# Government of B.C. 2012 Carbon Neutral Action Report

British Columbia's core government ministries and agencies have been taking action to reduce greenhouse gas (GHG) emissions since 2007. To meet this mandate, Green Teams were established at each ministry to encourage behaviour change initiatives among staff, while Shared Services BC, the office responsible for making building and major procurement decisions for core government, developed a program to achieve carbon neutrality.

Since 2007, government has built on Green Team successes, while working to manage our buildings, fleet and paper as effectively as possible. We have reported annually on core government's GHG emissions since 2008, and have been carbon neutral for our emissions associated with business travel since October 1, 2007. Beginning in 2010 the entire public sector of BC, including core government, achieved carbon neutrality for their building, paper, fleet and equipment emissions. Additionally, core government continued to be carbon neutral for business travel emissions.

This report will present core government's emissions for 2012 and highlight a few of the actions taken to reduce emissions.

## 2012 Greenhouse Gas Emissions

Core government reports on emissions from buildings, fleet vehicles, equipment, paper consumption and business travel.

In 2012 core government produced 99,868 tonnes of CO2e of which 98,361 tonnes require offsets to be purchased. This is an increase in total emissions of 1.7% over 2011 emissions.

It is estimated that stationary fugitive emissions from cooling comprise considerably less than 1% of core government's total emissions and the effort required to effectively capture this data is disproportionately onerous to the overall quantity of emissions they represent, therefore, they have been deemed out-of-scope from core government's emissions profile.

| 2012 Core Government Emissions Normalized for Climate | | | | | |
|---|---|---|---|---|---|
| 2010 | | 2011 | | 2012 | |
| Total Emissions | 95,228* | Total Emissions | 98,212 | Total Emissions | 99,891* |
| Emissions for Offsets | 93,656* | Emission for Offsets | 96,678 | Emissions for Offsets | 98,364* |
| Normalized Total Emissions | 99,442 | Normalized Total Emissions | 96,028 | Normalized Total Emissions | 100,147 |
| Normalized Emissions for Offsets | 97,870 | Normalized Emissions for Offsets | 94,494 | Normalized Emissions for Offsets | 98,620 |

| 2010 – 2012 Emission changes | |
|---|---|
| Total Emissions | +5% |
| Emissions for Offsets | +5% |

| 2010 – 2012 Normalized Emission Changes | |
|---|---|
| Total Emissions | **+0.7%** |
| Emissions for Offsets | **+0.75%** |

* 2010 core government emissions numbers used for normalization are based on data from May 2012, which is slightly different from the published 2010 emissions (total emissions 94,494, Emissions for offsets 92,951). This is due to amendments made to the 2010 emissions data. The same applies for 2012 emissions which are based on emissions data from May 2013.

**Normalized Emissions**

56% of core government emissions come from energy used in buildings, largely for heating. In order to make direct comparisons between 2010 and 2012, we normalize emissions from buildings with a consistent temperature. This is done using a 30 year average temperature (from Environment Canada) and a baseline of 15$^{o}$C for commercial buildings. Once core government emissions are normalized for climate, 2011 emissions have increased by 0.7%% from 2010 levels.

### Offsets Purchased to Become Carbon Neutral for 2012

To declare carbon neutrality for 2012, core government has purchased $2,459,025 in offsets from Pacific Carbon Trust. This is based on 98,361 tonnes of offsetable emissions.

1,514 tonnes of emissions are from the use of biofuels which are carbon neutral as specified under the *Carbon Neutral Government Regulation,* therefore they do not require the purchase of offsets.

## Government of B.C. Emission Reduction Activities - Highlights from 2012

Across core government, there are committed individuals working hard to reduce our greenhouse gas (GHG) emissions. From Green Team leads who engage in emission reduction and sustainability initiatives to dedicated energy managers, the province is proud of the clear dedication staff have shown to achieving carbon neutrality. Below are some of the key initiatives that are supporting a low-carbon public service across B.C.

### Ministry of Transportation

Leading Workplace strategies

The Ministry of Transportation undertook a pilot project in 2012 at their headquarters office in Victoria to reduce the amount of office space required per employee. The Leading Workplace Strategies (LWS) creates a mobile workspace which replaces specific offices with mobile workstations leading to a reduction in total space required.

The LWS pilot reduced the standard space entitlement per employee from 6.5 square metres to a total of less than 4 square meters per employee on the third floor of their headquarters building in Victoria. Staff are provided a locker and have an assortment of desks to choose from on a daily basis. This provides a more holistic approach to the office with more meeting rooms, breakout rooms. The layout also provides flexibility to optimize available space.

After the renovation was complete, the reduced amount of square footage per staff member means that 65 staff can now fit into the same area that once accommodated 46 staff. This has reduced the carbon footprint for each occupant by 38%.

The Ministry has received numerous enquiries from other public sector organizations about the LWS. Tours are conducted and learnings shared with other organizations to promote the benefits of this initiative.

*In 2013, the Ministry of Transportation and Infrastructure will continue to work on two significant building-related projects. The Ministry will continue its renovation in Kamloops to achieve a LEED – Silver Standard. The other building, located in Coquitlam, will consolidate separate sites in the Lower Mainland into one single, energy-efficient site to reduce the Ministry's overall carbon footprint* Grant Main, Deputy Minister.

**Ministry of Education**

The Ministry of Education has adopted a "Managed Print Services" initiative which reduces costs, paper and energy use associated with printing services. The project will replace or amalgamate existing leased printers with a print service providing print, copy, scan and fax services. These printers will better support mobility, pull-print technology and reduce mistaken, forgotten or duplicate printing.

The Ministry has been developing a paper-reduction culture to support this type of change since 2008. Streamlining, Green Team initiatives, Papercuts (a paper reduction strategy) and Leading Workplace Solutions (to reduce office space) have each played a role in preparing staff for regular amalgamation of printer services down to the planned service levels anticipated for this project.

The Ministry will be able to track the amount of paper purchased, reductions in number of printers as well as estimate potential energy savings associated with this new technology.

*The Ministry of Education continues to challenge itself in finding new ways to reduce its carbon footprint. In 2012 the Ministry completed the implementation of the Leading Workplace Strategy and continues to move forward towards paper and energy reductions with the completion of the Managed Print Services project.* James Gorman, Deputy Minister.

**Ministry of Social Development**

Deputy Minister, Mark Sieben, saw the need for a paperless, electronic document approval system. Staff were becoming more mobile in their work, approvals were taking too long, and version control was an ongoing issue. The five-person eApprovals team envisioned a flexible tracking system using SharePoint 2010, in which users could review, edit, comment on and approve documents.

After a year in development, the team launched eApprovals in March 2012. eApprovals is an electronic document approval system that replaced the Ministry of Social Development's paper approval process. The new system allows users to log, track, share and record official approvals for various types of documents across all divisions and levels of the ministry. Users can securely collaborate on a single copy of a document, regardless of their location, while the system maintains a complete record of the item's development history.

The new system has enhanced version control and security; improved service delivery to clients and stakeholders by reducing the average turnaround time for document approvals from 25 to 14 days; and is much kinder to the planet saving over 15,000 pages of printing in the first six months alone

Similarly, The iPad Briefcase Program began as a desire to reduce the amount of paper consumed to prepare minister and deputy minister binders for an Estimates debate.

The ministry used software that was already available through an existing cross-government iPad pilot to communicate with Microsoft SharePoint and Readdle's PDF Expert. The user is able to upload materials (that would otherwise be delivered via paper) to their SharePoint site and sync them to their iPad. Through the use of PDF Expert, the user can read, edit and annotate documents. All programs communicate with each other for a seamless transfer of information.

In the Spring of 2012, the Ministry of Social Development was the first ministry to use iPads in the Estimates Debate with a limited number of binders printed. Because executives viewed Estimates materials on their iPads they were often able to find information faster than if they had been using a physical binder.

As of March 2013, 90% of ministry executive work almost exclusively from their iPads. MSD's success has inspired other ministries to investigate adopting the program and currently, six executive members at the Office of Housing and Construction Standards rely on iPads.

*We have taken a number of steps to reduce our carbon footprint, including the iPad Briefcase and the eApproval Programs, both of which contributed to the 28% drop in emissions associated with ministry paper consumption and the 30% reduction in overall carbon emissions from ministry operations. In 2013, I look forward to reporting on the impact of the Leading Workplace Strategies on our emissions along with the success of additional innovations.* Mark Sieben, Deputy Minister

**Ministry of Environment**

The Climate Action Secretariat (CAS) will conduct a thorough evaluation of the Ministry's emissions profile to fully understand the sources of the ministry's emissions and where the best areas exist to target for reductions of those emissions. It is only by understanding what our Ministry emissions actually are, that we can identify areas where we can achieve reductions in those emissions. CAS intends to fully understand the sources of emissions for the ministry and evaluate the actions that could be taken to make significant reductions in those emissions.

2012 data appears to be consistent with the 2010 and 2011 emissions profile for the Ministry which found that emissions from fleet make up the largest portion of emissions. For most of the public sector, energy consumption from buildings is the largest portion of emissions, followed by fleet. For our ministry this is reversed so we will be working to understand why this is and how we can look at our fleet to reduce emissions along with our buildings. This will define a Ministry emissions reduction plan which will be developed in 2013.

*In conjunction with our innovative project, we intend to continue to monitor and evaluate the ghg emissions profile for the ministry with an eye to tracking these emissions and ensuring we are able to identify where we can achieve significant reductions. This will inform an emissions reduction plan for the ministry to be developed in 2013.* Wes Shoemaker, Deputy Minister

**Shared Services BC, Ministry of Citizens Services and Open Government**

BC has a policy to construct all new buildings to the LEED Gold level of certification (Leadership in Energy and Environmental Design). The gold level sets high standards for energy use and environmental considerations in design, the result of which are new buildings which will consume less energy in operation than equivalent standard construction buildings. Shared Services BC (SSBC) oversees most infrastructure and building initiatives for core government.

The Province of British Columbia currently has 12 LEED-NC (LEED for New Construction) projects at various stages of construction underway targeting LEED-NC Gold. Current LEED NC projects include the construction of the Ministry of Public Safety and Solicitor General's new Women's Unit associated with the Prince George Regional Correction Centre, which was completed in 2010, the new facility for women at Alouette Correctional Center for Women, and the expansion and renovations to the Surrey Courthouse. The Ministry of Transportation continues working with Shared Services BC to plan, design and construct renovations and to establish green building standards for buildings less than 600m2.

All new construction and renovations will target LEED-NC or CI (Commercial Interiors) Gold using an Integrated Design Process. Expansion of the Surrey Pretrial Services Center is targeting LEED-NC Gold and is scheduled for completion in November 2013. Construction of a new Okanagan Correctional Center in Oliver will begin in 2013/14 and is targeting LEED-NC Gold.

On behalf of ministry tenants, SSBC and service providers will continue to apply for funding through the Powersmart Partner Express program to retrofit lighting systems resulting in energy savings of more than 2 GJ. SSBC and WSI-BLJC has also started a partnership with Fortis BC to assess mechanical systems in correctional facilities.

On behalf of ministry tenants, SSBC and WSI have implemented electrical systems updates such as: retrofit of fluorescent lights, replacement of lighting system and retrofit to LED bulbs in several locations such as: Charlie Lake Warehouses, Port Alberni Courthouse, Surrey Courthouse and Nanaimo Health Centre.

As well, All T12 fluorescent lamps will be changed to T8 lamps within every building throughout the portfolio. The T8 lamps provide energy savings and enhanced lighting quality over the older T12 technology.