Oak Street Site, and the installation of Honeywell energy management software at the Oak Street Site and Sunnyhill. PHSA also applied for an addition \$6 million from PSECA for next fiscal year.
Awards	Complete	Built credibility and buy-in for energy-saving projects. Two awards won.	PHSA competed for Power Smart Excellence Awards.
Proposals/Evaluations	Complete	Projected energy savings are 60 percent within a three-year payback	PHSA considered a proposal to convert all exterior lighting at PHSA-owned facilities.
Proposals/Evaluations	Complete	Ensure new equipment is 100 percent energy efficiency compliant	PHSA examined the potential for reduced burning of fossil fuels and reduced demand on the hydro grid for capital projects in the coming years. Proposals included: the use of solar panels for heating, waste heat reclamation, investment in other alternative energy sources, and continued replacement of older building infrastructure with energy efficient equipment.

1.3 Supplies

Action	Action Taken	Outcome/Performance Measure	Notes Clarifying Action Taken
Initiated automatic double sided printing	Complete	Reduce paper consumption. Baseline set for 2007 and 2008. Reduction targets to be set in 2009.	In 2008, initial planning and assessment began for a PHSA-wide staff engagement initiative which targets paper reduction as a key priority. Furthermore, several PHSA departments undertook their own paper reduction initiatives including: Human Resources at BC Women's Hospital & Health Centre and BC Children's Hospital, PHSA Labs, PHSA Corporate Communications office, BCCA Communications office, Facilities and Planning, and PHSA Supply Chain. These initiatives ranged from eliminating printed copies of newsletters and defaulting printers to double siding to decreasing margin sizes and decreasing the number of printed reports.
Changed document template margins	In progress	Reduce paper consumption. Baseline set for 2007 and 2008. Reduction targets to be set in 2009.	This action is part of an overall plan and is in progress in various departments throughout the organization.
Committed to hold paperless meetings	In progress	Reduce paper consumption. Baseline set for 2007 and 2008. Reduction targets to be set in 2009.	This action is part of an overall plan and is in progress in various departments throughout the organization.

Developed document library (online and one printed copy) for large documents	In progress	Reduce paper consumption. Baseline set for 2007 and 2008. Reduction targets to be set in 2009.	This action is part of an overall plan and is in progress in various departments throughout the organization.
Used collaborative software to edit on-line	In progress	Reduce paper consumption. Baseline set for 2007 and 2008. Reduction targets to be set in 2009.	This action is part of an overall plan and is in progress in various departments throughout the organization.
Re-used non-confidential scrap paper	In progress	Reduce paper consumption. Baseline set for 2007 and 2008. Reduction targets to be set in 2009.	This action is part of an overall plan and is in progress in various departments throughout the organization.
Used laptops/tablets	In progress	Reduce paper consumption. Baseline set for 2007 and 2008. Reduction targets to be set in 2009.	This action is part of an overall plan and is in progress in various departments throughout the organization.
Restructured a process to use less paper	In progress	Reduce paper consumption. Baseline set for 2007 and 2008. Reduction targets to be set in 2009.	This action is part of an overall plan and is in progress in various departments throughout the organization.
Actions on non-paper related supplies:			
Chose "Green" items from Distribution Centre	In progress	Reduce materials. Waste reduction targets to be set in 2009.	This action is part of an overall culture shift and is in progress in various departments throughout the organization.
Encouraged re-use of furniture and equipment	In progress	Reduce materials. Waste reduction targets to be set in 2009.	This action is part of an overall culture shift and is in progress in various departments throughout the organization.
Sustainability purchasing workshop	Complete	Build organizational capacity in methods for reducing purchases of supplies such as paper. Build collaborative networks to make sure that PHSA purchases are energy efficient while encompassing other sustainability priorities such as waste reduction and cost savings.	Planned a sustainability purchasing workshop for the organization's Supply Chain group and others who deal with buying, contracts, or business cases.

1.4 Travel

Action	Action Taken	Outcome/Performance Measure	Notes Clarifying Action Taken
Installed Video Conferencing facilities	Complete	Reduced GHG emissions related to travel. Scores of staff are now using this method.	PHSA is a pioneer in the use of medical teleconferencing through Telehealth, and in 2008 promoted videoconferencing and other alternatives to reduce staff travel.
Supported alternative travel (bike/skateboard/walk/transit) for meetings	Complete	7 percent of staff at Oak Street Site carpool. Baselines and targets will be set for other sites in 2009.	PHSA provided assistance with ridesharing, vanpooling and carpooling (both in house and through Jack Bell Ride-Share.) Many staff use these methods for work-related travel throughout their workdays in addition to getting to and from work.

1.5 Employee Engagement

Action	Action Taken	Outcome/Performance Measure	Notes Clarifying Action Taken
Provided climate change education	Complete	More than 100 staff members participated. Site designed to reach 10,000 staff.	Corporate Manager, Environmental Sustainability presented to three groups. She also created a sustainability site on the intranet and had four stories published in corporate newsletters.
Provided conservation education	Complete	More than 100 staff members participated. Site designed to reach 10,000 staff.	Corporate Manager, Environmental Sustainability presented to three groups. She also created a sustainability site on the intranet and had four stories published in corporate newsletters.

Held contests to change behaviour/make pledges	Complete	Reduce GHG emissions, energy, materials, increase alternative transportation use, save money	The Centre for Disease Control held such a contest.
Held contests/support to generate ideas	Complete	Reduce GHG emissions, energy, materials, increase alternative transportation use, save money	The Centre for Disease Control held such a contest.
Developed Green Teams	Complete	Reduce GHG emissions, energy, materials, increase alternative transportation use, save money. More than 15 people currently on the green teams.	Two green teams were initiated and began work.
Supported Green Teams (resources)	Complete	Reduce GHG emissions, energy, materials, increase alternative transportation use, save money. More than 15 people on the green teams.	Corporate Manager, Environmental Sustainability supported two new green teams at corporate HR and at the Oak Tree Clinic.
Provided green tips	Complete	Designed to reach PHSA's 10,000 staff.	Corporate Manager, Environmental Sustainability provided green tips through presentations, media, and on the intranet.
Supported professional development	Complete	Built organizational capacity	Several PHSA staff attended sustainability courses and conferences.
Provided bicycle racks and shower facilities for staff	In progress	Reduce GHG emissions. Six percent of employees at the Oak Street Site are cyclists.	PHSA provided new bicycle racks and shower facilities for staff. Improvements to these facilities are planned as part of ongoing renovations. Some staff members use their bicycles to get to various meetings and sites throughout their workdays.
Comprehensive staff engagement program to foster sustainable behaviours ranging from reducing electricity use to using alternative transportation and more.	In progress	Reduce GHG emissions, energy, materials, increase alternative transportation use, save money. Initial target behaviours determined.	Initial planning began for a program based on the principles of volunteer management and community based social marketing. This program will incorporate "green teams" while going beyond what they currently do in healthcare, including measuring results and incorporating social sustainability into a comprehensive program. Initial results to be achieved in 2010.

1.6 Sustainability Actions (others)

Action	Action Taken	Outcome/Performance Measure	Notes Clarifying Action Taken
Reduced/replaced bottled water with filtered or refrigerated water	Complete	Reduce materials and GHG emissions. All main sites completed in 2008.	PHSA continued its campaign to switch to filtered water at all sites.
Improved recycling measures	Complete	Reduce materials and GHG emissions. New manager hired.	PHSA hired a waste management contracts manager to conduct an audit and improve WM practices, including recycling.
Purchased green cleaning products	Complete	Reduce hazardous waste	PHSA has a long term policy and practice of using green cleaning products.
Used green (low-e paints)	Complete	Reduce health hazards	PHSA has a long term practice of using no/low VOC products in all facilities.
Hired Transportation and Parking Coordinator	Complete	Reduce GHGs. New coordinator hired.	In June, PHSA created a new position with a mandate to design a plan to increase the use of alternative transportation not just related to commuting but also for employee travel within work-time and to decrease PHSA-related GHG emissions.

Environmental audit	Complete	Identify areas to reduce GHGs. More than 50 areas--ranging from food sourcing to hazardous waste disposal-- at five sites audited.	PHSA initiated an environmental audit based on the Green Guide to Healthcare to gauge priorities and locate new opportunities for sustainability savings and GHG reductions.
Established recycling program	Complete	Waste Management to set reduction targets in 2009. The thrift shops recycle about 30,000 pounds of clothing and household goods for reuse each year.	<ul style="list-style-type: none"> • Extensive office paper, glass and plastics recycling programs continued in 2008. • The contracted food service provider continued to recycle beverage containers, paper and compact cardboard, and to use biodegradable products where possible. • The Oak Street campus and Sunny Hill Health Centre for Children remained host to thrift shops run by the hospital auxiliaries.
LEED Gold status at BC Cancer Research Centre	Complete	Increase energy performance to 100 percent compliance.	Energy performance was reviewed at the BC Cancer Research Centre which was awarded LEED gold status. Key features include reduced energy consumption of 50% compared to a typical similar building, and the use of 25% recycled materials.
Food supplier- reduce materials use, source local foods, and provide sustainable seafood	Complete	Reduce footprint. Improve health	PHSA's food supplier for the Oak Street campus and Vancouver Centre launched several new initiatives designed to reduce materials use, source local foods, and provide sustainable seafood. These initiatives help reduce GHG emissions because less materials means fewer truck trips. Sourcing local and sustainable foods results in less transportation of goods.

Part 2: Plans to Continue Reducing Greenhouse Gas Emissions 2009 -- 2011

2.1 Mobile Fuel Combustion

Action	Action Planned	Outcome/Performance Measure	Notes Clarifying Action Taken	Timeframe
Encourage use of public transit/active transportation	Planned	Increase in non-transit using commuters using transit and participating in EPP program. Baseline and targets to be set in 2009.	<p>"The First Week is Free" FareSaver Tickets Program will offer all employees who currently drive alone to work and park at agency parking facilities a one-time incentive of a free book of FareSaver tickets. The goal is to get non-transit using commuters to try transit, and to encourage these employees to eventually sign up for the deep discount EPP program. Transit users will also be eligible for periodic prize giveaways, including umbrellas, coffee mugs and gift certificates for coffee and muffins at local shops.</p> <p>All PHSA and agency employees are currently eligible for a 15% discount on annual transit pass purchased from TransLink through payroll deduction (EPP program).</p> <p>Employees who regularly walk to work will be eligible for the semi-annual sustainable commuting prize draw, as well as a prize draw for gift certificates.</p>	2009 and beyond
Sustainability Actions - Guaranteed Ride Home and Other Incentives for Sustainable Commuters	Planned	Increase employee participation. Currently 7 percent of Oak Street campus staff carpool. Target goal of 10 percent for 2009.	<p>This program will be offered to employees who commute by bike, bus, carpool or by walking. The program is designed to ensure that in the event of any personal emergency, the employee will be eligible for a taxi ride home or to any other destination they need to go to unexpectedly (e.g., hospital, child's school, etc.). Employees must be registered members of the Green Commuting program to be eligible for this benefit.</p> <p>Sustainable commuters enrolled in the PHSA's Green Commuting program will be eligible for a variety of incentives and prize giveaways, including tickets for theatre, fine dining, and sporting events.</p>	
PHSA Fleet emissions reduction plan	Planned	Reduce Fleet emissions. Targets to be set in 2009.	PHSA will create a comprehensive plan with a variety of initiatives, possibly including some of those listed above such as encouraging car pooling in fleets and driver education training.	2009

2.2 Stationary Fuel Combustion (including electricity)

Action	Action Planned	Outcome/Performance Measure	Notes Clarifying Action Taken	Timeframe
Replace # computers with Energy Star models	in progress	Offset total electricity use by 20 percent over year 2007	This is ongoing as computers are replaced.	ongoing
Turn off lights in unused rooms	Planned	Offset total electricity use by 20 percent over year 2007	This will be part of PHSA's comprehensive employee engagement program for fostering sustainable behaviours.	2009

Replace Refrigerators (Energy Star rated appliance)	in progress	Offset total electricity use by 20 percent over year 2007	This is ongoing as refrigerators are replaced.	ongoing
Replace other appliances (with Energy Star rated appliance)	in progress	Offset total electricity use by 20 percent over year 2007	This is ongoing as appliances are replaced.	ongoing
Install multi-function devices (and remove stand-alone printers/faxes)	in progress	Offset total electricity use by 20 percent over year 2007	This is ongoing as part of PHSA's print strategy.	ongoing
Replace standard bulbs with CFLs	in progress	Offset total electricity use by 20 percent over year 2007	PHSA does not use CFLs but we do replace lights to other energy efficient types such as LED, T8s, etc.	ongoing
Install motion activated lights	in progress	Offset total electricity use by 20 percent over year 2007	This is ongoing as part of PHSA's site standards.	ongoing
Undertake lighting retrofit	in progress	Offset total electricity use by 20 percent over year 2007	This is ongoing as part of PHSA's site standards.	ongoing
Implement server virtualization	Planned	Offset total electricity use by 20 percent over year 2007	Since most servers run at between only 10 and 15 percent capacity, the third-year of the server virtualization project will replace older servers with new energy efficient ones while increasing capacity of both older and new servers.	2009
Apply for LEED existing building rating	Planned	Reduce footprint	Our next two green buildings are scheduled to be built at the Oak Street campus and in Prince George. Construction will begin on both of these buildings which will be built to LEED Gold standards. PHSA will also research possibilities for re-using materials from the Oak Street site building scheduled for demolition which currently sits in the footprint of the planned LEED Gold building.	2009
Undertake building energy audit at LOCATION(s)	Planned	Offset total electricity use by 20 percent over year 2007	See cell below. Energy audits are part of ongoing evaluations.	2009
Initiate or complete a building energy retrofit	Planned	Reduce electricity consumption and reduce environmental footprint. The upgrades will reduce electricity required for the lights by 72 percent. When electricity and maintenance savings are combined, the life-cycle cost savings reach 82 percent.	For leased sites, PHSA will continue to evaluate options and take action where possible. In 2009, PHSA will continue to upgrade urinals to waterless, implement LED lights where feasible, and replace T8 lights to lower wattage ones as per PHSA's site standards. Parking lot, parkade and, in some instances, interior light upgrades at the BCCA in Victoria and Vancouver will be completed.	2009
Examine potential for reduced fossil fuel use	Planned	Reduce environmental footprint	PHSA will continue to examine the potential for reduced burning of fossil fuels and reduced demand on the hydro grid for capital projects in the coming years.	2009

Generate green power	Planned	Reduce environmental footprint through green power generation and lower GHG emissions.	<p>Solar Hot Water Generation - This project is designed to capitalize on solar energy for all domestic hot water use at the Oak Street campus.</p> <p>Wind Turbines and Photovoltaics - PHSa will continue to monitor its new wind turbine and photovoltaics at the Oak Street campus. If these technologies continue to prove beneficial in 2009, PHSa will consider adding more to its sites.</p> <p>Geothermal and Fibre Optics - PHSa will evaluate the potential for geothermal energy at the new Children's Hospital building. It will also evaluate new fibre optic collectors and light delivery systems which could remove the need for electrically powered pot lights.</p>	Will be in the design phase for 2009, scheduled for implementation by 2011
Energy upgrades- Oak Street Campus	Planned	<p>Not only will this improve energy efficiency by 15 percent, reduce pollution, and save up to \$335,000 annually, it will also meet current seismic standards.</p> <p>The steam pipe re-insulation project is designed to reduce piping heat loss. Together, these three projects will save PHSa \$330,000 annually.</p>	<p>Boiler Upgrades - This project will reduce carbon emissions at BC Women's Hospital & Health Centre and BC Children's Hospital by a forecasted 2,500 tonnes annually. The steam plant retrofit replaces a 50-year-old system with a high efficiency, low NOx unit.</p> <p>Heat Reclamation, Chiller Retrofit, Steam Pipe Re-insulation - A new heat reclamation system on the boiler plant smokestack will send preheated water to the boilers. The chiller retrofit is an energy efficiency upgrade which will replace the site's two chillers with units that will save space and reduce noise. The chiller retrofit will also reduce maintenance and operating costs.</p> <p>New Energy Management Software - A new Honeywell energy management system will automatically monitor and make adjustments to HVAC controls.</p>	

2.3 Supplies

Action	Action Planned	Outcome/Performance Measure	Notes Clarifying Action Taken	Timeframe
Sustainability purchasing workshop	Planned	Built organizational capacity in methods for reducing purchases of supplies such as paper. Built collaborative networks to make sure that PHSa purchases are energy efficient while encompassing other sustainability priorities such as waste reduction and cost savings. 40 attendees.	PHSA will hold a sustainability purchasing workshop for the organization's Supply Chain group and others who deal with buying, contracts, or business cases in early 2009.	2009
Supply Chain - reducing purchases	Planned	Indicators include: reduced costs, improved quality, reduced risk, and leveraged buying power for environmental and social benefits.	PHSA will continue to build capacity from its sustainability purchasing workshop for the organization's Supply Chain group and other staff who deal with buying, contracts, or business cases.	2009
Paper reduction plan	Planned	40 initial participants for the pilot program.	In 2009, PHSa will recruit 20 volunteers and also develop a paper reduction plan which targets institutional opportunities for success. The plan will include collaboration with PHSa's Print Strategy in order to maximize synergies.	2009/2010

2.4 Travel

Action	Action Planned	Outcome/Performance Measure	Notes Clarifying Action Taken	Timeframe
Initiate Travel Policy	Planned	Set baseline for travel, and assess opportunities	In 2009, PHSA will assess opportunities for measuring corporate travel and setting a baseline for corporate travel emissions.	2009

2.5 Employee Engagement

Action	Action Planned	Outcome/Performance Measure	Notes Clarifying Action Taken	Timeframe
Provide climate change education	Planned	Increased employee participation in conservation activities. 20 initial participants for pilot.	See cell below	2009
Provide conservation education	Planned	Increased employee participation in conservation activities	<p>Awareness, Training, Fostering Sustainable Behaviours for Staff</p> <p>Currently, one-time and ad hoc training for staff occurs at PHSA in areas such as facilities management and equipment operation. In 2009, PHSA plans to launch a new pilot for an organization-wide employee engagement program designed to:</p> <ul style="list-style-type: none"> • Foster sustainable behaviours • Save money • Improve employee/client satisfaction • Capitalize on the ideas, innovations, and enthusiasm of staff <p>This proven method (based on principles of Community Based Social Marketing and Volunteer Management) will achieve measurable results in areas such as:</p> <ul style="list-style-type: none"> • Electricity reduction • Materials reduction (especially paper) • Alternative transportation use 	2009
Hold contests to change behaviour/make pledge	Planned	Reduce commuting GHGs	All registered carpool groups will be eligible for inclusion in a semi-annual sustainable commuting prize draw, which will involve various prizes and incentives. Registered employee carpools carrying three or more staff members to the Oak Street campus will be offered parking in preferred parking spaces at half the regular rate. Other facilities may receive this benefit in the second year of program implementation.	
Teleworking and teleconferencing	Planned	Relieved PHSA's space crunch. Reduced employee stress; increased employee satisfaction; reduced work-time losses. Pilot of 20 people targeted.	<p>To date, several PHSA offices function on telework while others incorporate it into regular practice. In 2009, PHSA will continue to encourage teleworking where such an arrangement is feasible and desirable for both staff and their supervisors.</p> <p>PHSA will also continue to maximize opportunities to decrease travel between sites by using teleconferencing—not only for large meetings, but for one-to-one meetings too.</p>	2009

Employee Engagement - covered cycling facilities	Planned	200 participants for alternative transportation incentive programs targeted.	<p>The lack of an adequate supply of covered bike parking and other end-of-trip cyclist facilities has been identified as an issue at the Oak street site. It is likely that this is also an issue at other PHSA facilities. Bike racks will be installed at various facilities as needed, and we will also examine the option of providing coverage over some existing bike racks.</p> <p>Cyclists will be eligible for various prizes and incentives. Cycling commuters at the Oak Street campus will receive gift certificates for on-site coffee shops. Free bike tune-ups will be offered in the springtime, and a free FareSaver transit ticket booklet will be offered in the fall to encourage cyclists to use transit instead of driving when the weather turns bad. A semi-annual annual prize draw will include gift certificates for cycling gear from bike shops around the region and other items. PHSA will also cover the registration fee for all employees interested in signing up for a Commuter Cycling Skills Course.</p>	2009
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2.6 Sustainability Actions (others)

Action	Action Planned	Outcome/Performance Measure	Notes Clarifying Action Taken	Timeframe
Reduce/replace bottled water with filtered or refrigerated water	in progress	Reduce GHGs and materials	Already underway and will continue.	ongoing
Improve recycling measures	in progress	Reduce waste to landfill	Already underway and will continue.	ongoing
Support composting	Planned	Reduce waste to landfill	Will be evaluated.	2009
Purchase green cleaning products	in progress	Reduce hazardous waste	Already underway and will continue.	ongoing
Use green (low-e paints)	in progress	Improve health	Already underway and will continue.	ongoing
Support sustainable procurement practices	in progress	Reduce materials	Already underway and will continue.	ongoing
Waste management	Planned	Reduce biomedical waste production via improved staff awareness. Baselines and targets to be set in 2009.	<ul style="list-style-type: none"> Promote recycling schemes and increasing segregation of waste streams. Investigate reducing and replacing disposable food containers and cutlery from food service outlets. Review waste management production and handling at the Oak Street Campus to minimize onsite transportation. During energy efficiency and other eco-renovations of the dish room at the Oak Street Site, ensure that meals for inpatient units--which need to be temporarily served on disposable products--are made from bio-degradable and post-consumer recycled products. <p>(Biomedical waste travels further and is processed using thermal and mechanical energy.)</p>	2009 and beyond

Sustainability strategy development	Planned	Unite the sustainability vision, goals and commitments of each agency with PHSA as a whole; articulate targets and actions; identify measurable results.	In late 2008, PHSA took its first steps towards a Sustainability Strategy when it became BC's first Health Authority to launch a comprehensive environmental audit in order to determine an environmental baseline. The audit, based on the Green Guide to Healthcare, is designed to gauge priorities and locate new opportunities for sustainability savings and GHG reductions. In 2009, PHSA will complete the audit and begin to prioritize and strategize on next steps.	2009
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