



Carbon Neutral Action Report | 2011

Executive Summary

Supporting more livable communities

In 2011 BC Transit moved forward with climate action initiatives in support of our commitment to link people, communities, and businesses across the province through cost-effective, sustainable public transit.

BC Transit initiated service expansions and increased ridership across British Columbia to promote higher travel mode share for transit, reduce reliance on automobiles and lower overall greenhouse gas emissions.

BC Transit's overall carbon emissions increased slightly from 28.47 kilograms CO₂e per service hour in 2010 to 28.62 kilograms CO₂e per service hour in 2011. This increase was primarily as a result of increased fuel consumption in the Regional Transit System as a result of service expansion.

Although direct GHG emissions from the combustion of diesel fuel in BC Transit's bus fleet increased by 120 tonnes in 2011 (as a result of service expansion and an increase in fleet size), expanded operation of the world's largest fleet of hydrogen fuel cell buses in the Resort Municipality of Whistler displaced more than 1,160 tonnes of direct GHG emissions that would have otherwise occurred had that fleet operated on diesel fuel.

Additional new vehicle technologies were showcased during 2011 as part of BC Transit's continuing commitment to exploring sustainable transit solutions. We tested an Alexander Dennis double decker with emission reducing EPA 2010 certified engine, the first time an EPA 2010 certified engine has been tested on a double decker in North America; and we had the opportunity to assess the zero-emission BYD electric eBus-12 which uses iron-phosphate battery technology and integrates solar panels on the bus roof, converting solar energy to electricity.

Greenhouse Gas emissions from BC Transit's non revenue vehicle fleet (transit supervisor and fleet maintenance vehicles) declined by 8% in 2011 as the operational benefits of hybrid vehicles acquired in 2010 for these applications continued to increase. Carbon emissions from both indirect purchased energy and from the use of office paper declined in absolute tonnage terms year on year, from 2010 to 2011.

In addition to supporting the achievement of Climate Action goals, BC Transit's services contribute to broader government and community objectives and deliver public benefits in three key areas:

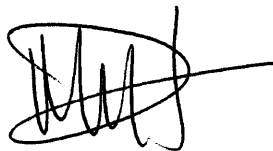
- Contributing to the economic, social and environmental sustainability of the province's communities through efficient and effective public transit.
- Increasing the mobility of the aging population and providing improved transit to support aging in place.
- Supporting rural and First Nations communities by linking them to regional services.

In 2011 BC Transit continued to embed our Climate Action and carbon neutrality goals within our ongoing commitment to provide effective and efficient service in support of these stakeholder expectations. Our aim is to deliver environmental, social and financial sustainability in the provision of transit services.

A key focus has been on working together. Throughout 2011 BC Transit worked with local partners to develop Transit Future Plans to promote more compact, sustainable and efficient communities, reduce energy use and greenhouse gas emissions and support increased population and employment densities near transit hubs and along transit corridors. Also, through the Enterprise Investment Initiative, we identified with our local government and operating partners, a common set of principles to drive improvements in transit service and quality over the next five years.

Both the Transit Future and Enterprise Investment Initiatives have the capacity to build future ridership by shaping land use, targeting services and promoting customer awareness through participatory planning.

By continuing to work together we can make transit more energy efficient, convenient and accessible for customers, encouraging them to choose transit and get off the road, delivering positive solutions for our families, our communities and our environment.



Mike Davis

Vice President & Chief Operating Officer
BC Transit

Bus shelter standardization program using up to 65% renewable content



2011 Greenhouse Gas Emissions

Most greenhouse gases produced from BC Transit's operations originates from the combustion of fossil fuels in our vehicle fleet and the energy used to heat and cool the buildings we own or lease.

| EMISSIONS SOURCE | GREENHOUSE GASES IN TONNES |
|--|----------------------------|
| Scope 1 (Direct) Emissions | |
| Mobile Combustion: Vehicle Fleet – Diesel & Gasoline | 58,481.25 |
| Stationary Combustion | 1,398.54 |
| Total Scope 1 Emissions | 59,879.79 |
| Scope 2 (Indirect) Emissions | |
| Indirect Emissions | 129.07 |
| Scope 3 Emissions | |
| Office Paper | 14.79 |
| Emissions from Biomass | |
| Total Biomass Emissions | 2,199.59 |
| TOTAL EMISSIONS CALENDAR YEAR 2011 | 62,223.24 |

It was estimated that fugitive emissions from vehicle fleet air conditioning do not comprise more than one per cent of BC Transit's total emissions and an ongoing effort to collect or estimate emissions from this source would be disproportionately onerous. For this reason emissions from this source have been deemed out of scope and have not been included in BC Transit's total greenhouse gas emissions profile.



Supporting communities-reducing their GHG footprint

Offsets Applied to Become Carbon Neutral in 2011

BC Transit measures and is accountable for its environmental results. BC Transit measures and reports its greenhouse gas emissions under carbon accounting protocols consistent with the *Carbon Neutral Government Regulation* using the web-based application known as SMARTTool, and offsets those regulated greenhouse gas emissions it cannot avoid through payments to the Pacific Carbon Trust.

In 2011 BC Transit offset 1,628 tonnes of regulated emissions.

As required by section 5 of the *Carbon Neutral Government Regulation*, 60,680.84 tonnes of CO₂e of emissions resulting from the operation of transit buses was reported as part of our greenhouse gas emissions profile in 2011. However, they were not offset as they are out of scope under section 4 (2) (c) of the *Carbon Neutral Government Regulation*.

Changes to Greenhouse Gas Emissions and Offsets Reporting from Previous Years

Following the public release of BC Transit's 2010 Carbon Neutral Action Report, it was determined that offsets required to become carbon neutral in 2010 were over paid by 37 tonnes CO₂e. The surplus of offsets purchased in 2010 has been applied against our 2011 emissions.

Whistler Transit Facility



Emissions Reduction Activities

Below is an overview of highlighted actions and targets reported in the CNAR Actions Table (attached)

A. MOBILE FUEL COMBUSTION

Revenue fleet: operation of the hydrogen bus fleet in the Resort Municipality of Whistler avoided more than 1,160 tonnes of GHGs in comparison with incumbent diesel bus technology

Showcased new and fuel efficient technologies – Zero emission BYD eBus-12 electric bus on test; also an Alexander Dennis double deck bus, the first double decker in North America with an EPA 2010 certified engine.

Signed a contract for the supply of 15 Vicinity medium duty buses which will deliver fuel and GHG savings when used in place of conventional, heavy duty transit buses.

Non-revenue fleet: increased operations by hybrid vehicles resulted in an 8% reduction in GHG emissions for this fleet compared with 2010.

BC Scrap It Program: BC Transit offers a monthly pass incentive for vehicle owners to scrap their older, more polluting vehicles and adopt transit; implementation of this program removed 265 tonnes of GHGs that would otherwise have been emitted in 2011.

B. STATIONARY FUEL COMBUSTION - FACILITIES

Energy retrofits were undertaken at Victoria Regional Transit System that resulted in a reduction of more than 13% in electricity consumption.

50% of the yard lighting at Victoria Transit Centre was upgraded with LED equivalent lighting.

C. SUPPLIES - PAPER

During 2011 BC Transit moved primarily to the use of 40% post-consumer recycled content paper. The Board of Directors converted to exclusive use of electronic media for meetings, avoiding all paper use and more than 56 kgs of related GHGs .



Vicinity Bus

Operational Changes in 2011

BC Transit initiated service expansions and increased ridership across the province to promote higher travel mode share for transit, reduce reliance on automobiles and lower overall greenhouse gas emissions.

With Service hours increasing by almost 12,000 hours the overall emissions intensity of service increased slightly by 0.15 kilograms CO₂e/hour to 28.62 kilograms CO₂e/hour.

Fleet

Hydrogen Bus Fleet, Resort Municipality of Whistler

The hydrogen fleet travelled more than 820,000 kms in calendar 2011 and avoided more than 1,160 tonnes of CO₂e in comparison to diesel buses.

By December 2011 the fleet had reported more than 1 million miles in service since the program began in December 2009. More than 80,000 hours of service, more than 9,600 safe refuellings, with more than 220,000 kgs of hydrogen dispensed and over 2,200 tonnes of GHG avoided in comparison to diesel buses.

Hydrogen Fuel Cell Bus



In August 2011 BC Transit unveiled two demonstration buses in Victoria on the same day, featuring emission-reducing technology to help contribute to cleaner air. The zero-emission BYD electric eBus-12 and the Alexander Dennis double decker outfitted with a new, emission reducing Cummins engine were in Victoria as part of BC Transit's ongoing commitment to exploring sustainable transit solutions.

Manufactured in China, the BYD eBus-12 uses zero emission technology. Using an iron phosphate battery, BYD reports the electric bus can travel up to 250 kilometres per charge. The eBus-12 also integrates solar panels on the bus roof, converting solar energy to electricity.

BC Transit tested the Alexander Dennis double decker's new EPA 2010-certified engine in Victoria. This was the first EPA 2010-certified engine tested on a double decker bus in North America. Configured as a commuter bus, the double decker features reclining, high-back seats and noise dampening pads.

Actions to Reduce Provincial Emissions and Improve Sustainability

Transit Future

Transit Future Plans envision what a community's transit network should look like 25 years from now.

The Plan analyzes the existing transit system in a community to see how it could be improved. It describes and prioritizes infrastructure and investment needed to get there.

It provides guidance for regional land use decision makers to ensure new developments have accessible, safe and convenient access to the transit system.

Transit Future guides future transit investment that is supportive of livable communities by:

- Offering more transportation choice
- Supporting smart land use plans that focus on walking, cycling and transit
- Meeting climate change goals
- Making it easy to access everyday services on foot, by bike and by transit



Transit Future Bus

A key element in public consultation in support of Transit Future Plans is the "Transit Future Bus", a 12m bus re-worked as a mobile public consultation tool.

In 2011 the Transit Future Bus visited : Abbotsford, Agassiz, Campbell River Chilliwack, Cowichan Valley, Harrison, Hope, Kamloops, Mission, Squamish, and Vernon.

Enterprise Investment Initiative (EII)

BC Transit is reviewing our business processes to improve operational efficiency and the sharing of information between partners. The EII project team consists of members from operating companies, local government and BC Transit staff. The team has identified a list of investment priorities to advance the following strategic outcomes:

- Increasing and optimizing the long term financial sustainability of BC Transit services
- Increasing transit mode share
- Increasing transit accessibility and flexibility to support the social needs of communities
- Increasing integration of transit systems with other modes of sustainable transportation
- Increasing the degree to which transit helps reduce the environmental footprint of communities.

EII Workshop





Promoting transit accessibility and supporting communities

Actions Planned for 2012

- Monitor and reduce BC Transit's emissions intensity: the amount of greenhouse gas emissions generated for every hour of transit service delivered
- Implement transit facility energy audit recommendations in the Victoria Regional Transit System at the Langford Transit Centre.
- Explore new fleet propulsion alternatives, particularly electric and natural gas propulsion systems and evaluate for implementation
- Continue to evaluate and monitor the 20 hydrogen fuel cell bus fleet in Whistler, B.C.
- Sell compliant carbon emission offsets to Pacific Carbon Trust

Links to Other BC Transit Information Relevant to Sustainability

Government Letter of Expectations - 2012

http://www.bctransit.com/corporate/general_info/pdf/2012-13_Governments_Letter_of_Expectations.pdf

BC Transit Service Plan - 2012

http://www.bctransit.com/corporate/general_info/pdf/BCT_2012_Service_Plan.pdf

BC Transit 2010 - 11 Annual Report

http://www.bctransit.com/corporate/general_info/pdf/BC_Transit_201011_Annual_Report_Final_WEB.pdf

BC Transit Go Green

<http://www.bctransit.com/gogreen/default.cfm>

BC Transit is a member of the Community Energy Association

<http://www.communityenergy.bc.ca/node/295>

BC Transit is a member of the Canadian Hydrogen Fuel Cells Association

<http://www.h2.ca/>

BC Transit is a member of the Clean Hydrogen In Cities program

<http://chic-project.eu/category/cities>

BC Transit –2011 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 (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 | | | There were no vehicle replacements in 2011. However, a replacement project for handyDart and Community Bus has begun that is expected to see more fuel efficient ARBOC buses replace older Ford Polars in 2012. | Continued replacement of older fleet with new fleet that meet the latest emissions standards. | Started before 1995 | No End Date (Continuous) |
| Replace larger vehicles with smaller models according to fleet “right-sizing” principles | Ongoing/In Progress | | | A contract was signed for the purchase of 15 Vicinity buses. These buses are 27.5 feet long and initial data suggests that there should be fuel savings when these are used in place of existing conventional buses. | Delivery of 15 Vicinity buses is expected early 2013. This trial fleet will allow for fitment of use testing in several locations and monitoring of their performance and reliability in community bus duty cycles. | 2009 | 2013 |
| Perform regular fleet maintenance specifically to improve fuel-efficiency | Ongoing/In Progress | 100 | % of vehicles are subject to regular maintenance for fuel efficiency | BC Transit continues to maintain all revenue buses to 5,000 km Preventative Maintenance cycle. BC Transit working with Voith Transmission to extend the oil drain intervals, this is currently in progress. | All vehicles are maintained and serviced as per BC Transit’s Preventative Maintenance program requirements. Ongoing periodic fuel efficiency monitoring and investigations into any vehicle that reports above average fuel usage compared to sample. | Started before 1995 | No End Date (Continuous) |
| Replace small maintenance vehicles with more fuel-efficient models | Ongoing/In Progress | | | A Mercedes Sprinter was purchased in March 2011 as a replacement parts van. The Sprinter uses an economical diesel engine that meets EPA 2010 standards and is significantly more fuel efficient than other diesel vans in its class. | All current nonrevenue vehicles are part of an ongoing replacement plan. Any replacements will have fuel efficiency as a stipulation of purchase. Future vehicles purchased as company pool vehicles will be of the hybrid design or other alternative energy solutions. | 2006 | No End Date (Continuous) |
| Behaviour change program | | | | | | | |
| Provide fleet driver training to reduce fuel use | Ongoing/In Progress | 100 | % of current drivers are trained | BC Transit has an ongoing and progress training module under the SMART Driver program which defines and reinforces “fuel sense” driving techniques. We also review these techniques during ride checks. | Continue to train operators in the SMART Driver program and review techniques through ride checks. | 2001 | No End Date (Continuous) |
| Introduce anti-idling policy and/or raise anti-idling awareness for fleet drivers (e.g., signs, stickers, messages) | Ongoing/In Progress | | | Continue to reinforce the policy and work with marketing to promote an onboard campaign of awareness for our ridership. | Maintain the Anti-idling policy in the training manual and continue to provide anti-idling training to new operators. | 2007 | No End Date (Continuous) |

| 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 |
|---|-------------------------|--------------------------------------|--|--|--|------------|--------------------------|
| Encourage carpooling in fleet vehicles | Ongoing/In Progress | 100 | % hybrid pool car fleet available for use | All BC Transit employees have bus passes. Pool cars (hybrids) are available when meeting logistics prevent transit use. | Continued use of hybrid pool cars when meeting logistics prevent transit use. | 2006 | No End Date (Continuous) |
| Promote alternatives to fleet vehicle travel where possible (e.g., bicycles, public transit, walking) | Ongoing/In Progress | | | BC Transit worked with partners to implement our vision to be a leader of integrated transportation solutions connecting people and communities to a more sustainable future. The Transit Future Plan processes in the Capital Regional District, Central Okanagan, Cowichan Valley, Campbell River and Kamloops were integrated with community active transportation plans. | BC Transit will continue to work with its strategic partners and stakeholders to promote transit and sustainable transportation solutions. In particular, the Transit Future Plan process will continue to integrate active transportation and transit planning for communities over 25,000 people. Service Reviews in smaller communities will also look to integrate active transportation and transit planning. | 2009 | No End Date (Continuous) |
| Other Mobile Fuel Combustion Actions | | | | | | | |
| BC Transit continued to implement its environmental fuel strategy | Ongoing/In Progress | 2199 | Tonnes of Greenhouse gas emissions from the use of biomass reported under SmartTool for 2011 | Continued implementation of BC Transit's environmental fuel strategy in line with the Renewable and Low Carbon Fuel Regulation requirements for diesel fuel established January 1, 2010. | Continue to implement BC Transit's environmental fuel strategy in line with the Renewable and Low Carbon Fuel Regulation requirements for diesel fuel established January 1, 2010. BC Transit will continue to explore alternative, low carbon fuel solutions. | 2008 | No End Date (Continuous) |
| Increased fuel efficiency of non-revenue service vehicles | Ongoing/In Progress | 8 | % reduction in non revenue fleet emissions. Emissions declined from 81.79 tonnes of CO2e in 2010 to 75.66 tonnes of CO2e in 2011 | BC Transit incorporated 5 hybrid vehicles for Transit Supervisors and 4 hybrid vehicles for pool and executive cars in the Victoria Regional Transit system. Use of hybrid vehicles represents 75% of gas consumed by non-revenue vehicle use. | Continued implementation of BC Transit's fleet renewal program for non-revenue fleet vehicles. The program incorporates full life cycle accounting of energy efficiency and air emissions in the business case process. | 2008 | No End Date (Continuous) |
| Low Emission Vehicle Pilot Programs | Ongoing/In Progress | | | Tested and evaluated a Double Decker diesel electric hybrid bus and showcased clean technology with China's BYD Zero-emission Electric Bus and the Alexander Dennis Decker with Emission-reducing EPA 2010-Certified Engine. | Advance low emission and low carbon fuel bus demonstrations (these will include natural gas and battery electric buses). | 2007 | No End Date (Continuous) |
| Diesel Engine Emissions Reduction Retrofit Program | Completed in 2011 | | | 169 buses have been upgraded in total by March 2011 (26% of current fleet) This includes 37 passive DPF's and 132 DOC's. | | 2009 | 2011 |
| "Hydrogen Fuel Cell Demonstration Fleet" | Ongoing/In Progress | 1160 | Demonstration of the fleet avoided more than 1,160 tonnes of greenhouse gas emissions in the Resort Municipality of Whistler in 2011 | By December 2011 the fleet had reported more than 1 million miles in service since program start in December 2009. More than 80,000 hours of service, more than 9,600 safe refuellings, with more than 220,000 kgs of hydrogen dispensed and over 2,200 tonnes of GHG avoided in comparison to diesel buses. | The demonstration hydrogen bus fleet will be tested for operational service effectiveness with Whistler Transit to 2014. | 2009 | No End Date (Continuous) |

| 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 |
|---------------------|-------------------------|--|---|---|------------|--------------------------|
| BC Scrap It Program | Ongoing/In Progress | 265 “tonnes of CO2e were reduced through the BC Scrap It Program. The calculation is assuming scrapped vehicle use of 16,000 km/y was completely replaced by transit for one year for the combo cases and for 3 years for transit cases.” | BC Transit is a program partner in the BC Scrap It Program. This is a voluntary early retirement vehicle program that provides incentives to help British Columbians replace higher polluting vehicles with cleaner forms of transportation. The program is designed to reduce greenhouse gas emissions and to lower exhaust pollutants across the province. All scrapped vehicles and their components are permanently and properly recycled. BC Transit offers a monthly pass incentive for vehicle owners to scrap their older vehicles and adopt transit. As of 2009 residents of Victoria could trade in their 1995 or older vehicle in exchange for up to two years of free rides on the bus. 24 Vehicles were scrapped in 2011 for BC Transit incentives. The CO2 reduction benefit is equivalent to saving 113 200 litres of gasoline. Other emission reductions from the 24 cases in tonnes are: HC- 0.7 ,CO-11 and NOx-0.9. | BC Transit intends to continue as a program partner in the BC Scrap It program. | 2009 | No End Date (Continuous) |

Stationary Fuel Combustion, Electricity and Fugitive Emissions (Buildings)

Planning/management

| | | | | | | | |
|---|---------------------|----|--|--|--|------|------|
| Reduce office space (square meters) per employee | Ongoing/In Progress | 11 | is the current average rentable square meters per employee | Increased occupant density in administration building. | None. | 2009 | 2012 |
| Install a real time metering system (e.g. Pulse, Reliable Controls, Houle Controls) | Ongoing/In Progress | 16 | % of buildings have a real time metering system installed | None. | Langford Transit Centre (LTC), Victoria Transit Centre (VTC) Garage sites outfitted with DDC control systems and optimization to reduce consumption. | 2010 | 2012 |

Owned buildings

| | | | | | | | |
|--|---------------------|----|---|--|--|------|--------------------------|
| Incorporate integrated design process into new construction or during renovations of owned buildings | Ongoing/In Progress | 5 | % of buildings built or renovated since start year indicated used the integrated design process | A new Vernon transit facility was built. The move to the new facility also occurred. | 100% of new construction will be designed and constructed by LEED accredited professionals utilizing best practices and sustainable and energy efficient materials where practical and feasible. | 2009 | No End Date (Continuous) |
| Perform energy retrofits on existing, owned buildings | Ongoing/In Progress | 47 | % of owned buildings have undergone energy retrofits since start year indicated | Whistler lighting controls updated. Lighting upgrades/ retrofit to VTC Yard and Garage and LTC Garage. | Major lighting retrofit of VTC Admin Building, implementation of major energy savings measures at LTC. | 2010 | No End Date (Continuous) |

Retrofitting owned buildings

| | | | | | | | |
|---|---------------------|--|--|--|--|------|--------------------------|
| Upgrade mechanical systems (heating, cooling, ventilation) during retrofits | Ongoing/In Progress | | | Controls added to lockout heating system with garage doors open. | LTC and VTC Garage site equipped with DDC control. Additional ductwork changes at LTC to optimise distribution. Heat recovery system at LTC. | 2010 | No End Date (Continuous) |
| Upgrade lighting systems during retrofits | Ongoing/In Progress | | | Replaced 50% of VTC yard lighting with LED equivalent. | VTC Admin building lighting upgrade scheduled. CFV yard and bay lighting upgrade planned. | 2009 | No End Date (Continuous) |

| 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 |
|---|-------------------------|--------------------------------------|------------------------------------|--|---|------------|--------------------------|
| Upgrade/adjust control systems during retrofits | Ongoing/In Progress | | | VTC Admin control system optimized to reduce consumption. | Add additional control zones to reduce overall consumption of system. | 2009 | No End Date (Continuous) |
| Improve building insulation (including windows) during retrofits | Ongoing/In Progress | | | Door weather-stripping and air curtains added to problematic areas. | Continuous improvements to building insulation and envelope sealing as opportunities arise in conjunction with other projects. | 2009 | No End Date (Continuous) |
| IT power management | | | | | | | |
| Install power management software which shuts down computers outside of regular business hours | Ongoing/In Progress | | | We have gone through an analysis process and identified many new projects. One of them is to replace all PC's and laptops with newer more efficient ones. | All of the company's old PC's and laptops will be replaced with newer more efficient ones. All the old PC's will be either donated or disposed of in an environmentally friendly manner. Once we have all of the models deployed, we can then look at software that manages the power more effectively. | 2010 | 2013 |
| Implement server virtualization | Ongoing/In Progress | | | Our server standards are based on virtualization and any new server that is initiated will be virtual by default, unless a case is made to have a physical server. In order to increase the number of virtual servers we have and minimize the number of physical servers, we have built up the capacity of the virtual environment in preparation to migrate the remaining servers. | We will move the remaining old physical servers to the virtual environment. Depending on the applications they are running, we can eliminate most stand alone physical servers. | 2009 | 2013 |
| Apply auto-sleep settings on computer monitors and CPUs | Ongoing/In Progress | | | The auto sleep function has been enabled for monitors. See Steps Taken for "Install power management..." item above for power management for the PC's. | See Steps Planned for "Install power management..." item above. | 2010 | 2013 |
| Remove stand-alone printers, copiers, and/or fax machines and install multi-function devices | Ongoing/In Progress | | | All units are multi-function devices except in special situations. | We are relocating an under-utilized printer in head office to the new Transit Communication Centre (TCOMM) facility in Langford. All opportunities to remove individual printers will be explored on an ongoing basis. | 2009 | No End Date (Continuous) |
| Apply auto-sleep settings on printers, copiers, fax machines, and/or multi-function devices | Ongoing/In Progress | | | All units are multi-function devices except in special situations. | We enable all multi-function devices and printers to go to sleep after a period of inactivity. All output devices purchased going forward will also have this feature enabled. | 2009 | No End Date (Continuous) |
| Replace computers with ENERGY STAR models during regular computer upgrades | Ongoing/In Progress | | | See Steps Taken for "Install power management..." item above. | Computers will be refreshed on an ongoing basis. Each time we purchase new hardware we will continuously look for more efficient devices. | 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 | 80 | % of fridges are ENERGY STAR rated | One refrigerator was replaced in 2011. ENERGY STAR model was chosen. | Most refrigerators in house are ENERGY STAR compliant. All future replacements will aim to reduce consumption within the ENERGY STAR grouping. | 2008 | No End Date (Continuous) |

| 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 |
|--|-------------------------|--------------------------------------|--|---|--|------------|--------------------------|
| Replace other appliances or electronic devices with ENERGY STAR models or source ENERGY STAR models for future purchases | Ongoing/In Progress | | | One dishwasher was replaced in 2011. ENERGY STAR compliant model was chosen. | Most appliances in house are ENERGY STAR compliant. All future replacements will aim to reduce consumption within the ENERGY STAR grouping. | 2008 | No End Date (Continuous) |
| Behaviour change program | | | | | | | |
| Encourage staff to use air dry setting on dishwashers | Ongoing/In Progress | | | Regular updates through administrative and facilities maintenance bulletins. | Maintain performance level. | 2010 | No End Date (Continuous) |
| Provide tips to staff on saving energy in the office while working outside of regular business hours | Ongoing/In Progress | | | Regular updates through administrative and facilities maintenance bulletins. | Maintain performance level. | 2010 | No End Date (Continuous) |
| Provide reminders for turning off lights (e.g., signs, stickers, messages) | Ongoing/In Progress | | | Regular updates through administrative and facilities maintenance bulletins. | Maintain performance level. | 2010 | No End Date (Continuous) |
| Promote hot water conservation | Ongoing/In Progress | | | Regular updates through administrative and facilities maintenance bulletins. | Maintain performance level. | 2010 | No End Date (Continuous) |
| Supplies (Paper) | | | | | | | |
| Paper Type | | | | | | | |
| Purchase 30% post-consumer recycled paper | Ongoing/In Progress | 10 | % of total paper purchased contains 30% recycled content | Shifted many products from 30% recycled content to 40% recycled content. | Maintain performance level. | 2010 | No End Date (Continuous) |
| Purchase 40% post-consumer recycled paper | Ongoing/In Progress | 85 | % of total paper purchased contains 40% recycled content | Increased use of 40% recycled content paper. | Review opportunities to further increase post-consumer content in purchased paper. | 2011 | No End Date (Continuous) |
| Purchase 100% post-consumer recycled paper | Ongoing/In Progress | 1 | % of total paper purchased contains 100% recycled content | Maintained 100% recycled content performance level. | Review opportunities to further increase post-consumer content in purchased paper. | 2010 | 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 | All network printers and photocopiers are now defaulted to double-sided printing. Evaluating setting the colour printer to a default 'print and hold' setting to limit unclaimed print jobs. | Maintain performance level. | 2010 | No End Date (Continuous) |
| Electronic media in place of paper | | | | | | | |
| Post materials online that were previously printed | Ongoing/In Progress | 56 | Kgs of CO2e avoided per year by switching board meeting materials to electronic medium | BC Transit employees are encouraged to scan printed materials and post reference material online when deemed appropriate. Starting in July 2011, Board packages were issued electronically to Board members to use their supplied Ipads for note taking and review. | BC Transit is reviewing its business processes, information systems, and its enabling technologies to identify and prioritize the investments needed to deliver greater value to its customers and partners. | 2010 | 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 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.) | Ongoing/In Progress | 100 % of computers have web-conferencing software installed | WebEx has been used extensively throughout the organization. | The phone system is undergoing upgrades to enable more functionality and online collaboration which includes conference calls and instant messaging is part of that upgrade. | 2011 | 2013 |
| Make desktop web-cameras available to staff | In Development | | All new laptops have web cameras built in. | Cameras for PC's and conference rooms will be evaluated after all the upgrades and stabilization projects have been completed. | 2011 | 2013 |
| Behaviour change program | | | | | | |
| Encourage staff to consider virtual attendance/presentation at events where possible | Ongoing/In Progress | | Conference calling is encouraged and used extensively. | Maintain conference calling encouragement. | 2010 | No End Date (Continuous) |
| Encourage carpooling to meetings | Ongoing/In Progress | | All BC Transit employees have bus passes. Pool cars (hybrids) are available when meeting logistics prevent transit use. | BC Transit will continue to issue employees bus passes and will continue to encourage staff to use the Hybrid pool cars when meeting logistics prevent transit use. | 2009 | No End Date (Continuous) |
| Encourage alternative travel to meetings (e.g., bicycles, public transit, walking) | Ongoing/In Progress | | All BC Transit Employees are given bus passes. | BC Transit will continue to issue employees bus passes and encourage staff to use the Hybrid pool cars when meeting logistics prevent transit use. | 2009 | No End Date (Continuous) |
| Education, Awareness, and Engagement | | | | | | |
| Team-building | | | | | | |
| Create Green, Sustainability, Energy Conservation, or Climate Action Teams with executive endorsement | Ongoing/In Progress | | Core group was maintained while working to restructure Sustainability Team to be more accessible and garner higher level endorsement. | Continue working on the group restructuring. | 2009 | No End Date (Continuous) |
| Provide resources and/or dedicated staff to support teams | Completed in 2011 | | One staff person was tasked with providing support from Environment Services and Climate Action. | One staff person was tasked with providing support from Environment Services and Climate Action. | 2010 | No End Date (Continuous) |
| Staff Professional Development | | | | | | |
| Support green professional development (e.g., workshops, conferences, training) | Ongoing/In Progress | | An employee of BC Transit as part of Environmental Services has been LEED Green Associate Certified. | Several BC Transit employs will maintain their professional environmental certification/accreditations. | 2009 | No End Date (Continuous) |

| 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 | | The BC Transit environmental sustainability team has been working on restructuring but is committed to developing strategies that reduce our impact on the environment including education opportunities for BC Transit employees. | Once a renewed BC Transit environmental sustainability team is operational, work will begin to offer environmental education to BC Transit staff. | 2009 | No End Date (Continuous) |
| Provide education to staff about the conservation of water, energy, and raw materials | Ongoing/In Progress | | The BC Transit environmental sustainability team has been working on restructuring but is committed to developing strategies that reduce our impact on the environment including education opportunities for BC Transit employees. | Once a renewed BC Transit environmental sustainability team is operational, work will begin to offer environmental education to BC Transit staff. | 2009 | No End Date (Continuous) |
| Provide green tips on staff website or in newsletters | Ongoing/In Progress | | The BC Transit environmental sustainability team has been working on restructuring but is committed to developing strategies that reduce our impact on the environment including education opportunities for BC Transit employees. | Once a renewed BC Transit environmental sustainability team is operational, work will begin to address greening initiatives on a case by case basis. | 2009 | No End Date (Continuous) |
| Provide sustainability education during new staff orientation | Ongoing/In Progress | | Sustainability education is part of the new staff orientation. | Sustainability education is part of the new staff orientation process ongoing. | 2010 | No End Date (Continuous) |
| Client/public awareness/education | | | | | | |
| Provide education to clients/public about the science of climate change | Ongoing/In Progress | | BC Transit presented at American Public Transportation Association conference, BC Transit was involved in Canadian Urban Transit Association Green Strategies Group and Hydrogen Alliance activities. | BC Transit will continue to include advice and information on the science of climate change while communicating about transit services and technologies. The linkage between transit service and environmental and climate change objectives informs BC Transit's Service Plans. | 2009 | No End Date (Continuous) |
| Provide education to clients/public about the conservation of water, energy, and raw materials | Ongoing/In Progress | | BC Transit included advice and information on energy, water and material use while communicating with suppliers for the procurement of transit services and technologies. The linkage between transit service and energy efficiency and broader conservation informs BC Transit's Service Plans. | BC Transit's business case templates and procurement evaluations include appropriate evaluation of financial, environmental and social impacts. | 2009 | No End Date (Continuous) |
| Provide green tips on client/public website or in newsletters | Ongoing/In Progress | | BC Transit provided green tips and environmental advice through all of its marketing channels in 2011. BC Transit continually engaged in marketing outreach to demonstrate the advantages of transit, walking and cycling as financially, socially and environmentally wise transportation choices. Key marketing campaigns were "If its Green, Just Go" and the key outreach activity was the "Transit Future" campaign. | BC Transit continually engages in marketing outreach to demonstrate the advantages of transit, walking and cycling as financially, socially and environmentally wise transportation choices. A key initiative for 2011 is the continuation of the "Transit Future" campaign. | 2009 | No End Date (Continuous) |

| 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 |
|--|-------------------------|--------------------------------------|--|---|------------|--------------------------|
| Other Sustainability Actions | | | | | | |
| Water conservation | | | | | | |
| Establish a water conservation strategy which includes a plan or policy for replacing water fixtures with efficient models | In Development | | 8 sink faucets replaced in 2011 with low flow versions. | Continuing program of faucet replacements, toilet replacements and urinal replacements. Low flow showerheads installed. | 2011 | 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 | | | The business case for this work is being investigated by BC Transit Facilities Division. | 2011 | No End Date (Continuous) |
| Indoor air quality | | | | | | |
| Enforce a scent-free policy (e.g., no strong perfumes, deodorants, etc.) | Ongoing/In Progress | | BC Transit continued to enforce a scent-free policy in 2011. | BC Transit will continue to enforce a scent-free policy. | 2000 | No End Date (Continuous) |
| Commuting to and from home | | | | | | |
| Encourage commuting by foot, bicycle, carpool or public transit | Ongoing/In Progress | | BC Transit encourages transit staff to use greener types of travel through employee engagement strategies (including commuting surveys) and education. All BC Transit employees have bus passes. | Where feasible encourage transit staff to use greener types of travel by implementing transportation demand management policies and incentives, and by continuing to include showers, lockers, and bicycle parking areas in plans for new transit operations centres. | 2009 | No End Date (Continuous) |
| Provide shower or locker facilities for staff/students who commute by foot or by bicycle | Ongoing/In Progress | | BC Transit has shower and locker room facilities at its main facilities. | Where feasible encourage transit staff to use greener types of travel by implementing transportation demand management policies and incentives, and by continuing to include showers, lockers, and bicycle parking areas in plans for new transit operations centres. | 2009 | No End Date (Continuous) |
| Provide secure bicycle storage | Ongoing/In Progress | | BC Transit has secure bicycle storage at its main facilities. | Where feasible encourage transit staff to use greener types of travel by implementing transportation demand management policies and incentives, and by continuing to include showers, lockers, and bicycle parking areas in plans for new transit operations centres. | 2009 | No End Date (Continuous) |
| Modify parking fees or parking availability for staff/students | In Development | | BC Transit is currently reviewing parking in general at all of its facilities. | BC Transit intends to implement a transportation demand management plan that will result in a priority based restriction on the number of cars that can be parked at its head office location. | 2010 | No End Date (Continuous) |



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