# Shared Services BC - 2012 Carbon Neutral Action Report

## Actions Towards Carbon Neutrality

The actions listed below contribute to a reduction in greenhouse gas emissions from sources for which public sector organizations are responsible under the carbon neutral government regulation of the Greenhouse Gas Reduction Targets Act.

| Action | Status | Steps Taken | Steps Planned | Start Year | End Year |
|---|---|---|---|---|---|
| **Stationary Fuel Combustion, Electricity** | | | | | |
| **IT power management** | | | | | |
| Install power management software which shuts down computers outside of regular business hours | Ongoing/In Progress | Done prior to 2011. Since 2008 all workstations have auto-standby settings applied as a standard, according to the Power Management Implementation Program which results in approximately 10 million kilowatt hours of savings per year. | All new workstations will be subject to the same power management settings. | 2008 | No End Date (Continuous) |
| Implement server virtualization | Ongoing/In Progress | In 2012 SSBC yielded substantial space and energy savings by transforming 122 virtual servers and 32 physical servers. 27 servers were decommissioned.<br><br>The total savings on the long term project from 2009 to the end of 2012 was approximately 100KW. | The expectation is that energy consumption decreases will accelerate. The project has already saved an additional 20KW in the first quarter of 2013.<br><br>Servers will continue to be virtualized according to the 5-year schedule until the end of 2013. | 2009 | No End Date (Continuous) |
| Apply auto-sleep settings on computer monitors and CPUs | Ongoing/In Progress | Done prior to 2012. Since 2008, the Power Management Program applies the auto standby for all workstations and their displays. | All existing and new workstations and displays will follow the Power Management Program. The Program applies aggressively low auto standby settings for all workstations and their displays. | 2008 | No End Date (Continuous) |
| Remove stand-alone printers, copiers, and/or fax machines and install multi-function devices as part of a print management strategy | Ongoing/In Progress | Now that existing MFDs have reached their end-of-life, efforts to remove or replace multiple personal printers with multi-function devices (MFDs) have been incorporated into a new Managed Print Project. | As per the new Managed Print Project, approximately 7100 devices will be replaced with approximately 3000. These figures represent a rough estimate. The actual numbers will be determined as each goverment site is examined over the next 14 months.<br><br>The requirements discovery phase at each site will also determine what types of devices are appropriate -- MFP, SFP, paper path, fewer-larger or more-smaller and so on.<br><br>In general, there is an intent to dramatically reduce the number of devices which would result in significant electrical consumption savings. More information will be available for the next annual carbon neutral reporting cycle. | 2009 | No End Date (Continuous) |
| Apply auto-sleep settings on printers, fax machines, and/or multi-function devices | Ongoing/In Progress | Auto-sleep settings are applied to MFDs, but due to number and diversity of other stand-alone peripheral devices, no formal auto-sleep standard has been established.<br><br>In 2012, a project plan to replace the now end-of-life MFDs was developed by Shared Servics BC. | All MFDs will be replaced starting in the Spring of 2013, as per the new Managed Print Project. Approximately 3000 new energy efficient devices will be installed over the next 14 months. The devices will be implemented with auto-sleep settings enabled | 2010 | No End Date (Continuous) |
| Replace computers with ENERGY STAR models during regular computer upgrades | Ongoing/In Progress | Done prior to 2012. Since 2008, the Power Management Program dictates that all existing and new workstations are Energy Star and Epeat compliant. | All existing and new workstations will adhere to the Power Management Program. The Program dictates that all existing and new workstations are Energy Star and Epeat compliant. | 2008 | No End Date (Continuous) |
| **Leased buildings** | | | | | |
| Establish energy performance baseline for leased buildings | Ongoing/In Progress | Building level energy performance targets are part of SSBC and WSI's Energy Management and Conservation Strategy, which was implemented to support efforts to address climate action targets and | Energy performance in leased facilities will continue to be reviewed, and tailored improvement plans implemented when and where appropriate and authorized. | 2009 | No End Date (Continuous) |

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| | | regulations as they relate to public sector facilities. The established goal Building Energy Performance Indicators (BEPIs) is based on a combination of empirical operator knowledge of building-specific systems and energy accounting data. The strategy provides direction for leased buildings and funding. In particular, it addresses optimal energy use and performance by identifying indicators and targets for energy use and GHG reduction, demand side management (including conservation actions intended to achieve energy use and GHG reduction targets), and actions to confirm direction and ensure progress. However, in many cases, SSBC does not pay for energy costs in leased buildings, therefore our ability to establish performance baselines is somewhat inhibited. | | | |
| Lease space with operations and maintenance performance labelling/certification (e.g., LEED EB:O&M) | Ongoing/In Progress | A number of factors are considered during lease negotiations for BC Government space. The environmental performance of leased space is addressed where feasible through the use of 'green' elements in lease schedules, which are intended to improve performance regarding conservation of energy and water, waste reduction and recycling, and support of green team activities. While performance labelling and certification of leased space is desirable, other priorities may take precedent (such as location, building occupancy costs, unique space programming requirements, etc) during the selection of a new space or renewing an existing lease. | No additional plans are underway to certify leased space to LEED EB:O&M. | 2008 | No End Date (Continuous) |
| Lease space with commercial interiors performance labelling/certification (e.g., LEED CI) | Ongoing/In Progress | SSBC is not actively seeking leased space with commercial interiors performance labelling/certification at this time unless specifically required. | No additional plans are underway to certify leased space to LEED CI. | 2008 | No End Date (Continuous) |
| Lease space in buildings with new construction performance labelling/certification (e.g., LEED NC) | Ongoing/In Progress | A number of factors are considered during lease negotiations for BC Government space. The environmental performance of leased space is addressed where feasible through the use of 'green' elements in lease schedules, which are intended to improve performance regarding conservation of energy and water, waste reduction and recycling, and support of green team activities. While performance labelling and certification of leased space is desirable, other priorities may have taken precedent (such as location, building occupancy costs, unique space programming requirements, etc) during the selection of a new space or renewing an existing lease. | No plans are currently underway to certify leased space to LEED NC. | 2008 | No End Date (Continuous) |
| Develop a green lease policy that requires green features to conserve energy be included in all lease negotiations | Ongoing/In Progress | A significant number of government's building portfolio is leased space. SSBC undertook research and analysis on 'green' elements in lease schedules that are intended to improve performance regarding conservation of energy and water, waste reduction and recycling, and support of green team activities. These schedule elements be considered during the negotiation of new leases and lease renewals. | Green lease performance will continue to be an area of focus during the 2013-2015 period, and will be incorporated into the development of a Real Estate Strategy for government's building portfolio. | 2008 | No End Date (Continuous) |
| **Owned buildings** | | | | | |
| Establish energy performance baseline for owned buildings | Ongoing/In Progress | SSBC has evaluated and monitor the implementation of a new energy management information system (EMIS) supplied by BJC-WSI to measure, monitor and maintain benchmarking. | Going forward, SSBC will continue to work with services providers to implement and maintain benchmarking. SSBC Service Level agreement has included an energy target of 1% reduction each year | 2008 | No End Date (Continuous) |

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| | | SSBC is evaluating the implementation of EnergyStar Portfolio Manager, a EMIS provided by federal government in the facilities that are not managed by WSI.<br>SSBC Service Level agreement has continued with an energy target of 1% reduction each year until 2020 for all owned buildings in the portfolio. | until 2020 for all owned buildings in the portfolio. | | |
| Register for performance labelling/certification for operations and maintenance of owned buildings (e.g., LEED EB:O&M) | Ongoing/In Progress | In facilities where Shared Services BC has access to energy consumption information, quarterly reviews continued to be undertaken, adjustments to building performance continued to be actioned through O&M activities, and capital and major asset maintenance projects were identified. | In facilities where Shared Services BC has access to energy consumption information, quarterly reviews will continue to be undertaken, adjustments to building performance will continue to be actioned through O&M activities, and capital and major asset maintenance projects will continue to be identified.<br>A strategy to identify the best performance certification for the organization is planned for this period. | 2009 | No End Date (Continuous) |
| Register for performance labelling/certification for commercial interiors of owned buildings (e.g., LEED CI) | Ongoing/In Progress | On behalf of Shared Services BC and ministry tenants, Workplace Solutions Inc. applies the LEED CI checklist for every construction and renovation project valued over $80,000. Occasionally, if budget is available and building performance labelling/certification is identified as a priority for ministry tenants, LEED-CI certification is sought for tenant improvements to commercial interior spaces in owned facilities. | If budget is available and building performance labelling is identified as a priority for ministry tenants, LEED-CI certification will be sought for tenant improvements to commercial interior spaces in BC Government owned facilities. | 2009 | No End Date (Continuous) |
| Achieve LEED NC Gold certification at a minimum for new construction or major renovations | Ongoing/In Progress | The Province of British Columbia currently has 12 LEED-NC 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.<br>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 construction and renovations will target LEED-NC or CI Gold using an Integrated Design Process.<br>Expansion of the Surrey Pretrial Services Center (LEED Project 10199) is targeting LEED-NC Gold and is scheduled for completion in November 2013.<br>Construction of a new Okanagan Correctional Center in Oliver will begin in 2013/14 and is targeting LEED-NC Gold. | 2008 | No End Date (Continuous) |
| Perform energy retrofits on existing, owned buildings | Ongoing/In Progress | 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.<br>SSBC and WSI-BLJC has started also partnership with Fortis BC to assess mechanical systems in correctional facilities. | 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, and other initiatives as Continuous Optimization Program and Commercial Kitchen initiative.<br>SSBC and WSI-BLJC has started also partnership with Fortis BC to assess mechanical systems in correctional facilities. | 2009 | No End Date (Continuous) |
| Incorporate a refrigerant management strategy into regular building management/maintenance to reduce fugitive emissions | Ongoing/In Progress | The management of refrigerant systems continued to be in compliance with Provincial regulation. As required, precautions were taken to mitigate emissions, and emissions were reported per regulatory requirements by service providers in behalf of SSBC | The management of refrigerant systems will continue to be in compliance with Provincial regulation. As required, precautions are taken to mitigate emissions, and emissions were reported per regulatory requirements by service providers in behalf of SSBC | 2009 | No End Date (Continuous) |
| **Planning/management** | | | | | |
| Reduce office space (square meters) per employee | Ongoing/In Progress | The Annual Space Planning Process provides opportunity for SSBC and Clients to work to process enables SSBC and clients to work together towards supporting program and service delivery while | Further LWS projects will be undertaken with an initial focus on Victoria office space as a result of Victoria LWS 2018. Specific capital projects in planning or in progress which will lead to a reduction of | 2010 | No End Date (Continuous) |

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| | | enabling a more flexible and mobile workforce. The BC Government's office and carbon footprint is reduced through the implementation of the Leading Workplace Strategies (LWS) initiative, which began in 2010.<br><br>Summary for 2012:<br>Approx 9500m2 of space has been dropped from our portfolio across the province. Of 9500 m2 of space, approx 5000m2 of space has been reduced as a result of implementing LWS | office footprint include:<br>-CITZ Phases 3 & 4 4000 Seymour<br>-MSD 614 Humboldt<br>-CITZ 563 Superior<br>-FLNRO Phase 2 2975 Jutland<br><br>Additional LWS space reduction opportunities will be identified and implemented in Victoria for 2013 to 15 based on opportunities identified through the Annual Space Planning Process and ministry functional suitability. A target density equal to or less than 14.5m2 per person has been identified for all future office space projects. | | |
| Install a real time metering system (e.g. Pulse, Reliable Controls, Houle Controls) | In Development | In partnership with Continuos Optimization Program from BC Hydro, SSBC is planning to integrate real time metering in five buildings for the 2012-2014 reporting period, as an initial pilot program consisting of five facilities.<br>A business case has been developed for a Continuos Optimization Program.<br>The business case has been revised by executive and waiting for funding in 2013 | SSBC is also evaluating the participation in the program Enertrack funded by Fortis BC, that includes real time metering as well as an energy management software to improve operation and monitoring of biggest gas consumer's facilities<br><br>When budgets are approved, an implementation phase will be started. | 2012 | 2014 |
| **Retrofit details for owned buildings** | | | | | |
| Upgrade mechanical systems (heating, cooling, ventilation) during retrofits | Ongoing/In Progress | If budget is available and is a priority for ministry tenants, HVAC and boiler replacements will be sought for tenants. | The Technical Standards are periodically updated, when and if new technology and processes emerge and should be considered for a new construction project.<br>Upgrade of mechanical systems by SSBC will continue to be considered on a case by case basis. | 2009 | No End Date (Continuous) |
| Upgrade lighting systems during retrofits | Ongoing/In Progress | On behalf of ministry tenants, SSBC and WSI had implemented electrical systems updates as: retrofit of fluorescent lights, replacement of ligthing system, retrofit to LED bulbs, in several locations as: Charlie Lake Warehouses, Port Alberni Courthouse, Surrey Courthouse, Nanaimo Health Centre. | 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<br><br>All incandescent lamps will be changed to LED lamp technology providing improved energy saving and reducing maintenance cycles.<br><br>The Technical Standards have been updated requiring fluorescent lamps to now have a minimum 40,000 hour life (previously 20,000 hour life). The increased lamp life will reduce relamp maintenance costs.<br><br>LED luminaires are being implemented in selected outdoor streetlighting and floodlighting projects as a replacement for HID lamp technology. | 2009 | No End Date (Continuous) |
| Upgrade/adjust control systems during retrofits | Ongoing/In Progress | On behalf of ministry tenants, SSBC and WSI had successfully applied for funding to BC Hydro and Fortis BC to implement installation of motion sensor controls in several locations as: Surrey | Occupancy sensors and vacancy sensors are being installed in selected spaces to automatically turn off lights when spaces are unoccupied. | 2009 | No End Date (Continuous) |

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| | | Courthouse, Port Alberni Courthouse, Nanaimo Health Centre. | Ongoing energy audits will identify opportunities to integrate building lighting controls with DDC systems to provide automatic shut off of lighting system after hours. | | |
| Improve building insulation (including windows) during retrofits | Ongoing/In Progress | Upgrades for building insulation by SSBC continued to be considered on a case by case basis. | Upgrades for building insulation by SSBC will continue to be considered on a case by case basis. | 2009 | No End Date (Continuous) |
| **Supplies (Paper)** | | | | | |
| **Electronic media in place of paper** | | | | | |
| Switch to an electronic payroll notification system in place of paper pay stubs | Ongoing/In Progress | Completed previous to 2012. | Electronic payroll will continue to be the Government standard moving forward. There are no plans to return to a paper-based system. | 2008 | No End Date (Continuous) |

## 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

| Action | Status | Steps Taken | Steps Planned | Start Year | End Year |
|---|---|---|---|---|---|
| **Business Travel** | | | | | |
| **Virtual meeting technology** | | | | | |
| Install web-conferencing software (e.g., Live Meeting, Elluminate, etc.) | Ongoing/In Progress | Starting in 2009, Shared Services BC rolled out desktop collaboration tools to more than 36,000 workstations across core government (e.g., LiveMeeting, instant messaging, peer-to-peer file sharing). In particular, SSBC provided an internal LiveMeeting service that allows meetings of up to 40 participants. Monitoring statistics show simultaneous web conference levels remained high throughout the year in the 100 range, a 25% increase from 2011.<br><br>A service that allows clients from outside of the BC Government to attend Live Meeting web-conferences is also available. Monitoring statistics demonstrate the service was used on 3323 occasions throughout the year, slightly higher than 2011, and the meetings 16 participants on average, which is a significant increase from 2011 where the average attendance was 6 persons. Although not explicitly measurable, the increase in average attendance likely contributes to reduced business travel and emission reductions. | Web-conferencing software will remain available to BC Government staff and will be upgraded as the technology improves. As well, there are plans to improve the reporting capacity for the internal LiveMeeting service so that total meetings and average participants can be calculated and compared year-to-year or more frequently. | 2009 | No End Date (Continuous) |
| Install video-conferencing units in meeting rooms or provide mobile video-conferencing units | Ongoing/In Progress | In 2010, Shared Services BC launched a pilot of Telepresence technology in 4 sites (2 in Victoria, 2 in Vancouver). In 2011, these telepresence sites were opened up to Executive Directors as well as Assistant Deputy Ministers. Hence the sites' usage increased considerably. In 2012 two new locations were installed in Prince George and Kamloops. Overall carbon savings through travel avoidance is estimated to be 3393 kgCO2e and $217,500 in cost savings.<br><br>Approximately 2695 hours of conference time was booked in all six locations over the course of the year, which represents over a 100% increase from 2011. | SSBC will continue to support the 6 telepresence locations on behalf of Ministry/Agency executives. Usage will tracked to evaluate year-to-year performance, travel costs avoided and impact on GHG emissions.<br><br>As well, a new site was added in Kelowna in the Spring of 2013. This site will likely be the final site added. | 2010 | No End Date (Continuous) |
| **Other Sustainability Actions** | | | | | |
| **Building construction, renovation** | | | | | |
| Establish a policy to reuse materials where possible and divert construction and demolition debris from landfills and incineration facilities | Ongoing/In Progress | | | 2009 | No End Date (Continuous) |
| Incorporate lifecycle costing into new construction or renovations | Ongoing/In Progress | Shared Services BC's Technical Standards are based on lifecycle costing. All major projects where the Technical Standards are applied (e.g. Major tenant improvements and new construction) have been considered under a lifecycle costing model. Lifecycle costing and triple bottom line planning services were available for use during project planning and business case development and are employed at the discretion of ministry customers. | SSBC's Technical Standards will continue to be applied to major project developments during the 2013-15 reporting period. | 2009 | No End Date (Continuous) |
| **Procurement (non-paper supplies)** | | | | | |

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| Establish green standards for goods that are replaced infrequently and/or may require capital funds to purchase (e.g., office furniture, carpeting, etc.) | Ongoing/In Progress | Coordinated redistribution of furniture to government through centralized tracking (rather than disposal by one ministry in parallel with purchases being undertaken by another ministry) achieves a lower impact to government. To ensure effective use of Government assets, ministries and agencies can source used office furniture through Asset Investment Recovery (AIR) or dispose of it. AIR provides disposal, recycling, secure warehouse storage and asset management services for government ministry clients.<br>Environmental certifications are required on furniture acquisitions via furniture resellers who have been awarded a corporate supply arrangement with corporate government. These certifications include Greenguard certified, SCS Indoor Advantage certified, BIFA Level 1, 2 or 3, and contribution to LEED. | Steps taken in 2012 will be continued to the future.<br><br>Cost avoidance (i.e. significant savings to be realized based on historical experience) from deployment of surplus furniture, rather than purchasing new furniture, will be a continued goal. | 2011 | No End Date (Continuous) |
| Implement sustainable purchasing program for cleaning products, disposable paper products and trash bags | Ongoing/In Progress | | | 2011 | No End Date (Continuous) |
| **Waste reduction/diversion** | | | | | |
| Put in place an operations policy to facilitate the reduction and diversion of building occupant waste from landfills or incineration facilities | Ongoing/In Progress | The multi-stream recycling program will continue to be offered by WSI to ministry clients who requested it.<br>SSBC, in consultation with WSI, will establish baseline waste diversion data.<br><br>The 80% construction waste diversion target continued to be in effect during the 2012/13 reporting period.<br>The actual average diversion rate was 82%. | The 80% construction waste diversion target continued to be in effect during the 2012/13 reporting period.<br><br>SSBC and WSI will develop strategies to meet the new organics ban bylaws in the Capital Regional District and MetroVancouver. | 2009 | No End Date (Continuous) |
| Implement a hazardous waste reduction and disposal strategy | Ongoing/In Progress | SSBCâ€ ™s and WSIâ€ ™s ISO 14001 registered Environmental Management Systems require pollution prevention strategies. These operational strategies are in place (e.g. PCBs, halocarbons, asbestos). | | 2009 | No End Date (Continuous) |
| **Water conservation** | | | | | |
| Establish a water conservation strategy which includes a plan or policy for replacing water fixtures with efficient models | Ongoing/In Progress | The Technical Standards are periodically updated, when and if new technology and processes emerge and should be considered for a new construction project.<br><br>WSI business processes remain in place. | | 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 | Ongoing/In Progress | Potable water management by SSBC will continue to be considered on a case by case basis. | Potable water management by SSBC will continue to be considered on a case by case basis. | 2009 | No End Date (Continuous) |
| Introduce a stormwater management landscape strategy (e.g., vegetated roofs, permeable paving, rain gardens, bioswales) | Ongoing/In Progress | | | 2009 | No End Date (Continuous) |