
Vancouver Island Health Authority

2011 Carbon Neutral Action Report

Executive Summary

The Vancouver Island Health Authority (VIHA) has made many advances to reduce carbon emissions in 2011 and remains committed to “Greening our Practice” as well as do more with available resources. The VIHA is accomplishing these goals by incorporating energy conservation and environmental initiatives into its practices. This past year saw the culmination of these efforts with these outstanding achievements:

- Committing to Carbon Neutrality by completing carbon reducing projects and purchasing offsets for emissions.
- Building to LEED® Gold Construction - On March 13, 2011 the new Patient Care Centre (PCC) Royal Jubilee Hospital (RJH) in Victoria, British Columbia opened to the public.
- Creating an Energy Efficiency and Conservation Department to maximize commitment.
- Launching of a staff focused Behavior Change Pilot Program in Partnership with BC Hydro.

These achievements demonstrate the VIHA’s efforts to ensure that environmental sustainability initiatives have become a part of our practice and organization.

We are pleased to see that for 2011 the VIHA’s carbon emissions are still below the 2007 emissions in spite of adding 38,213 square meters of floor space to our owned building stock. New construction to LEED® Gold standards and completing efficiency upgrades at many sites has helped to keep emissions below 2007 levels. VIHA remains committed to reducing carbon emissions to 33% below 2007 levels by 2020. In 2011 the VIHA has investigated the potential for replacing natural gas fired steam plants with clean energy systems at two large acute care facilities and is cooperating with the community of Port Alberni as it explores the potential for a low carbon district energy system.

For 2012 the challenge continues for the VIHA to reduce greenhouse gas emissions while expanding our practice to meeting the growing demands of health care delivery. Our committed team will make every effort to meet these challenges.

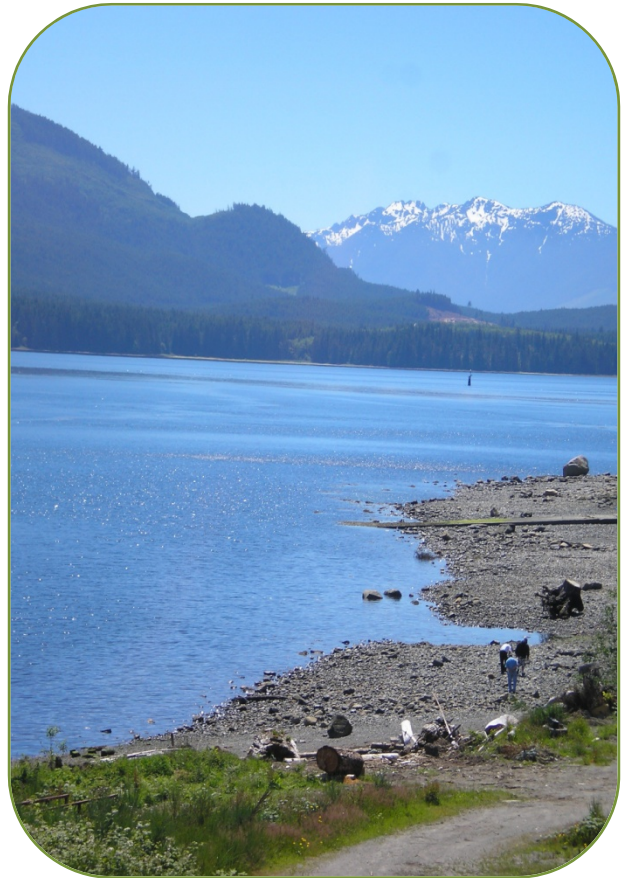


Joe Murphy
Vice President, Operations & Support Services

Overview

The Vancouver Island Health Authority (VIHA) provides health care to residents on Vancouver Island, the islands of the Georgia Strait, and the mainland communities north of Powell River and south of Rivers Inlet. We are a diverse region serving a diverse population some *quick facts* about the VIHA...

BUDGET - \$1.8 Billion
POPULATION - 765,849 (17% of BC)
HEALTH CARE PROFESSIONALS - 18,000
PHYSICIAN PARTNERS - 1,700
VOLUNTEERS - 3,600 volunteers provide over 260,000 hours of service per year
GEOGRAPHICAL AREA - 56,000 square kilometers
FACILITIES - 207 Buildings for a total building area of 520,416 square metres
ACUTE CARE & REHABILITATION BEDS - 1,500 projecting growth of 200 beds in 10 years
RESIDENTIAL CARE & ASSISTED LIVING UNITS - 6,350 projecting growth of 163 beds per year
COMMUNITY ADDICTION BEDS - 386 (VIHA owned / operated)
COMMUNITY MENTAL HEALTH BEDS - 646 (VIHA owned / operated)
GREENHOUSE GAS EMISSIONS 2011 – 34,887 Tonnes tCO₂e



Commitment

The Executive and the Board of Directors of VIHA (the Board) are fully supportive of energy conservation, carbon emissions reduction and sustainability. The *Greenhouse Gas Reduction Target Act* (Bill 44), states green house gas emissions should be at least 33% below 2007 emission levels by 2020. As of 2011 the VIHA's emission levels remain below 2007 emission levels and we remain committed to implement strategies to achieve a 33% reduction by 2020. In partnership with BC Hydro the VIHA is also committed to reduce electrical consumption by at least 2 Giga Watt hours (GWh) each year.

These commitments have resulted in the health authority:

- Achieving carbon neutrality by reducing carbon emissions and purchasing offsets
- Constructing and operating a LEED® Gold Patient Care Centre
- Committing to all new construction being LEED® Gold and enrolled in the BC Hydro New Construction Program
- Creating an Energy Efficiency and Conservation Department
- Engaging and supporting staff in Green Team Activities
- Working with Community, Local Government and Provincial Government to reduce our environmental footprint

2011 Greenhouse Gas Emissions

Internal data collection processes are in place to identify all sources of carbon emission as defined by Bill 44. The VIHA has reported on carbon emissions using the BC Government's SmartTool program starting in 2007 with full reporting completed for 2009, 2010 and 2011. This year a Self-Certification process was implemented. Our total Emissions from all sources for 2011 are as follows:

Emission Source	tCO ₂ e	Offsets Purchased
Fleet	902	
Office Paper	747	
Buildings Owned	31,740	
Buildings Leased	1,587	
Total Emissions, Calendar year 2011	35005	
Carbon Neutral or Offset Exempt Emissions	59	
Total Emissions for Offsets Reported April 30, 2012 in SmartTool	34,946	\$873,650

Due to usage of BioDiesel 59 tCO₂e were offset exempt. The VIHA purchased offsets for 34,946 tCO₂e from Pacific Carbon Trust in order to be Carbon Neutral. Owned buildings are the primary source of emissions responsible for greenhouse gases accounting for 90.8% of total emissions. Leased buildings account for 4.5%, fleet 2.6% and paper 2.1% of emissions. Please see Appendix A for the Emissions report from SmartTool.

The VIHA has determined it's consumption of fugitive gas (i.e. leaks from pressurized equipment) is less than 1% of the overall emissions and is disproportionately onerous to collect data. For this reason these gasses have been deemed out of scope.

Adjustments to Greenhouse Gas Emissions and Offsets Reporting from Previous Years

Following the public release of the VIHA's 2010 Carbon Neutral Action Report adjustments were made due to the end of calendar year billing. It was also noted that the VIHA had reported on the Victoria Cancer Centre which is also reported by PHSA. This resulted in a net increase with the emissions changing from 32,501 tCO₂e to 32,938 tCO₂e. The VIHA purchases carbon offsets quarterly and makes adjustments as data is updated.

Carbon Targets

Bill 44 sets targets for Public Sector Organizations (PSO) to reduce carbon emissions. To date, as per the chart below, the VIHA has reduced emissions below 2007 levels. For 2011 the increase is largely due to an additional 38,979 square meters of net new space. The challenge going forward will be to continue to reduce emissions while expanding facilities. All new construction must meet similar targets emissions that are 33% below or lower than the 2007 emissions for the building they are replacing. Net new space would target to have net zero emissions. Replacing some or all of the natural gas boilers at our largest facilities with low carbon energy systems will ensure that targets are met.

GHG Emissions: Actual vs. Target

Year	Total GHG Emissions tCO ₂ e	Target tCO ₂ e	
2007	37,295 ¹	37,295	Baseline
2008	37,696 ¹		
2009	35,836 ²		
2010	32,932 ³		12% reduction
2011	34,887 ²		6.2% reduction
2012			
2016			
2020		24,988	33% reduction
2050		7,459	80% reduction

1 estimated based on invoices

2 based on data from SmartTool

3 emissions changed due to end of year billing adjustments

In Scope Emissions Reductions Activities 2011

Over the past years the VIHA has been implementing a number of energy saving strategies to reduce energy consumption and thereby greenhouse gas emissions. In 2011 initiatives completed to reduce carbon emission included the following projects:

- Installing domestic solar hot water systems at two of its facilities
- Installing heat recovery chillers at Victoria General. The chillers recover and use it for domestic hot water and preheat for makeup air systems.
- Undertaking high efficiency boiler replacements and installing stack economizers and controls upgrades at Cumberland Health Centre,
- Adding demand ventilation for kitchen exhaust at all major sites
- Retro-commissioning of existing mechanical heating systems at Victoria General Hospital, and Nanaimo General Hospital.



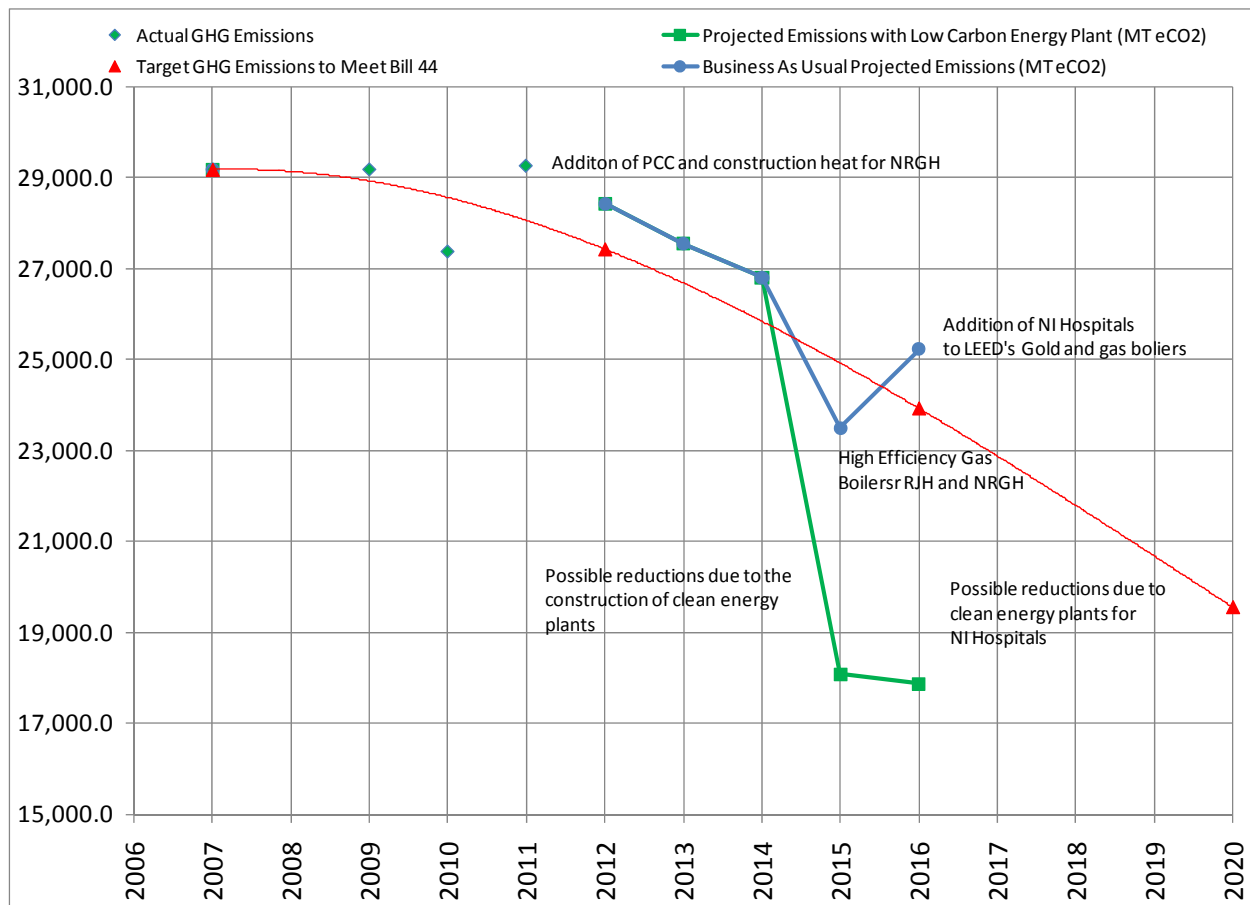
Solar Collectors at Victoria General –Operating since Dec 1, 2011

- Participating in Continuous Optimization at twelve acute and residential care sites.
- Improving parking at Nanaimo Regional General included installing LED (light emitting diode) lights, electric car charging stations, waste water retention systems, and natural vegetation.
- Reducing paper consumption through printer optimization double sided printing, electronic health records, and thin client for clinical staff.
- Reducing paper usage by implementing VI Hire. This is an electronic hiring system in the past year handled 4,000 plus postings that would have previously been posted on paper at approximately 125 sights. This would have generated approximately 50,000 paper applications for these vacancies over a period of one year.

Recognizing that it will be necessary to achieve large scale carbon reductions if our targets are to be met, the VIHA is investigating the use of low carbon energy plants. To this end we have commissioned two Prefeasibility Studies at Royal Jubilee and Nanaimo Regional General Hospitals to look at clean energy plants that will produce steam with minimal carbon emissions. Without these plants the greenhouse gas from VIHA will escalate above the 2007 emissions level even with aggressive energy conservation strategies. These plants will ensure that the VIHA's carbon emission targets will be met well past 2020.

This is demonstrated in the following graph. The red line represents the VIHA's target emission to meet Bill 44, the blue line represents business as usual case (which includes energy conservation) and the green line represents the impact of low carbon energy plants at RJH and NRGH:

VIHA Owned Buildings GHG Emission Targets vs Actual and Projected Emissions



Emission Reduction Activities 2012 -2014

There are several projects underway and/or planned that will deliver more reductions in 2012 and 2014 as they are completed. These initiatives include:

- Starting Round II of the Continuous Optimization Program by adding 8 more sites.
- Energy upgrades at Royal Jubilee Hospital, West Coast General Hospital and Cowichan District Hospital based on recently completed energy studies.
- Installation of heat recovery chillers and domestic hot water preheat at Nanaimo Regional General Hospital.
- Install either high efficiency gas boilers at Royal Jubilee and Nanaimo Regional General Hospitals or for significantly more reductions install low carbon energy plants at the two sites. The graph above demonstrates that low carbon energy plants will be required to meet the target reductions of Bill 44 - energy conservation on its own will not be sufficient. The low carbon energy plants modeled for these two sites include heat recovery from waste heat streams and biomass boilers for high temperature process loads. A similar choice will have to be made for the two new North Island Hospitals.

Changes to Operations

Net New Space Added since 2007 as of December 2011

• Decommissioned – Bay Pavilion RJH Campus	2007	-23 sqm
• Nanaimo Regional General Hospital Perinatal Department	2008	2,189 sqm
• Victoria General Hospital Emergency Department	2009	1,660 sqm
• Port Hardy Hospital Multilevel Care Beds	2009	499 sqm
• Royal Jubilee Energy Centre	2009	218 sqm
• Nanaimo Regional General Hospital Renal Department	2010	1,109 sqm
• Cowichan District Hospital Pharmacy	2010	152 sqm
• Cowichan District Hospital Island Medical Program	2011	219 sqm
• Royal Jubilee Patient Care Centre	2011	41,320 sqm
• Decommissioned – South, East and Centre Block RJH Campus	2011	-9130 sqm
TOTAL NET NEW		38,213 sqm

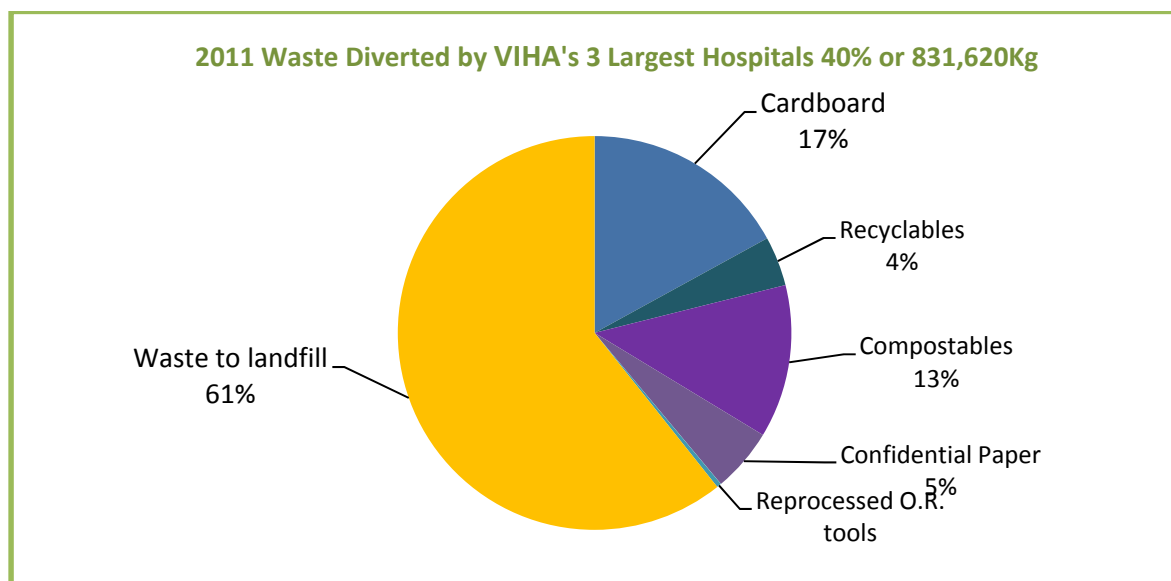
Initiative to Reduce Provincial Emissions and Improve Sustainability

Municipal Governments on Vancouver Island are also working on strategies to reduce their carbon emissions and the VIHA has contributed to their Official Community Plans and Carbon Reduction Strategies. The Capital Regional District of Victoria is looking at several VIHA sites to see if there is potential to extract heat from sewage transfer stations or large domestic water supply lines near the facilities. The City of Port Alberni is in the planning stages to provide district energy supplied hot water to the hospital.

On a provincial level the Director of the Energy Efficiency and Conservation Department is the Chair for the Provincial Environmental Technical Team and works with other Provincial Sector Organizations on the Carbon Neutral Action Committee. Both groups are working to bring about environmental changes to the provinces public buildings and operations.

Other community engagement activities include:

- Creation of the Royal Jubilee Hospital Sustainable Master Plan.
- Providing video / audio conferencing services to reduce staff car travel.
- Recycling thirty thousand pounds a year of linen (98% of our linen waste) by donating it for reuse in developing countries.
- Working with suppliers to recycle products.
- Promoting bike to work, ride share and use of a shuttle bus between two of the largest facilities.
- Support ride share by increasing the VIHA Propass subsidy to \$14 per pay period.
- Developing a pilot staff engagement program that supports leadership at the staff level through Green Teams.
- Hosting “Green Teams Unite” with the Climate Action Secretariat to bring Green Team Leaders together for a day of inspiration, training and collaboration.
- Hosting Green Leaders Training for VIHA staff, Municipal Staff and University Staff.
- Adding composting to its recycling program for major sites in Victoria and Nanaimo these sites offer seven or more streams of recycling. See the following table of waste diverted from the VIHA’s largest sites.



- Promoting Telehealth which provides patients the opportunity of health care in the comfort of their home community while reducing the need to travel. In the past year there were 6,197 consultations resulting in saving 2,379,122 km’s of travel and 653,580 kilograms of greenhouse gas emissions. If the patients were required to travel rather than use Telehealth they would likely have one or more nights in a hotel for approximately 2,850 of the patients. The graph

below provides the detail of the travel. There is significant potential for this program expand too many more communities and programs and thereby reduce more emissions.

Travel Avoided by Patients using Telehealth System

Total Number of kms	Duncan	Nanaimo	Campbell River	Comox	Port Alberni	Parksville	Salt Spring	Sub TOTAL
Consultations	31	2379	1014	1557	736	171	5	5,893
Distance in kms one way	65	120	264	219	195	150	60	1,073
Number of kms avoided	4,030	570,960	535,392	681,966	287,040	51,300	600	2,131,288
Total kgs of GHG emissions avoided	1,109	157,129	147,340	187,677	78,994	14,118	165	586,532

Total Number of kms	Continued From Above Sub Total	Sointula	Port McNeill	Port Hardy	Tofino	Alert Bay	Port Alice	Gold River	Woodstone	TOTAL
Consultations	5,893	3	58	112	31	5	9	58	28	6,197
Distance in kms one way	1,073	470	463	502	316	467	512	355	75	4233
Number of kms avoided	2,131,288	2,820	53,708	112,448	19,592	4,670	9,216	41,180	4,200	2,379,122
Total kgs of GHG emissions avoided	586,532	776	14,780	30,946	5,392	1,285	2,536	11,333	1,156	654,736

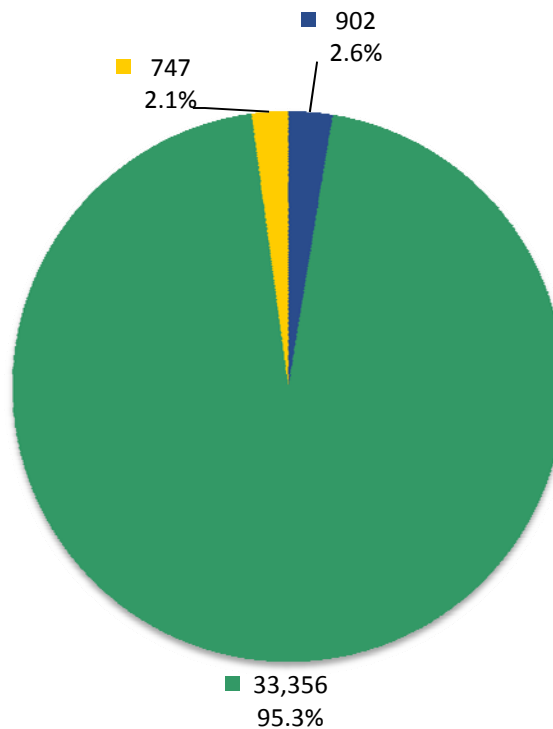
Greening our Practice

The VIHA produced a video to engage staff and inform the public of the energy reducing initiatives underway and ask for everyone's help in being mindful of how we use our precious resources. The video can be viewed at:

http://www.viha.ca/about_viha/environment.htm

APPENDIX A – Emissions by Source as downloaded from SmartTool

**Vancouver Island Health Authority
Greenhouse Gas Emissions by Source
for the 2011 Calendar Year (tCO₂e*)**



Total Emissions: 35,005

- 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 2011 (Generated May 08, 2012 10:14 AM)

Total offsets required: **34,946**. Total offset investment: **\$873,650**. Emissions which do not require offsets: **59** **

*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

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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 (as of 12/31/11)	Performance to Date (as of 12/31/11)		Steps Taken in 2011	Steps Planned for 2012 -2014	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	8	% of vehicles are fuel- efficient models	Started 2010. Replacement rate is 10% per year. Replaced 17 vehicles of 191.	Continue with 10% replacement rate as funding permits	2009	No End Date (Continuous)
Replace larger vehicles with smaller models according to fleet "right-sizing" principles	Ongoing/In Progress	5	% of vehicles down-sized since start year indicated	Include compact size car as a part of the renewal process. Replacing Neons and Chryslers with Echo and Corolla	Continue with downsizing.	2009	No End Date (Continuous)
Perform regular fleet maintenance specifically to improve fuel-efficiency	Ongoing/In Progress	100	% of vehicles are subject to regular maintenance for fuel efficiency	Trucks serviced twice per year as per federal regulation. Cars serviced at a minimum twice per year or as required depending on mileage.	Continue to service Vehicle	2009	No End Date (Continuous)
Behaviour change program							
Introduce anti-idling policy and/or raise anti-idling awareness for fleet drivers (e.g., signs, stickers, messages)	Ongoing/In Progress	191	Fleet vehicles no idling policy	All VIHA Sites are Designated no idle zones. Policy for fleet vehicles to not idle while off of site.	Plan roll out and implementation and making all sites non idle zones.	2009	No End Date (Continuous)
Encourage carpooling in fleet vehicles	Ongoing/In Progress			Staff have been encouraged to car pool	Continue to promote car pool	1999	No End Date (Continuous)
Promote alternatives to fleet vehicle travel where possible (e.g., bicycles, public transit, walking)	Ongoing/In Progress	23	Riders per day used VGH/RJH shuttle	Increased number of shuttles available to staff for attending meetings and also during peak commute periods. Increased number of vehicles and runs for peak times.	Continue to promote shuttle	2009	No End Date (Continuous)
Other Mobile Fuel Combustion Actions							
Use audio conferencing to minimize travel	Ongoing/In Progress			Installed centralized audio conferencing	Continue with program	2010	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			Energy Efficiency Conservation Department reviewing various rating and bench marking programs available with Capital Design and Construction.			
Reduce office space (square meters) per employee	Ongoing/In Progress			Space Planning follows Ministry of Health Guidelines and makes every effort to optimize space.	Continue to follow Ministry of Health Guidelines	2007	No End Date (Continuous)
Install a real time metering system (e.g. Pulse, Reliable Controls, Houle Controls)	Ongoing/In Progress	53	% of buildings have a real time metering system installed	Installed pulse metering all owned except very smallest.	Develop reports, dashboards and train staff.	2009	2012
Owned buildings							
Establish energy performance baseline for owned buildings	Ongoing/In Progress	85	% of owned buildings have an established energy performance baseline	Energy baselines are completed at the majority of the owned buildings. Some small sites have not been included.	Implement water monitoring and baseline for owned buildings.		

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Action	Status (as of 12/31/11)	Performance to Date (as of 12/31/11)		Steps Taken in 2011	Steps Planned for 2012 -2014	Start Year	End Year
Achieve LEED NC Gold certification at a minimum for new construction or major renovations	Ongoing/In Progress			Completed construction of the RJH Patient Care Centre (PCC) that was built to LEED Gold standards. NRGH ER was designed to LEED Gold standards and is under construction. Oceanside Health Centre will be constructed to Leeds NC Gold	Complete certification for PCC. Complete construction of NRGH ER.Design North Island Hospitals to LEED's GOLD Standard.	2008	No End Date (Continuous)
Incorporate integrated design process into new construction or during renovations of owned buildings	Ongoing/In Progress	75	% of buildings built or renovated since start year indicated used the integrated design process	The RJH Patient Care Centre used an integrated design process	Continue to use this process for large new buildings	2009	No End Date (Continuous)
Incorporate a refrigerant management strategy into regular building management/maintenance to reduce fugitive emissions	Ongoing/In Progress	100	% of buildings	Continued to use service contractors.	Continue to require this from service contractors	2009	No End Date (Continuous)
Perform energy retrofits on existing, owned buildings	Ongoing/In Progress	35	% of owned buildings have undergone energy retrofits since start year indicated	Boiler replacements, controls upgrades, kitchen demand ventilation, heat recovery, lighting upgrades, upgrades comissioning synchronous belts, efficient motors.	Heat recovery chillers, low carbon energy plants.	2009	No End Date (Continuous)
Retrofitting owned buildings							
Upgrade mechanical systems (heating, cooling, ventilation) during retrofits	Ongoing/In Progress	25	% of retrofits since start year indicated had heating, cooling, and ventilation systems upgrades	Retrofits are reviewed and where feasible energy efficient options are included.	Review all projects for potential retrofits, and rebates, estimate projects with retrofit included.	2008	No End Date (Continuous)
Upgrade lighting systems during retrofits	Ongoing/In Progress	85	% of retrofits since start year indicated had lighting systems upgrades	Ongoing lighting retrofits through out owned buildings	Continue upgrading lighting to achieve optimal efficiency.	2009	No End Date (Continuous)
Upgrade/adjust control systems during retrofits	Ongoing/In Progress	25	% of retrofits since start year indicated had control system upgrades or adjustments	Continue upgrading controls through building renovations, retro commissioning and BC Hydro programs.	Continue with control upgrades.	2009	No End Date (Continuous)
Improve building insulation (including windows) during retrofits	Ongoing/In Progress	5	% of retrofits since start year indicated had insulation improvements	When areas are renovated sufficiently that insulation is affected the insulation and or windows are improved. Trillium Lodge and Cumberland Lodge being done with a capital request for NRGH	Upgrade systems as budgets and projects allow.	2009	No End Date (Continuous)
Install an on-site renewable energy demonstration project	Ongoing/In Progress	5	% of retrofits since start year indicated had on-site renewable energy components	PSECA III is funding installation of domestic solar hot water systems at VGH, SPH and LMH.	PSECA III is funding installation of domestic solar hot water systems at Aberdeen Hospital.	2010	No End Date (Continuous)
IT power management							
Install power management software which shuts down computers outside of regular business hours	In Development			VIHA had planned to implement this year. Desktop services were centralized into HSSBC. Software not provided with new installs.	Requires Ministry to invervene and change contract to add software.	2009	No End Date (Continuous)
Implement server virtualization	Ongoing/In Progress	45	% of servers have been virtualized since start year indicated	261 virtual servers, 319 physical servers. Demand for physical servers is high.	Continue with virtualization and addressing issues requiring high in demand for actual servers.	2009	No End Date (Continuous)
Apply auto-sleep settings on computer monitors and CPUs	Ongoing/In Progress	98	% of computers have auto-sleep settings applied	Desktops power off after 20 mins. (No sleep enabled for CPU). Laptops monitor powers down after 10 mins and hard disk after 15 mins.	Continue with program.	2009	No End Date (Continuous)

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Action	Status (as of 12/31/11)	Performance to Date (as of 12/31/11)		Steps Taken in 2011	Steps Planned for 2012 -2014	Start Year	End Year
Remove stand-alone printers, copiers, and/or fax machines and install multi-function devices	Ongoing/In Progress	40	% reduction in printers, copiers, and/or fax machines since start year indicated	Overall reduction in print devices by 40% to 2,937 devices.	By 2013 the MSP Project will reduce the number of print devices to 1,641. MPS installation progress to date is 40% - 655 MPS devices deployed.	2009	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 Network printers have auto-sleep	All Consolidated device will provide savings. Econo mode and autopower saving mode is default setting on all print devices.	2009	No End Date (Continuous)
Replace computers with ENERGY STAR models during regular computer upgrades	Ongoing/In Progress	99	% of computers are ENERGY STAR rated	All equipment available as Energy Star is purchased under this program.	Continue with program.	2009	No End Date (Continuous)
Appliances and electronic devices							
Replace refrigerators with ENERGY STAR models or source ENERGY STAR models for future purchases	Ongoing/In Progress	50	% of fridges are ENERGY STAR rated	All equipment available as Energy Star is purchased under this program	Continue with Program	2009	No End Date (Continuous)
Replace other appliances or electronic devices with ENERGY STAR models or source ENERGY STAR models for future purchases	Ongoing/In Progress	100	% of appliances that are available with Energy Star ratings are purchased as such.	All equipment available as Energy Star is purchased under this program. The Purchasing Department is working with the Energy Efficiency and Conservation Department to make use of the BC Hydro rebate program for purchasing energy efficient equipment.	Continue with Program	2009	No End Date (Continuous)
Replace desk lamp incandescent bulbs with compact fluorescent (CFL) bulbs or source more efficient desk lamps for future purchases	Ongoing/In Progress			All new lighting is LED or compact fluorescent as per new VIHA Lighting Standard.	Use compact fluorescents or LED	2001	No End Date (Continuous)
Behaviour change program							
Help staff reduce personal energy use through "workstation tune-ups"	Ongoing/In Progress	5	% of current staff have completed a workstation tune-up	Turn it off Campaign included work station tune ups.	Continue with Green Teams and add 1 or more sights.	2008	No End Date (Continuous)
Ask staff to unplug electrical equipment or switch off power bars when not in use	Ongoing/In Progress	5	Sites have Green Teams	Completed Electrical Campaign including unplugging electrical equipment.	Continue with Green Teams and add 1 or more sights.	2008	No End Date (Continuous)
Ask staff to close blinds at end of work day to reduce heating/cooling demands	In Development				Continue with Green Teams and add 1 or more sights.	2008	No End Date (Continuous)
Encourage staff to use air dry setting on dishwashers	Ongoing/In Progress	5	Sites have Green Teams	Reduce Hot Water Campaign being planned including dishwasher efficiency.	Continue with Green Teams and add 1 or more sights.	2008	No End Date (Continuous)
Provide tips to staff on saving energy in the office while working outside of regular business hours	Ongoing/In Progress	5	Sites have Green Teams	Electrical Campaign at 5 sights and published Green tips in the newsletter.	Continue with Green Teams and add 1 or more sights.	2008	No End Date (Continuous)
Provide reminders for turning off lights (e.g., signs, stickers, messages)	Ongoing/In Progress			Produced , printed and delivered "Turn it off" stickers. Designed posters for next years campaigns.	Rollout Green Teams at 5 sites per year.	2008	No End Date (Continuous)
Promote hot water conservation	Ongoing/In Progress	1	Campaign Planned	Worked on a campaign for the upcoming year.	Rollout Green Teams at 5 sites per year. Continue collaborating in Public Sector Organizations.	2008	No End Date (Continuous)
Other Stationary Fuel Combustion, Electricity, and Fugitive Emissions Actions							
Moving to Thin Client Computers from Desk Top PC's	Ongoing/In Progress	375	computers changed to thin client	Change all our desk top to PC's were applicable and as computers are refreshed	Ongoing.	2010	No End Date (Continuous)
Supplies (Paper)							
Paper Type							

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Purchase 30% post-consumer recycled paper	Ongoing/In Progress	80	% of total paper purchased contains 30% recycled content	Recycled paper is the most economical option.	Recycled content will be purchased on a cost basis unless a sustainable purchasing policy is adopted.	2011	No End Date (Continuous)
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	Deliver through MPS Project	Default to double sided printing on all business printers	2009	No End Date (Continuous)
Apply "print and hold" settings to networked printers to eliminate unclaimed print jobs	Ongoing/In Progress	100	% of network printers have 'print and hold' settings applied	Deliver through MPS Project	Enable PIN printing on all MSP networked devices.	2009	No End Date (Continuous)
Reduce default margin size in standard document templates (e.g., letters, briefing notes, forms, etc.)	In Development			Margins cannot be adjusted for clinical forms. Could be done in software for business documents	Investigate feasibility for changing margins via software	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	10	% of staff workstations with software installed	1243 Microsoft OCS users at this time. The service is free of charge. Approximately 700 people use the service at any given time.	Continue with the program.	2010	No End Date (Continuous)
Use electronic document library for filing common documents	Ongoing/In Progress			Shared drives are used through out the organization. Electronic distribution of work binders. Sharepoint and intranet.	Continue with the program.	2009	No End Date (Continuous)
Post materials online that were previously printed	Ongoing/In Progress	100	% of Job Postings and Paper Applications are Electronic	4000 plus job postings, posters and 50,000 paper applications are now done electronically.	Leaders connect in development to put all forms and info online for managers.	2009	No End Date (Continuous)
Switch to an electronic payroll notification system in place of paper pay stubs	In Development			Reviewing two options.	Select option and implement program.	2010	No End Date (Continuous)
Behaviour change program							
Train staff to use collaborative software for electronic editing (e.g. SharePoint, Groove, etc.)	Ongoing/In Progress	10	% of staff currently have received collaborative software training	OSC - on demand editing and document share available for all workstations.	Continue with the program.	2009	No End Date (Continuous)
Encourage staff to hold paperless meetings or presentations (i.e., no handouts)	Ongoing/In Progress			Increase use of electronic files, laptops and projectors has reduced the paper at meetings.	Continue with the program.	2009	No End Date (Continuous)

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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 *Greenhouse Gas Reduction Targets Act*. 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 12/31/11)	Performance to Date (as of 12/31/11)	Steps Taken in 2011	Steps Planned for 2012 -2014	Start Year	End Year
Business Travel						
Virtual meeting technology						
Install web-conferencing software (e.g., Live Meeting, Elluminate, etc.)	In Development		Software is being made available.	Continue with program.	2009	No End Date (Continuous)
Behaviour change program						
Train staff in video-conferencing or provide technical support for video-conferencing set-up	Ongoing/In Progress		Live support available on demand.	Continue with program.	2009	No End Date (Continuous)
Encourage staff to consider virtual attendance/presentation at events where possible	Ongoing/In Progress		Audio and/or video conferencing is used for regional meetings.	Continue with program. Develop some metrics.	2009	No End Date (Continuous)
Encourage carpooling to meetings	Ongoing/In Progress		Encourage ride share	Continue with program. Develop some metrics.	2008	No End Date (Continuous)
Encourage alternative travel to meetings (e.g., bicycles, public transit, walking)	Ongoing/In Progress		Encourage ride share	Continue with program. Develop some metrics.	2007	No End Date (Continuous)
Education, Awareness, and Engagement						
Team-building						
Create Green, Sustainability, Energy Conservation, or Climate Action Teams with executive endorsement	In Development	5	Pilot sites.	5 pilot sites have active green teams.	2009	No End Date (Continuous)
Provide resources and/or dedicated staff to support teams	In Development	2	BC Hydro Energy Managers with support of Energy Specialist	Energy Team, BC Hydro and FortisBC are supporting formation of Green Teams	2010	No End Date (Continuous)
Providing behaviour change education/training to teams (e.g., community-based social marketing)	In Development	15	Held green team meetings, behaviour change campaigns and events at each of five pilot sites.	An Education Program will be provided. Conducted baseline survey and established annual follow-up survey. Created graphics and prompts. Conducted turn-it-off energy walk about audits. Celebrated success at year end.	2009	No End Date (Continuous)
Awards/Recognition						
Establish a sustainability/green awards or recognition program	In Development	3	Held three recognition events with senior management making presentation and attended by 80 people.	Events held to recognize FM&O staff for energy conservation initiatives The existing VIHA Celebration of Excellence award program was used.	2011	No End Date (Continuous)
Staff Professional Development						
Support green professional development (e.g., workshops, conferences, training)	Ongoing/In Progress		FM&O staff attended BC Hydro Power Smart Forum. Energy Team members have attended training on FortisBC programs, EnergyStar, Solar and Carbon.	Develop and deliver technical workshop on energy conservation for FM&O staff. Provide FM&O Managers update on energy conservation progress, green teams and conservation at annual FM&O conference. Continue with education. Energy Team members to attend Globe Conference.	2009	No End Date (Continuous)

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Action	Status (as of 12/31/11)	Performance to Date (as of 12/31/11)		Steps Taken in 2011	Steps Planned for 2012 -2014	Start Year	End Year
Staff awareness/education							
Provide education to staff about the science of climate change	Ongoing/In Progress	50	Managers and Directors.	Facilities staff attended courses on subject. BC Hydro provided course to directors and managers	Continue with education	2009	No End Date (Continuous)
Provide education to staff about the conservation of water, energy, and raw materials	In Development	5	Green Teams includes education component.	Green Teams receive education, BC Hydro Outreach Team visited pilot sites, promoted the BC Hydro Tune Up Tool to all of VIHA	Continue with education	2010	No End Date (Continuous)
Provide green tips on staff website or in newsletters	Ongoing/In Progress	8	Good News Stories about green initiatives provided for staff newsletter. Promoted energy conservation on homepage of Intranet.	Green Teams will include education component.	Continue with articles in Newsletter and Behaviour change ads on intranet.	2009	No End Date (Continuous)
Provide sustainability education during new staff orientation	Ongoing/In Progress	18	Sessions per year - on average 65 packages given out	Provide package to new employees on alternate transit options. Created a Green CEO Video for staff orientation.	Provide information on other Green Initiatives.	2010	No End Date (Continuous)
Client/public awareness/education							
Provide education to clients/public about the conservation of water, energy, and raw materials	Ongoing/In Progress	2	Local newspaper article, magazine article .	Article in local paper on solar system at Victoria General. Article about Nanaimo Regional General participation in the BC Hydro New Building Construction Program for the new ED. Hosted various organizations for a Lessons Learned on installing solar panels with 35 people attending	Plan to make the dashboard for solar energy available on public website.	2011	No End Date (Continuous)
Provide green tips on client/public website or in newsletters	Ongoing/In Progress	1	Produced a Green Video available on BC Hydro and VIHA Internet	Green Video of VIHA CEO and VP of Operations and Support Services talk about initiatives taken to reduce carbon emissions and call to action for others to follow suit.	Continue outreach	2011	No End Date (Continuous)
Other Education, Awareness, and Engagement Actions							
Collaboration with other organizations and sharing Best Practices	Ongoing/In Progress	2	Meet with other organizations to collaborate and learn Best Practices	Attended month Health Care Energy Managers meetings. Invite other organizations to learn/collaborate about Behaviour Change methods. Team member presented on Green Pilots at BC Hydro Forum.	Will submit award application for national organization for new green Patient Care Center at Royal Jubilee Hospital.	2011	No End Date (Continuous)
Bright Ideas from staff solicited	Ongoing/In Progress			Button asking for their ideas to make us more sustainable and effective. Submissions are acknowledged and sent to relevant department for consideration / implementation.	Continue program.	2011	No End Date (Continuous)
Other Sustainability Actions							
Water conservation							
Establish a water conservation strategy which includes a plan or policy for replacing water fixtures with efficient models	Ongoing/In Progress	1	New buildings are LEED compliant.	For new construction and replacements hands free and low flow toilets are used. Where appropriate auto shut off faucets are used.	Continue with replacement program	2009	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	In Development			Water audit done at one site. Some flow through cooling equipment upgraded/replaced.	Pilot a Green Team behaviour change campaign to reduce water. Send staff to training for irrigation management.		
Introduce a stormwater management landscape strategy (e.g., vegetated roofs, permeable paving, rain gardens, bioswales)	Ongoing/In Progress			RJH parking for the new PCC and NRGH parking for the new ER have incorporated these strategies.	Continue for new parking areas and new construction. Support for Energy team member with LEED/Green building experience.	2009	No End Date (Continuous)
Waste reduction/diversion							

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Put in place an operations policy to facilitate the reduction and diversion of building occupant waste from landfills or incineration facilities	Ongoing/In Progress			Recycling available at most sites dependant on municipal programs. Most sites with operating facilities also have (outside agency) recycling of use equipment or refurbishing and reuse of operating tools.	Add attitional recycling streams. Battery recycling now at many sites, compost pick up from commercial kitchens.	Started before 1995	No End Date (Continuous)
Implement a hazardous waste reduction and disposal strategy	Ongoing/In Progress	100	% Hazardous materials are diverted	Hazardous waste disposal system in place.	Continue with disposal system.	2008	No End Date (Continuous)
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.)	In Development			A sustainable procurement poilcy has been developed by HSSBC.	Sustainable Procurement Policy ready for approval.	2009	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.)	In Development			A sustainable procurement poilcy has been developed by HSSBC.	Sustainable Procurement Policy ready for approval.	2009	No End Date (Continuous)
Implement sustainable purchasing program for cleaning products, disposable paper products and trash bags	In Development			A sustainable procurement poilcy has been developed by HSSBC.	Sustainable Procurement Policy ready for approval.	2009	No End Date (Continuous)
Require a minimum purchase of sustainable, and organic food and beverages supplied by contracted food suppliers or caterers	In Development			For Central North Island, sustainable food is purchased as available through the suppliers. SI changed to Steamatics food system providing choice reducing waste and incorporating locally grown foods where feasible.	Continue to look for ways to include these products while staying within budget.Green teams strive to purchase local/natural foods and products for events.	2009	No End Date (Continuous)
Building construction, renovation, and leasing							
Establish a policy to reuse materials where possible and divert construction and demolition debris from landfills and incineration facilities	Ongoing/In Progress			LEED Gold construction for new buildings incorporates this. Sites recycle materials when service is available.	Continue with this program	2009	No End Date (Continuous)
Indoor air quality							
Enforce a scent-free policy (e.g., no strong perfumes, deodorants, etc.)	Ongoing/In Progress	100%	VIHA policy in place	Continue promoting policy	Continue promoting policy	2007	No End Date (Continuous)
Incorporate low volatile organic compounds (VOCs) standards into procurement policy for products such as paints, carpets, and furniture	Ongoing/In Progress			FM&O has been using low VOC materials for maintenance and repairs. Sustainable procurement policy has been developed by SSO that will help with purchase of furniture	Implement sustainable procurement policy	2008	No End Date (Continuous)
Commuting to and from home							
Offer staff a compressed work week	Ongoing/In Progress	24	Staff working a compressed work week	Alternate Work Week policy is in place.	Develop some metrics as to what GHG savings are.	2008	No End Date (Continuous)
Encourage commuting by foot, bicycle, carpool or public transit	Ongoing/In Progress	3%	Increase in Bike to Work Week Participation	Transit increased Propass subsidy rate to \$14.00 per pay period.	Continue to review and promote. Staff participate in Bike to Work Week. Program to be promoted in green video.	2014	No End Date (Continuous)
Provide shower or locker facilities for staff/students who commute by foot or by bicycle	Ongoing/In Progress			Increased promotion of employee BTWW. New Space in PCC and RJH.	New space in NRGH Emergency Mental Health addition.	2009	No End Date (Continuous)
Provide secure bicycle storage	Ongoing/In Progress	5%	Increase in secure storage for bicycles	Continue to review and increase storage when able.	Continue to review and increase storage when able.	2003	No End Date (Continuous)
Other Sustainability Actions							
Working with BC Transit to improve routes and sevice for VIHA staff and clients	In Development						

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Action	Status (as of 12/31/11)	Performance to Date (as of 12/31/11)		Steps Taken in 2011	Steps Planned for 2012 -2014	Start Year	End Year
Telehealth Service	Ongoing/In Progress	1	2.4 Million Km's of travel by patients	Telehealth service avoids patient travel. Also genetics consultants are able to avoid travel to sites. There was a 30% increase from last year.	Continue with program.	2009	No End Date (Continuous)