



PROVINCIAL CAPITAL COMMISSION

Provincial Capital Commission - 2010 Carbon Neutral Action Report

Executive Summary

The PCC is committed to achieving its part in the Shareholder's Climate Action goals, and has included targets for reduction in greenhouse gas emissions (GHG's) and electricity consumption in its Service Plan so that PCC performance is publicly reported and transparent.

Energy use is primarily generated from the PCC property inventory. This inventory, located within the Capital region, includes commercial revenue properties occupied by tenants. It also includes parks and green space. Commercial revenue properties include heritage buildings, Inner Harbour ferry terminals, and development sites currently utilized as parking lots and special events venues. Annual revenues from PCC properties in 2010/11 were \$3 million, used to fund PCC property maintenance, province-wide outreach programs and business operations on a self-sustaining basis. Common operating expenses, including utilities are incurred by the PCC at its commercial properties and recovered from tenants under lease agreements. The PCC owns the building that is its corporate head office at 613 Pandora Avenue, Victoria, as well as St. Ann's Academy National Historic site that is leased to the Province for use as government office space.

Energy consumption is primarily driven by tenant operations at the Crystal Garden, Visitor Information Centre, and the CPR Steamship Terminal building. For the base reporting year of 2007, the PCC's CO₂ emissions were approximately 312 tonnes from natural gas and heating oil, and 14 tonnes from electricity, for a total of 326 tonnes.

2010 Greenhouse Gas Emissions

Sources which contribute to PCC Greenhouse Gas Emissions include emissions from stationary fuel combustion and electricity at PCC buildings (177.32 tonnes of CO₂e) and mobile fuel combustion of the PCC's vehicle (1.2 tonnes of CO₂e). The 2010 total of 178.52 tonnes, compared to the 2007 year, represents a total decline of 45% in energy consumption.

The PCC has estimated that emissions from paper supplies do not comprise more than 0.01% of the PCC'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 organization total greenhouse gas emissions profile.

Offsets Applied to Become Carbon Neutral in 2010

In March 2011, the PCC purchased carbon offsets to achieve carbon neutrality for 2010. The payment of \$4,463 to Pacific Carbon Trust was based on the 2010 PCC total of 178.52 tonnes of CO₂e.

Specific Actions Taken to Reduce Greenhouse Gas Emissions in 2010

Since the announcement of the Climate Action Plan in 2007, the PCC and its tenants have implemented some significant infrastructure and technological investments to reduce CO2 emissions and build long-term sustainability into business operations. Highlights include:

- **Crystal Garden** – significant reductions in CO2 emissions in natural gas consumption for heating the glass-roofed heritage building have been achieved through replacement of the primary heating system from hot water radiant coils to modern heat pump technology and energy management system in space occupied by the Victoria Conference Centre (VCC) and the Old Spaghetti Factory restaurant. Other energy conservation measures include upgrades to lighting fixtures and energy use conservation measures. Examples include disabling the walk-in chillers at the VCC not in use.
- **CPR Steamship Terminal** – seismic upgrade and rehabilitation project to be completed in 2011 is based on a \$3 million contribution from the Province of BC and Government of Canada under the Infrastructure Stimulus Fund. The scope of work includes mechanical and electrical upgrades which will achieve energy efficiencies. This includes replacement of antiquated electric baseboard heating with modern energy efficient natural gas condensing boiler central heating system, and installation of energy efficient light fixtures. The new central heating system will facilitate the future opportunity to implement a geo thermal exchange system, subject to a positive business case and funding availability.
- **Corporate operations** - The PCC has enhanced procurement practices to incorporate environmental responsibility into the way products, services and business relationships are managed. PCC employees continue to demonstrate leadership and initiative in seeking innovative and creative ways to make environmental responsibility part of office culture.

In addition to the above highlights, other actions implemented to date include:

- Implemented government's Smartool to establish emission reduction targets, trace GHG reduction progress and calculate offset purchase requirements.
- Education and orientation of the PCC Board, staff and tenants on government's climate action plans, goals and targets.
- Changed to 30% post-consumer recycled fibre content in office paper.
- Strong executive leadership and support of "paperless" initiatives.
- Implementation of energy efficient office equipment and energy use practices at corporate head office.

Plans to Continue Reducing Greenhouse Gas Emissions 2011 – 2013

The PCC will continue to identify and implement opportunities to reduce electricity use from its property holdings to achieve government's goal of a 5% reduction against base consumption. Key strategies planned for 2011 include:

- 613 Pandora Avenue – update the lighting system in the building which currently consists of fluorescent luminaries with T12 technology lamps and electromagnetic ballasts. Upgrading to the current T8 energy saving technology lamps, and high efficiency electronic ballasts, will provide significant lighting system efficiency improvements over the existing lamp ballast combinations. These newer lamp technologies also have the added benefit of improved light maintenance factors, which result in better illumination levels over the life of the lamp and lighting system.
- Disable 613 Pandora head office boiler systems during the summer season.
- 812 Wharf Street (upper floor) - replace the existing thermostat with a wall mounted programmable thermostat to control these heaters to a lower set point temperature during unoccupied periods. This will reduce excessive heating at night.
- Implement Energy Management Awareness Program - Ongoing energy management should be part of a building maintenance program. For example, tenants and staff should be encouraged to shut off lights, computer monitors and copiers when not in use. Education on the costs of running plug load equipment and the environmental benefits of reducing energy use may encourage participation.

The PCC will implement identified opportunities on a business case approach, and will seek financial support from tenants where appropriate linked to cost/ benefit analysis. In addition to the above strategies, over the next three years the PCC will pursue the following actions:

- Increase employee awareness and accountability for environmental objectives.
- Continue to monitor actual GHG emissions and electrical consumption by property to ensure plans to achieve annual forecast are being met.
- Continue to identify and adopt best practices in energy management from other property management organizations with the Capital, the Province and other jurisdictions.
- Refine outreach programs delivery to incorporate climate action plan goals.
- Continue replacement of information technology and office equipment with energy efficient models.

Parks and greenspace

Although the PCC holds an extensive inventory of parks and green space, the carbon credits generated by these properties are not permitted to be counted towards carbon credits. The most effective business case for achieving carbon neutrality will be for the PCC to purchase credits through the Pacific Carbon Trust.

Conclusion

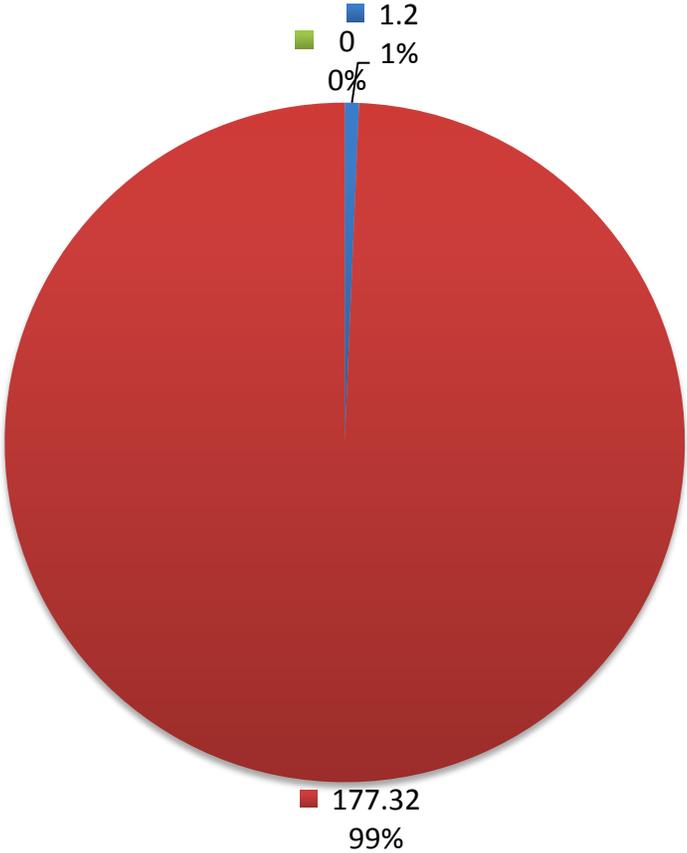
The Provincial Capital Commission is proud of its accomplishments to date and the transparency in public reporting of results in achieving net energy use reductions from its diverse property inventory that includes tenant occupied heritage buildings. The PCC will continue focusing on new strategies in 2011 that will further reduce CO2 emissions.

In the coming years, the PCC will continue to build on its accomplishments and invest in new infrastructure in partnership with tenants that will support the PCC's commitment to sustainability.

A handwritten signature in cursive script that reads "Ray Parks".

Ray Parks
Chief Executive Officer

Provincial Capital Commission
Greenhouse Gas Emissions by Source
for the 2010 Calendar Year (tCO₂e*)



Total Emissions: 178.52

- Mobile Fuel Combustion (Fleet and other mobile equipment)
- Stationary Fuel Combustion and Electricity (Buildings)
- Supplies (Paper)

Offsets Applied to Become Carbon Neutral in 2010

Total offsets purchased: **178.52**. Total offset investment: **\$4,463.00**. Emissions which do not require offsets: **0** **

*Tonnes of carbon dioxide equivalent (tCO₂e) is a standard unit of measure in which all types of greenhouse gases are expressed based on their global warming potential relative to carbon dioxide.

** Under the *Carbon Neutral Government Regulation of the Greenhouse Gas Reduction Targets Act*, all emissions from the sources listed above must be reported. As outlined in the regulation, some emissions do not require offsets.

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Actions Towards Carbon Neutrality

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

Action	Status (as of 12/31/10)	Performance to Date (as of 12/31/10)		Steps Taken in 2010	Steps Planned for 2011 -2013	Start Year	End Year
Mobile Fuel Combustion (Fleet and other mobile equipment)							
This section is either not applicable, not yet evaluated, or was completed before 2010							
Stationary Fuel Combustion, Electricity and Fugitive Emissions (Buildings)							
Planning/management							
Enrol in a building energy benchmarking program (e.g., GREEN UP)	In Development				Plan to enrol in Green Up Program in 2011 to gain performance standards, resources and to assist PCC in measuring and comparing on-going performance of building portfolio.	2011	2012
Reduce office space (square meters) per employee	Completed in 2010	18	is the current average rentable square meters per employee	Plan to fully utilize common space area at PCC headquarters complete.		2010	2010
Owned buildings							
Register for performance labelling/certification for operations and maintenance of owned buildings (e.g., LEED EB:O&M)	In Development			PCC highlighted buildings eligible for certifications.	PCC to register building operations and maintenance that may be eligible for certifications.	2010	2011
Register for performance labelling/certification for commercial interiors of owned buildings (e.g., LEED CI)	In Development			PCC highlighted commercial interior buildings eligible for certifications.	PCC to register commercial interior buildings that may be eligible for certifications.	2010	2011
Complete energy retrofits on existing, owned buildings	Ongoing/In Progress	40	% of owned buildings have undergone energy retrofits since start year indicated	In 2010 the CP Steamship Terminal Building seismic and rehabilitation construction project began. The 87-year-old heritage building is being brought up to current seismic standards. Retrofits also included upgrades to mechanical systems, lighting systems, control systems and insulation.	Energy audits have been conducted for all PCC buildings including the Belleville Port Facility, Tourist Information Centre and 613 Pandora Avenue. Energy retrofit options for each building have been provided. The remaining PCC buildings will be retrofit over the next two years.	2005	2012
Retrofitting owned buildings							
Upgrade mechanical systems (heating, cooling, ventilation) during retrofits	Ongoing/In Progress	40	% of retrofits since start year indicated had heating, cooling, and ventilation systems upgrades	Crystal Garden HVAC system upgraded during building renovations between 2005 to 2008. CP Terminal Building mechanical system upgraded in 2010.	Determine possible HVAC retrofits in PCC owned buildings.	2005	2011
Upgrade lighting systems during retrofits	Ongoing/In Progress	90	% of retrofits since start year indicated had lighting systems upgrades	Lighting retrofits for the CP Steamship Terminal Building made as part of the seismic work being completed on the building.	Determine further lighting upgrades at PCC owned buildings.	2010	2011
Upgrade/adjust control systems during retrofits	Ongoing/In Progress	40	% of retrofits since start year indicated had control system upgrades or adjustments	Crystal Garden and CP Steamship Terminal Building updated during building renovations.	Review control systems in all PCC buildings and determine schedule for upgrades or adjustments.	2010	2011
Improve building insulation (including windows) during retrofits	Ongoing/In Progress	40	% of retrofits since start year indicated had insulation improvements	Crystal Garden and CP Steamship Terminal Building insulation improvements made during building renovations.	Insulation improvements to remaining PCC buildings to be scheduled over next five years.	2007	No End Date (Continuous)
IT power management							

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Action	Status (as of 12/31/10)	Performance to Date (as of 12/31/10)		Steps Taken in 2010	Steps Planned for 2011 -2013	Start Year	End Year
Install power management software which shuts down computers outside of regular business hours	In Development				PCC to install power management software on all computers in 2011.	2011	2011
Implement server virtualization	In Development			PCC researched implementation of virtual server.	Virtual server to be implemented in 2011.	2010	2011
Appliances and electronic devices							
Replace refrigerators with ENERGY STAR models or source ENERGY STAR models for future purchases	In Development				Energy Star reffridgerator to be installed at headquarters in 2011.	2010	2011
Behaviour change program							
Ask staff to unplug electrical equipment or switch off power bars when not in use	Ongoing/In Progress			Staff encouraged to turn off power bars and unplug equipment when not in use.	Continue to encourage staff to turn off power bars and unplug equipment when not in use.	2007	No End Date (Continuous)
Ask staff to close blinds at end of work day to reduce heating/cooling demands	Ongoing/In Progress			Staff encouraged to close blinds at the end of work days.	Continue to encourage staff to close blinds at the end of work days.	2007	No End Date (Continuous)
Encourage staff to use air dry setting on dishwashers	Ongoing/In Progress			Staff encouraged to use dry setting on dishwasher.	Continue to encourage staff to use dry setting on dishwasher.	2007	No End Date (Continuous)
Encourage use of stairs instead of elevators	Ongoing/In Progress			PCC headquaters does not have an elevator.	Continue to use stairs.	Started before 1995	No End Date (Continuous)
Provide reminders for turning off lights (e.g., signs, stickers, messages)	Ongoing/In Progress			Reminders sent to staff on an on-going basis to ensure lights are turned off when office space not occupied.	Continue to post signs over light switches.	2009	No End Date (Continuous)
Promote hot water conservation	Ongoing/In Progress			Operate automatic dishwasher only when it is fully loaded.	PCC to install instant water heater on sinks to avoid running water until it heats up. Ensure all water pipes are properly insulated.	2010	2011
Supplies (Paper)							
Paper Type							
Purchase 30% post-consumer recycled paper	Ongoing/In Progress	100	% of total paper purchased contains 30% recycled content	Recycled paper purchases at PCC headquarters for everyday use.	Continue to purchase 30% recycled paper.	2009	No End Date (Continuous)
Electronic media in place of paper							
Post materials online that were previously printed	Ongoing/In Progress			All PCC coporate reports including the PCC newsletter is posted online at www.bcpcc.com	Continue to post materials on PCC website.	2010	2010
Switch to an electronic payroll notification system in place of paper pay stubs	In Development			75% of staff have switched to electronic payroll notification.	Encourage remainder of PCC staff to shift to electronic payroll notification system.	2010	2010
Behaviour change program							
Encourage staff to hold paperless meetings or presentations (i.e., no handouts)	Ongoing/In Progress			PCC staff meetings have been paperless since 2007.	Continue paperless PCC staff meetings.	2007	No End Date (Continuous)

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Actions to Reduce Provincial Emissions and Improve Sustainability

The actions listed below contribute to a reduction in greenhouse gas emissions from sources that fall outside of the reporting requirements defined in the carbon neutral government regulation of the *Greenhouse Gas Reduction Targets Act*. Public sector organizations can optionally use this section to report on actions that will help British Columbia meet its provincial greenhouse gas reduction targets, engage the public, and improve environmental sustainability across all aspects of their organization.

Action	Status (as of 12/31/10)	Performance to Date (as of 12/31/10)		Steps Taken in 2010	Steps Planned for 2011 -2013	Start Year	End Year
Business Travel							
Virtual meeting technology							
Install web-conferencing software (e.g., Live Meeting, Elluminate, etc.)	Ongoing/In Progress	75	% of computers have web-conferencing software installed	75% of staff have installed web-conferencing software.	Install web-conferencing software on remaining PC's.	2009	2011
Behaviour change program							
Train staff in video-conferencing or provide technical support for video-conferencing set-up	Ongoing/In Progress	50	% of staff are trained in video-conferencing or have access to technical support	50% of staff trained in video-conferencing.	Provide video-conferencing training to remainder of staff.	2010	2011
Encourage staff to consider virtual attendance/presentation at events where possible	Ongoing/In Progress			All PCC staff encouraged to use virtual attendance such as live meeting whenever possible.	Continue to encourage virtual attendance.	2009	No End Date (Continuous)
Encourage carpooling to meetings	Ongoing/In Progress			All PCC staff encouraged to carpool to meetings whenever possible.	Continue to encourage staff to bicycle, bus or walk to meetings when possible.	2009	No End Date (Continuous)
Encourage alternative travel to meetings (e.g., bicycles, public transit, walking)	Ongoing/In Progress			All PCC staff encouraged to bicycle, bus or walk to meetings whenever possible.	Continue to encourage staff to bicycle, bus or walk to meetings when possible.	2009	No End Date (Continuous)
Education, Awareness, and Engagement							
Staff Professional Development							
Support green professional development (e.g., workshops, conferences, training)	Ongoing/In Progress			The PCC has supported green professional development conferences and training sessions throughout the year.	Continue to support green professional development and training sessions.	2009	No End Date (Continuous)
Staff awareness/education							
Provide education to staff about the science of climate change	Ongoing/In Progress			Several PCC staff have participated in workshops focused on the science of climate change.	Provide staff information regarding the science of climate change at staff meetings.	2009	No End Date (Continuous)
Provide education to staff about the conservation of water, energy, and raw materials	In Development				Provide staff information regarding the conservation of water, energy and raw materials and staff meetings.	2009	No End Date (Continuous)
Other Sustainability Actions							
Water conservation							
Establish a water conservation strategy which includes a plan or policy for replacing water fixtures with efficient models	Ongoing/In Progress			Efficient water fixtures installed at Crystal Garden, Tourist Information Centre and CP Steamship Terminal building.	Continue to outfit 613 Pandora with efficient water fixtures.	2008	2011
Introduce a stormwater management landscape strategy (e.g., vegetated roofs, permeable paving, rain gardens, bioswales)	Ongoing/In Progress			Strategy implemented at St. Ann's Academy and CP Steamship Terminal building.	Continue to implement stormwater management strategies at PCC properties.	2009	2011
Procurement (non-paper supplies)							
Incorporate minimum recycled content standards into procurement policy for consumable, non-paper supplies (e.g., writing instruments, binders, toner cartridges, etc.)	In Development				Include minimum recycled content standards into the procurement policy for consumable, non-paper supplies.	2011	2011

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Action	Status (as of 12/31/10)	Performance to Date (as of 12/31/10)	Steps Taken in 2010	Steps Planned for 2011 -2013	Start Year	End Year
Establish green standards for goods that are replaced infrequently and/or may require capital funds to purchase (e.g., office furniture, carpeting, etc.)	In Development			Draft policy to establish green standards for goods that are replaced infrequently and may require capital funds to purchase.	2010	2011
Implement sustainable purchasing program for cleaning products, disposable paper products and trash bags	In Development			Develop sustainable purchasing program for cleaning products, disposable paper products and trash bags.	2010	2011
Indoor air quality						
Enforce a scent-free policy (e.g., no strong perfumes, deodorants, etc.)	Ongoing/In Progress		Scent-free policy enforced at PCC headquarters and St, Ann's Academy.	Continue to enforce policy.	2010	No End Date (Continuous)
Commuting to and from home						
Encourage commuting by foot, bicycle, carpool or public transit	Ongoing/In Progress		Encourage staff to communte by foot, bike carpool and bus.	Continue to encourage staff to communte by foot, bike, carpool and bus.	2007	No End Date (Continuous)