

Plans and actions taken in British Columbia's public sector to reduce greenhouse gas emissions, save money and support the low-carbon economy.



The Best Place on Earth



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### Purpose of the *Carbon Neutral Update 2009*

The *Greenhouse Gas Reduction Targets Act* requires all B.C. public sector organizations to report annually by June on plans made and actions taken in the previous calendar year, to reduce greenhouse gas emissions. The carbon neutral commitment covers over 150 organizations, including core government ministries and agencies, school districts, colleges and universities, health authorities and Crown corporations. In June 2009, government released a summary report entitled *Getting to Carbon Neutral*, along with individual public sector organization reports. In addition to emission reduction plans and actions, core government must report on actual emissions related to business travel and offsets purchased beginning with emissions from calendar 2008.

This is the second update, and includes highlights of the thousands of individual actions that public sector organizations have taken – many at little or no cost – to reduce their carbon pollution. It also includes statistics demonstrating the level of emission reduction planning and action that has taken place in advance of the first year for which the entire public sector will measure their emissions. (All public sector organizations will be required to report on emissions and offsets related to 2010 operations in June 2011.)

To view any of the individual public sector reports, visit the [www.LiveSmartBC.ca](http://www.LiveSmartBC.ca) website under Government Action.

## Message from the Minister of the Environment, the Honourable Barry Penner

I am pleased to present the *Carbon Neutral Update 2009*, a requirement of the *Greenhouse Gas Reduction Targets Act*.

This is the second year that the entire public sector across British Columbia is providing updates on their plans, actions and achievements in reducing carbon emissions. The B.C. government continues to be the only government in North America to require this reporting.

Activities range from upgrading buildings to changing the way we work. We are improving heating, ventilation and air conditioning (HVAC) systems in existing buildings, upgrading fleets to fuel efficient vehicles and replacing business travel with web meetings and tele-conferencing. Carbon neutrality is gaining momentum across the public sector, and institutions are seeing reductions in their environmental footprints. As a result, many organizations already report significant savings in heating and transportation budgets, which, in turn, is incentive to introduce more emission-reducing equipment, technology and practices.

It is encouraging to see the enthusiasm of the women and men in the public sector who have embraced this challenge. Across government, staff are volunteering for Green Teams and eagerly developing, implementing and participating in new ways to cut carbon pollution. From using web-conferencing equipment at workstations to collecting and reusing more than 2,500 pounds of office supplies, the success of projects outlined in this update is a result of public servants' personal dedication to change and environmental responsibility.

British Columbians' energy and commitment to become carbon neutral at all levels of the public sector for 2010 is a demonstration of leadership and part of the solution to reaching our ambitious province-wide targets:

- a six percent reduction in carbon emissions (from 2007 levels) in 2012;
- 18 percent reduction by 2016;
- 33 percent reduction by 2020; and
- 80 percent reduction in 2050.

Government ministries, agencies, organizations and Crown corporations are seeing the direct benefits of reducing carbon pollution – savings that come from burning less fuel and energy, logging fewer travel miles and working towards paperless office practices. Our economy benefits from the growing clean-technology and eco-business sector. Government leadership is key when it comes to climate change and that is why we are developing new environment-friendly technologies and experiences to share with organizations across the province, the country and the world.

Thank you



Barry Penner  
Minister of Environment

*Government ministries, agencies, organizations and Crown corporations are seeing the direct benefits of reducing carbon pollution – savings that come from burning less fuel and energy, logging fewer travel miles and paperless office practices.*



## Message from the Minister of State for Climate Action, the Honourable John Yap

As Minister of State for Climate Action, I am pleased to join my colleague, Environment Minister Barry Penner, in presenting the public sector *Carbon Neutral Update 2009*.

This second report shows the public sector achieving its goal of significantly reducing carbon pollution. Equally important, this report is evidence of a transformational change taking hold across government, and B.C. society at large.

Since 2007, the B.C. public sector has been making plans and taking action to measure, reduce and offset greenhouse gas emissions – all to become carbon neutral for 2010. While each carbon neutral public sector organization is responsible for cutting its own greenhouse gas (GHG) pollution, we can see their influence helping the broader community make positive changes to shrink the province's overall carbon footprint.

- Northern Lights College is building the Centre for Clean Energy Technology to Leadership in Energy and Environmental Design (LEED) Platinum standards. The center will provide students with the skills needed in B.C.'s emerging low-carbon economy and will showcase the latest "off the grid" technology for electricity production, solar, biomass and geo-exchange heating, and water conservation.
- Building on their own experience with carbon neutrality, the Columbia Basin Trust is helping 29 Kootenay municipalities, five First Nation communities and three regional districts develop a coordinated, regional approach to reduce emissions and achieve carbon neutral operations in 2012.
- School District 61's (Greater Victoria) Prelude Orchestra decided to travel carbon-free for their spring concert tour. Young musicians rode to six elementary schools by bicycle, inspiring audiences to take up the challenge and reduce their personal carbon footprints.

These are only a few of many examples of the widespread reach of the public sector's "above and beyond" approach to carbon pollution. This report is a high-level overview of actions already taken and future plans that will lead to real reductions. Becoming carbon neutral is not easy, but as North America's first carbon neutral public sector, our leadership and successes are inspiring behaviour change across our province.

For more examples and to see all 152 Carbon Neutral Action Reports, please visit the Government Action on Climate Change section of the LiveSmart.BC website.

Thank you



John Yap  
Minister of State for Climate Action

*Young musicians rode to six elementary schools by bicycle, inspiring audiences to take up the challenge and reduce their personal carbon footprints.*



## What is Carbon Neutral?

Carbon neutrality is about recognizing that we are responsible for 100 percent of the carbon pollution we generate. The power of the carbon neutral initiative in B.C. is its ability to reach employees and their network of contacts: teachers, professors and students in schools, colleges and universities, nurses and patients in hospitals, staff and clients of Crown corporations. With one degree of separation, we can reach almost everyone in B.C.

Achieving carbon neutrality is a four-step process: reduce carbon pollution, measure remaining emissions, purchase offsets to ensure net emissions are zero and report out on results.

## Reducing emissions and saving energy in a cost-effective manner is our primary goal

There are two ways to reduce carbon pollution – behaviour change and improving equipment and technology.

We can make a difference by turning down the heat, turning off lights, printing fewer materials and consuming less. Many organizations have Green or Sustainability Teams that act as agents of change in motivating climate action. These workplace volunteers personalize the message, champion local programs and are a continual source of ideas. They have been instrumental in identifying and rolling out initiatives across government and engaging staff to do their part to reduce GHGs.

With the vast bulk of emissions generated by fleet and buildings, it makes sense that public sector organizations focused attention here in 2009. They are continuing to turn to more fuel-efficient vehicles when leases come up, and energy consumption is top of mind when acquiring, retrofitting or designing new space.

### **Measure emissions helps us manage energy and costs**

The B.C. government uses two tools to measure GHG emissions: SMARTTEC measures emissions related to business travel for core government only; SMARTTool aggregates and estimates GHG emissions from buildings, equipment, fleets and paper for the entire provincial public sector. Both tools were used by core government in 2008, and were rolled out to other public sector agencies in 2009. A single web-based tool used by all organizations means that emission estimates are accurate and comparable. It also means that organizations don't need to develop in-house expertise on GHG measurement.

*At 150 Mile Elementary School, four solar collectors were installed over the gym to feed the showers and two collectors were installed over the other wing of the school to serve washrooms. "The expectation is that the solar hot water systems will lower natural gas and electricity bills," said Doug Gorcak (pictured left), Manager of Facilities and Transportation. "As well, it will reduce greenhouse gas emissions and the need for the school district to purchase carbon offsets in order to be carbon neutral in its operations."*



## **Offsetting: counteracting carbon pollution and growing clean technology**

While the B.C. public sector is actively and dramatically reducing its carbon footprint, it still generates GHG emissions. For 2010, the entire public sector will purchase enough high quality offsets through the Pacific Carbon Trust to reduce its emissions to net-zero. This Crown corporation was set up by the B.C. government in March 2008 to acquire credible GHG offsets from projects in B.C., which meet stringent eligibility criteria as defined by the Ministry of Environment's *Offset Emissions Regulation*.

### **What is a carbon offset?**

Even with today's strong environmental building codes, high-tech equipment and conscientiously "green" office practices, it is not possible for an organization to produce zero emissions. To reach net-zero and to counteract the negative effects of carbon pollution, the public sector buys carbon offsets.

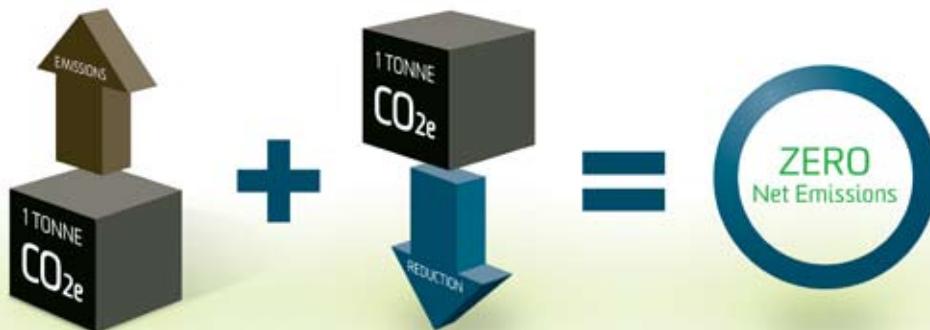
Because our atmosphere is like an ocean of gases, reducing carbon emissions at any location will be beneficial to the whole system. A carbon offset represents one tonne less of carbon dioxide (CO<sub>2</sub>) in our atmosphere and is created when an organization invests in real emissions-reducing activities (called an offset project). Offsets don't pay companies to do what they had a solid business case to do already. They are truly additional (supporting a switch to cleaner fuel, planting trees or upgrading systems) and would not have happened without the extra investment. Offsets focus on credible and cost-effective B.C.-based carbon-reduction projects. The offset market in B.C. will stimulate green businesses in our communities and support lower-cost emission-reduction projects.

### **Reporting on actions to inspire change**

Public reporting holds government accountable for its commitment. It shows progress, builds momentum, serves as examples to others and is an idea bank for organizations looking for new ways to reduce their own carbon footprint.

Starting for 2008, the provincial government and public sector organizations have produced detailed annual Carbon Neutral Action Reports. Core government also reports on emissions related to business travel and offsets purchased. These reports are the basis of this document. For more information and to view all 2009 Carbon Neutral Action Reports, visit [www.LiveSmartBC.ca](http://www.LiveSmartBC.ca)

In 2008, the core government's total GHG emissions were estimated to be 104,873 tonnes. Although government is finalizing 2009 emissions, we have seen a 60 percent decline in business travel from 25,809 tonnes in 2008 to 10,123 tonnes in 2009. This reduction is partially because of cutbacks in ministry travel budgets; however the use of on-line collaborative tools like LiveMeeting, Communicator and enhanced video-conferencing reduced the impact on ministries' abilities to deliver public services. With these tools, employees are transforming the way they work, saving time and travel dollars while reducing carbon pollution. The total cost to offset the reduced 2009 travel emissions was \$253,076.



*Image courtesy of  
the Pacific Carbon Trust*

[www.LiveSmartBC.ca](http://www.LiveSmartBC.ca)

## Taking Action: how we made a difference

Since 2008, British Columbia has made impressive progress in reducing energy and paper use, costs and related emissions. The following examples give a sense of the diverse activities across the province. The actions by each organization reflect unique circumstances such as size, location, stakeholder interests and opportunities. For access to detailed reports, please visit [www.LiveSmartBC.ca](http://www.LiveSmartBC.ca).

### A new way of working: technology, workplace and purchasing practices

#### ***Virtual meetings and alternatives to business travel***

Core government is required to report on business travel. Virtual meetings result in a significant drop in travel-related GHG emissions. They also achieve dramatic cost savings by reducing travel expenses, "down time" for staff travelling to meetings and the number of carbon offsets required.

These savings can quickly cover the cost of installing web-conferencing software, cameras and other technology.

- The Vancouver Island Health Authority installed 40 additional video-conferencing units.
- With more than 11,000 combined staff, BC Hydro and ICBC are two of the largest Crown agencies in B.C. Most of those staff will soon have access to web-conferencing software.
- The Ministry of Labour is piloting SharePoint Seven to improve collaboration and cut travel.

Of the 41 school districts (out of 60) that reported using web-conferencing software, 20 percent reported that they had installed it on all staff computers. School districts in remote communities found virtual conferencing an effective alternative to travel. For example:

- The Nisga'a School District reported that video-conferencing is available in half of all meeting rooms, and the district is planning to add mobile video-conferencing equipment.
- The Stikine School District – the largest school district in the province encompassing many isolated communities – has video-conferencing available for all meeting rooms.
- School District 49 (Central Coast) installed fibre optic internet access to the district to reduce computer processing and wait time. It also installed Smart Boards to facilitate web-conferencing for classroom education programs and board meetings, eliminating paper agendas and reducing air travel.

*Installing equipment is only part of the story. Changing the way we work is also significant: 71 percent of organizations reported that where possible, staff are, or will be, encouraged to attend or present at events virtually, rather than in person.*



### ***IT and computers***

Personal computers, data storage and information networks draw significant electricity. Upgrading equipment and installing energy-saving software can have a dramatic effect in reducing electricity bills.

- Over the last two years, core government has upgraded 97 percent of desktop computers and laptops with the highest-rated ENERGY STAR models available.
- Of the 118 agencies outside of core government that reported on ENERGY STAR computers, almost half indicated that at least 90 percent of computers now have this energy-efficient label.

In 2009, 77 percent of public sector organizations focused on installing software to automatically shut down personal computers outside of business hours. For example:

- The Burnaby School District started using auto shut-down software as early as 2004. In 2009, it completed the installation on the remaining 4,000 computers. Eleven other public sector organizations also reported that all computers now have this software.

Partitioning servers into several “virtual” servers is another significant source of savings. As data storage technology improves, virtual servers have become a recognized “good practice” in the IT world – requiring fewer individual servers, saving both space and energy.

Seventy-three percent of public service organizations identified server virtualization as an action that was ongoing or completed in 2009, or was in development for 2010-2012. For example:

- The Interior Health Authority completed virtualization of its servers in 2009 and estimates savings of approximately \$100,000 a year in electricity costs.
- The Royal BC Museum has estimated that installing auto power-down software and virtualizing its servers has led to a savings of 109,000 kWh/year.

*Camosun College is going green across the campus. All 930 meeting rooms now have access to video-conferencing equipment, allowing faculty and students to connect with their colleagues and peers across the province and world. This idea is catching on. Fifty-eight percent of all public sector organizations have installed or are looking at video-conferencing options.*



### Purchasing with the end in mind

The life cycle of office supplies – purchase, use, reuse and disposal – provides many opportunities to make environmentally responsible decisions. From paperclips to vehicles, public sector organizations are watching what they buy, where it comes from and how much they need.

- When the Pacific Carbon Trust moved into new offices in Victoria, it purchased used furniture to fill the space.
- School District 83 (North Okanagan-Shuswap) opts for furniture that's custom built in its own millwork department, "where real wood and quality material provides a long-lasting product." The district is also using carpet tiles as there is less waste during installation, and damaged areas can be replaced with a few tiles instead of a whole new carpet.

Seventy-one percent of organizations reported that they have or will develop a sustainable purchasing program for consumable items, such as cleaning or disposable paper products. For example:

- School District 28 (Quesnel) reports that all products used by cleaning staff, including trash bags, meet "green" standards.
- The College of the Rockies encourages the purchase of environmentally friendly cleaning products. On the Creston campus, for example, the janitorial staff uses natural cleaning products wherever possible – including vinegar to get rid of hornet nests.

### Paper

Paper is one of the biggest consumption items in large organizations. The public sector is conscientiously reducing the amount of paper it uses:

- Eighty percent of organizations already, or are planning to, encourage paperless meetings and presentations to all staff, and skip printing handouts completely.
- Ninety-one percent of organizations identified switching from printing materials to posting them online in 2009, or as something they intend to do in 2010-2012.

Public sector organizations are also sourcing paper that is environmentally responsible:

- Seventy-seven percent reported that they purchased 30 percent post-consumer recycled paper in 2009, or intend to for 2010-2012.
- Sixty-two percent use or are investigating 100 percent post-consumer recycled paper.



*The Homeowner Protection Office (HPO) introduced LIMSPortal, a collaborative online system that allows the HPO and its stakeholders to share information online instead of feeding a heavy flow of paper. What makes this project different from many online services is the variety and number of stakeholders. Licensed residential builders, warranty providers and building departments can use a secure online account to conduct routine transactions, saving the costs and time associated with separate vehicle trips.*

*The previous registration, application and renewal processes used a minimum of 106,000 pages per year. Stakeholders would contribute another 11,000 paper documents. With the LIMSPortal, licensing and registration related paper documents have been completely eliminated, and participating stakeholders have cut their HPO-related paper consumption by 75 percent.*

## Waste management: reduce, reuse, re-purpose and then recycle

Waste disposal accounts for about five percent of B.C.'s carbon emissions. Last year, 67 percent of public sector organizations reported that they are developing or implementing policies to reduce and divert the waste they send to landfills or incinerators. For example:

- In 2009, School District 6 (Rocky Mountain) established a long-term target of reducing waste from all schools by 25 percent.
- School District 46 (Sunshine Coast) composts clean sawdust from shop classes. In 2010, it intends to begin using wood chips in garden beds.
- Vancouver Coastal Health Authority recycles paper, plastics, soft drink cans, cardboard, batteries, mercury, electronics, and fluorescent and high-intensity discharge lighting. In 2009, it collected baseline data about its recycling program so it can measure and continue to improve performance over time.
- The BC Pavilion Corporation manages BC Place, which hosted the opening, closing and medal ceremonies for the 2010 Winter Olympic and Paralympics Games. Through a cooperative effort, BC Place managed to divert approximately 81 percent of collected waste from the landfill. Sixty-three percent of the refuse was either composted or recycled, while the remainder went to a waste-to-energy facility.
- The Ministry of Finance Green Team and employees collected 2,560 pounds of unused office supplies (electronics, old binders, staplers, etc.). They were returned to the supply room for future use or sent to Asset Investment Recovery for resale. Employees reduced the demand for energy and raw materials that would have gone into producing and shipping new supplies, and raised awareness of the importance of reusing and recycling. "It was something that everyone could relate to ... a simple yet brilliant idea that was provided by one employee and with the assistance of the Green team, the idea was brought to life."

This challenge was so successful that the tools and communications developed were adapted for a cross-government project. Ten ministries collected a grand total of 17,758 pounds of office supplies.

*To support the 75 percent solid waste diversion goal of Metro Vancouver Region, School District 43 (Coquitlam) elementary students presented to the Port Coquitlam City Council and requested improved recycling services for their schools. As a result of their efforts, Kwayquitlam Middle School (pictured here) and Maple Creek Middle School have been participating in a Port Coquitlam pilot project that will see a higher level of recycling and green waste pick until the end of the 2009/10 school year. The school district is hoping to demonstrate that the cost of the program will be equal to or lower than existing services, allowing them to expand the program to other schools.*



## Energy conservation: the cheapest form of energy

With 6,500 public sector buildings, the government of British Columbia has the largest building portfolio in the province. Energy conservation practices will have a huge direct impact on carbon pollution and operating costs. It will also improve building performance, benefiting close to 300,000 staff and 1.6 million students.

The B.C. Government has committed close to \$75 million for retrofits to public buildings under the Public Sector Energy Conservation Agreement program. In 2009, the Ministry of Education made an additional \$10 million available to schools in the Interior and Northern B.C. to upgrade heating, ventilation and air conditioning systems. For more information on available funding, please visit [www.LiveSmartBC.ca](http://www.LiveSmartBC.ca)

### **Establishing energy performance baselines**

"What's measured gets managed" is a guiding principle in energy conservation. Under this principle, many public sector organizations have established energy performance baselines for their buildings. The most common is the Building Energy Performance Index (BEPI), which measures annual energy use per square meter of building space.

In 2009, 51 percent of organizations reported focusing on building energy performance baselines for owned buildings for 2009, and 20 per cent plan to establish baselines between 2010-2012.

Having baseline data means organizations can compare the energy efficiency of their buildings with similar facilities, identifying buildings that could benefit from further upgrades. They can also compare energy usage over time.

- BC Housing Corporation is one the largest property owners in the public sector. It manages more than 900,000 square meters in more than 1,000 buildings across the province, including 10,000 housing units. Ninety-three percent of the buildings have an established energy performance baseline, and the remaining buildings will be measured in the coming years.
- Both Vancouver Coastal Health Authority and Providence Health Care have established energy performance baselines for all Acute, and Extended/Residential Care facilities. They use that information to benchmark the buildings against other spaces with similar functions and with other Health Authorities.

*After 25 years, the BC Games ceremonial torch was retired to make way for a smaller, sleeker and more fuel-efficient version.*

*The old torch burned 900,000 cubic feet of natural gas, contributing 12 tonnes of GHGs to the atmosphere over the 100 days it was lit. It cost more than \$50 dollars a day to operate, and burned enough natural gas for more than 10 average-sized homes for a year. The new torch features 303 LED lights, and will cost about a dollar or two each day for the 100 days it will be lit – using less electricity than a toaster.*



## Building retrofits: make a lasting contribution to energy savings

From simple maintenance, like caulking windows and replacing old doors, to upgrading extensive HVAC systems with state-of-the-art technology, retrofitting buildings can save enough money over the long term to more than justify the initial outlay. Once you factor in carbon pollution avoidance, the benefit goes far beyond the balance sheet.

Seventy-seven percent of public sector organizations worked on and completed retrofit projects in 2009, or have projects in development for 2010-2012.

Many organizations have taken advantage of the funding provided by the B.C. Government:

- School District 27 (Cariboo Chilcotin) upgraded the HVAC system at Nesika Elementary School. The school's utility bills have been cut by about 20 percent and its carbon footprint has dropped by 30 percent.
- Northern Health Authority completed a number of building retrofits under the Public Sector Energy Conservation Agreement. This includes lighting upgrades in 19 hospitals and residential care facilities which are expected to save 3,000,000 kWh and 81 tonnes of carbon pollution annually. Also completed were the installation of a building automation system and the replacement of two outdated steam boilers with high-efficiency condensing units.
- The Royal BC Museum completed gallery lighting retrofits and exterior LED retrofits, saving 338,000 kWh a year, equivalent to the energy for 31 homes annually.

## Renewable energy: demonstrating success in clean tech

Some organizations retrofitted buildings with on-site renewable energy demonstration projects, including solar electricity or hot water, geoexchange heating/cooling systems or small wind turbines. For example the The BC Lottery Corporation installed 12 solar panels on the roof of the Kamloops head office. Projects such as this not only reduce GHGs and produce green energy. They also ignite the imaginations of students, clients and staff, and inspire others to use and adapt the technology. This in turn, demonstrates practical applications and the market viability of new ideas, and supports job creation in B.C.'s growing technology sector.

Nearly one third of B.C.'s school districts completed or were developing on-site renewable energy projects in 2009. Almost half of B.C.'s post-secondary institutions reported projects complete or planned, ranging from solar parking meters at Royal Roads University to a novel geo-exchange heating and cooling system at Langara College.

*School District 41 (Burnaby) has been augmenting and modifying its existing boiler plants with condensing modules to add lifecycle to existing units and reduce energy consumption. Partial replacement of the heating plants with condensing boilers costs between \$60,000-\$100,000 for a school of 300-400 students. While direct cost saving is about \$7,000 per year, the cost avoidance as utility rates rise can be substantial. These retrofits also extend the life cycle of existing heating plants.*

*Over three years, the district has completed 10 elementary schools, reducing natural gas consumption by more than 1500 GJ's – or 75 tonnes of CO2 emissions – each year.*

*The condensing boiler is the white box on the ground. The boiler it is replacing is on the truck.*



## Energy conservation: building with the future in mind

New buildings are expensive undertakings, and planning for long-term savings makes sense. The LEED Green Building Rating System™ is an independent certification program for the design, construction and operation of high-performance buildings. LEED awards points for performance across a spectrum of indicators. Certification is based on the total point score, following a review and audit by the Canadian Green Building Council.

There are four levels of certification: Certified, Silver, Gold and Platinum. All new public sector buildings in British Columbia must be LEED Gold certified at a minimum.

The Abbotsford Regional Hospital and Cancer Center, managed by the Provincial Health Services Authority, achieved LEED Gold certification in 2009 as did BC Housing's head office in Burnaby. A number of other projects targeting LEED Gold were completed in 2009 and were awaiting certification, including:

- The Ministry of Forests and Range's Provincial Wildfire Coordination Centre
- The Ministry of Transportation and Infrastructure's Kamloops office
- BC Tourism Center at the Peace Arch in Surrey
- The Ministry of Housing and Social Development's Nanaimo Office
- BC Showcase and the Asia Pacific Center at Robson Square
- University of Victoria's First People's House
- Two non-profit projects by BC Housing: Victoria Heights and Friendship Lodge

## Diverting construction waste

Forty-eight per cent of provincial agencies reported that they have or will establish policies to reuse materials where possible and divert construction and demolition debris from landfills and incineration facilities during construction or major renovation projects. For example:

- School District 20 (Kootenay Columbia) recycled 95 percent of a high-school during demolition.
- Legal Services Society used demountable wall systems in place of conventional drywall.
- School District 44 (North Vancouver) noted that "lumber, millwork, valves, light fixtures, pumps, boilers and even mechanical control panels were salvaged from demolished schools" and used to re-fit Ridgeway, Carson Graham and Highlands schools.

*With two buildings already certified as LEED NC Gold, the University of Victoria's First People's House is one of four other campus projects targeting LEED Gold. Opened in 2009, sustainability features of this striking building include a green roof, natural ventilation, rammed earth walls, locally sourced materials, reuse of treated waste water, and landscaping with native trees and vegetation.*



## Transportation: exploring alternatives and driving differently

Vehicle fuel consumption is a significant source of carbon pollution. Across the public sector, organizations are actively tracking – and reducing – those emissions. In terms of operations, organizations are replacing vehicles with more fuel-efficient models, “right-sizing” the fleet and improving maintenance. Add behaviour-change initiatives, such as anti-idling campaigns and driver training, and dramatic savings in fuel efficiency can be achieved.

Many public sector organizations have broadened their influence beyond their own organizational boundaries. They are actively engaging with the public and their communities to meet provincial greenhouse gas reduction targets and raise awareness about environmental sustainability. These include encouraging staff and students to adopt green commuting practices – cycling, walking and taking public transit to work – and promoting anti-idling and carpooling.

### **Using fuel-efficient models and fleet “right-sizing” cuts costs**

Fleet right-sizing is about analyzing and understanding the requirements of an organization’s vehicle fleet. With factual data, an organization may be able cut the number of vehicles it owns, reduce capital investment in the fleet, improve fuel-efficiency and still meet operational demands.

In 2009, 73 percent of public sector organizations reported that they either replaced vehicles with more fuel-efficient ones in 2009, or would replace them in 2010-2012. For example:

- Through Shared Services BC’s hybrid vehicle replacement program, the B.C. government has a hybrid fleet of 607 vehicles – one of the largest hybrid fleets in North America.
- The Interior Health Authority reported that 24 percent of its 250 fleet vehicles are hybrid.
- In 2009, BC Transit replaced 93 busses (10 percent of the fleet) with more efficient models and added an additional 32 new buses, part of BC’s Transit plan to increase ridership.
- ICBC reduced its vehicle fleet size by four percent in 2009.

*A commitment to changing what you can is important – regardless of the size of the fleet. School District 93 (Conseil Scolaire Francophone) acquired three hybrid cars in 2009, and now proudly reports that 100 per cent of its fleet is hybrid. On the other end of the scale, BC Hydro, which has the largest fleet in the public sector at 2,500 vehicles, is test driving a number of energy efficient models. Eighteen per cent of its fleet is fuel efficient, including two fully electric vehicles, three plug-in hybrids, eight hydrogen powered vehicles and 119 hybrids.*



### ***Anti-idling: taking a break from air pollution***

Anti-idling policies and awareness campaigns were the top behavior-change actions in the public sector, with 74 percent of organizations co-ordinating or developing campaigns for staff or clients. This includes installing signs in loading zones, bus stops and drop-off points; putting idle-free reminders on key chains and windshield stickers; and promoting driver-training programs.

- Five of the six Health Authorities promote anti-idling or have an anti-idling policy.
- Many School Districts, including District 63 (Saanich), District 39 (Vancouver) and District 83 (North Okanagan-Shuswap) installed Global Positioning Systems units to monitor driving and record idling time.

### ***Active commuting leads to healthier happier staff***

Even though staff commuting isn't part of operating budgets, 63 percent of organizations identified support for commuting by bicycle, carpool or public transit. The same percentage of organizations either provided or plan to install secure bicycle storage. Sixty percent have or will install shower and locker facilities, helping remove one of the main barriers to active transportation.

- The Vancouver Island Health Authority promoted carpool options and established a shuttle service for staff between two Victoria hospitals.
- The BC Transmission Corporation provides a TransLink Employer Pass Program in the Lower Mainland. It pays 75 percent for commuters between home and their regular work location. An average of 215 people (out of 404 full-time equivalents) used the monthly pass.
- Eighty per cent of staff with the Ministry of Healthy Living and Sport walk, take public transit, bike and carpool to and from work.
- Eighty per cent of schools in School District 43 (Coquitlam) actively promote active transportation.
- Target Green Streets was launched by the Ministry of Finance in 2008 and expanded across government in 2009. It was a commuter challenge to encourage a change in commuting habits with the goal of reducing GHGs and supporting the province's reduction targets. A total of 1,625 people participated cross-government for just over five weeks. They cut 5,793 kg of CO<sub>2</sub>e during the challenge, which is equal to \$3,190 in fuel costs. An extra 578 participants registered – people who were already "zero emitters" because they walked, cycled, ran or skateboarded to work.

*Ninety-three percent of school boards indicated that anti-idling was an important action to support. School Districts 5 (South-east Kootenay) and 20 (Columbia Kootenay) provided training for all bus drivers, teaching how to save gas and money while reducing carbon pollution.*

*The Districts' anti-idling campaign also included parents.*

**B.C. Is Idle Free  
Turn Engine Off**



## Green Teams: grassroots change from within

Public servants across British Columbia have embraced the climate change challenge. They volunteer time, energy and creativity to develop and implement sustainability programs. Whether inspiring colleagues to walk to the office and turn off the lights, or encouraging parents to turn the car engines off while waiting for students after school, the cumulative impact of their actions is immeasurable.

The public sector provides support by creating corporate teams to promote environmental causes:

- Seventy-three per cent of organizations reported that they created or intend to create and provide executive endorsement for Green, Sustainability, Energy Conservation or Climate Action Teams at the office.
- Fifty-eight per cent of organizations have provided or will provide resources and/or dedicated staff to support their teams.
- Sixty-nine percent of organizations reported that they helped engage all staff by providing information about the science of climate change, water conservation, energy and raw materials. This included tips on the staff website, in newsletters and through sustainability education for new staff.
- BC Hydro created annual Employee Conservation Leadership Awards to recognize leadership from all employees. This year's winning projects include new buildings that will use a quarter of the energy that they would if built to current codes – making them among the most energy efficient of all provincial public buildings.

## Beyond Carbon Neutral: inspiring action across B.C.

Just over half of public sector organizations took the next step and provided climate change information to clients, students, patients and the general public. For example:

- Capilano University initiated a Sustainability Pledge that encouraged students and the community to take personal action and change specific behaviours around energy, food, travel, waste and water. Since September 2009, more than 1,000 people have signed the pledge.
- ICBC launched a province-wide television, radio and web public awareness campaign encouraging B.C. drivers to engage in more fuel-efficient and safer driving practices.

*The Provincial Health Services Authority's Green+Leaders program offers opportunities for staff to bring sustainability values to the workplace. Volunteers work between two and four hours per month, encouraging colleagues to turn lights and equipment off when not in use, make sure recycling is being done correctly, reduce paper use and leave cars at home. There were 40 staff volunteers in the first year, and PHSA's goal is to reach 150.*



## Building Momentum

Looking at this small sampling of initiatives, what stands out is the diversity of opportunities to reduce carbon pollution. Individuals, divisions and organizations work with unique circumstances and move at different paces. Letting organizations identify what makes sense for them leads to creative opportunities that conserve energy, save money and streamline processes. Getting to carbon neutral is complicated, and the B.C. public sector is paving the way by pioneering technology and finding new ways to engage and excite staff.

This report spotlights both world-class projects and small, personal changes. We applaud all efforts, recognizing that the first steps are often hardest to undertake. We understand that not everyone can bike to work and that some vehicle fleets have already reduced gas consumption as much as possible. Passion and an ongoing commitment to the environment will continue to take us further, one step after another.

By the end of March 2011, The B.C. public sector will have a clear picture of all the energy, fuel and paper use in 2010. By measuring carbon pollution, B.C. is compiling a rich database of building portfolios and is closer to establishing sectoral and regional benchmarks. This information is critical as it helps us identify energy use and compare building performance. It demonstrates the clear and tangible long-term benefits of buildings that meet LEED Gold standards, and will help make the case for capital outlays for energy retrofits. All of this supports province-wide long-term goals of a 33 percent reduction in carbon pollution by 2020, and an 80 percent reduction by 2050.

Reaching B.C.'s climate action goals is the challenge of our time and will require unprecedented collaboration. The commitment to a carbon neutral public sector in B.C. is a catalyst to collaboration across all sectors. When insurance providers, transportation and transit industries, community planners and developers work together, we all benefit.

The carbon neutral commitment is reducing organizational emissions, saving costs, demonstrating leadership and inspiring individuals to take action at work and with their families, friends and neighbours.

*Based on hard work through 2009, the B.C. Public Service was chosen again as one of Canada's Greenest Employers. This special designation recognizes employers that lead the nation in creating a culture of environmental awareness in their organizations. These employers have developed exceptional earth-friendly initiatives – and are attracting people to their organizations because of their environmental leadership.*

