



PROVINCIAL CAPITAL COMMISSION

## **Provincial Capital Commission 2012 Carbon Neutral Action Report**

### **Executive Summary**

The Provincial Capital Commission (PCC) is a small service Crown Corporation with seven FTE's, a single vehicle and six significant heritage designated buildings surrounding Victoria's inner harbour. Our goal, in step with the BC Government's Climate Action Plan, is to work towards a reduction in greenhouse gas emissions (GHG's) and electricity consumption. This report was prepared in accordance with the *Greenhouse Gas Reduction Targets Act* adopted in November 2007. It reflects our continued and ongoing commitment to acting responsibly on the environment and climate change action.

Energy use is predominantly generated from the PCC's commercially tenanted heritage buildings and is highly sensitive to tenant business requirements and climate fluctuations. This inventory, located within the Capital region, includes the Crystal Garden, Visitors Information Centre at 812 Wharf Street, and the CPR Steamship Terminal. Commercial revenue properties also include Inner Harbour ferry terminals and development sites currently utilized as parking lots and special events venues. Annual revenues from PCC properties in 2012/13, forecasted at \$2.05 million, are used to fund province-wide outreach programs, PCC property maintenance, and business operations on a self-sustaining basis. Common operating expenses including utilities incurred by the PCC at its commercial properties are in part or wholly recovered from tenants under lease agreements. The PCC also owns the building that is its corporate head office at 613 Pandora Avenue, as well as St. Ann's Academy National Historic site that is leased to the Province for use as government office space.

The majority of PCC buildings have energy efficiency challenges given their age and design characteristics as well as renovation/refurbishment restrictions due to heritage designations. The PCC has made significant investments in many of these buildings for both seismic and energy efficiency rationale however, substantial limitations, notably heritage protected design characteristics like the glass roofed Crystal Garden, hinder the organizations ability to reach complete energy efficiency. For the base reporting year of 2007, the PCC's CO<sub>2</sub> emissions were approximately 312 tonnes from natural gas and heating oil, and 14 tonnes from electricity, for a total of 326 tonnes.

### **2012 Greenhouse Gas Emissions**

As required by the *Greenhouse Gas Reduction Targets Act*, the PCC's reports total GHG emissions for the 2012 Calendar Year from all sources covered by the Act. Due to a lack of energy data SSBC and the CAS have estimated 2012 PCC energy usage based on 2011 consumption. The total estimated usage is 351 tCO<sub>2</sub>e. The 2012 estimate of 351 tonnes, compared to the 2007 baseline year, represents an increase of 7% in energy consumption. Due to the fact that this is an estimate produced outside the organization, the PCC is unable to comment as to the accuracy of this figure.

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 2012**

The PCC will be purchasing carbon offsets to achieve carbon neutrality for 2012 based on 2011 consumption levels estimate as produced by SSBC and the CAS. Payment will be made to the Pacific Carbon Trust based on 351 tonnes of CO<sub>2</sub>e.

## **Emissions Reduction Activities:**

### **Specific Actions Taken to Reduce Greenhouse Gas Emissions in 2012**

Since the announcement of the Climate Action Plan in 2007, the PCC and its tenants have implemented significant infrastructure and technological investments to reduce CO<sub>2</sub> emissions while building long-term sustainability into business operations. Highlights include:

- With the support of BC Hydro Power Smart program, the PCC updated the lighting systems at 613 Pandora Avenue, Victoria Belleville Terminal, and 812 Wharf Street, which currently consist of fluorescent luminaries with T12 technology lamps and electromagnetic ballasts. Based on energy audits, upgrading to the current T8 and T5 energy saving technology lamps and high efficiency electronic ballasts will provide significant (estimated at 61%, 59%, and 43% respectively) 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.
- The CPR Steamship Terminal building's seismic upgrade was completed in 2012. During this upgrade, high efficiency gas boilers were installed significantly improving the energy efficiency of the heritage building.

### **Plans to Continue Reducing Greenhouse Gas Emissions 2013 – 2015**

The PCC will continue to identify and implement opportunities to reduce energy use from its property holdings to meet the next goal. Key strategies planned for 2013 include:

- Working proactively with Shared Services BC's Climate Action Group to ensure emissions reduction targets for properties are met as we continue to transition service provisions, lease management, and property management services.
- Continue to identify ways in which the PCC can improve energy efficiency to reduce energy consumption in all aspects of PCC business.

## **Parks and greenspace**

Although the PCC holds an extensive inventory of parks, green space and water lots, 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 2013 that will further reduce CO<sub>2</sub> emissions. In the coming years, the PCC will build on its accomplishments and invest in new infrastructure in partnership with tenants that will support the PCC's commitment to sustainability in the Capital region.

## Provincial Capital Commission - 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
<b>Mobile Fuel Combustion (Fleet and other)</b>					
<b>Behaviour change program</b>					
Introduce anti-idling policy and/or raise anti-idling awareness for fleet drivers (e.g., signs, stickers, messages)	Completed (in Reporting Year)	Anti-idling messaging and awareness raised with the staff member who drives the PCC's one vehicle.		2012	2012
Promote alternatives to fleet vehicle travel where possible (e.g., bicycles, public transit, walking)	Completed (in Previous Year)				No End Date (Continuous)
<b>Vehicle fuel efficiency</b>					
Replace vehicles with more fuel-efficient models	Completed (in Reporting Year)	Investigation into replacing PCC single vehicle completed. Resulted in a decision not to replace current vehicle.		2011	2012
Perform regular fleet maintenance to improve fuel-efficiency	Completed (in Previous Year)				No End Date (Continuous)
<b>Stationary Fuel Combustion, Electricity</b>					
<b>Behaviour change program</b>					
Help staff reduce personal energy use through ""workstation tune-ups""	Completed (in Reporting Year)	All staff member completed the training session provided.		2012	2012
Ask staff to unplug electrical equipment or switch off power bars when not in use	Ongoing/In Progress	Staff are encouraged to unplug electrical equipment/switch off power bars when not in use.	Continue to encourage staff to unplug electrical equipment/switch off power bars when not in use.	2008	No End Date (Continuous)
Ask staff to unplug electrical equipment or switch off power bars when not in use	Ongoing/In Progress	Staff are encouraged to unplug electrical equipment/switch off power bars when not in use.	Continue to encourage staff to unplug electrical equipment/switch off power bars when not in use.	2008	No End Date (Continuous)
Encourage staff to use air dry setting on dishwashers	Completed (in Previous Year)				No End Date (Continuous)
Encourage use of stairs instead of elevators	Completed (in Previous Year)				No End Date (Continuous)
Provide reminders for turning off lights (e.g., signs, stickers, messages)	Completed (in Previous Year)				No End Date (Continuous)
Promote hot water conservation	Completed (in Previous Year)				No End Date (Continuous)
<b>IT power management</b>					
Install power management software which shuts down computers outside of regular business hours	Not Yet Evaluated				No End Date (Continuous)
Apply auto-sleep settings on computer monitors and CPUs	Completed (in Previous Year)				No End Date (Continuous)
Apply auto-sleep settings on printers, fax machines, and/or multi-function devices	Completed (in Previous Year)				No End Date (Continuous)
Replace computers with ENERGY STAR models during regular computer upgrades	Completed (in Reporting Year)	All computers at PCC headquarters were upgraded to energy star models.		2012	2012
<b>Leased buildings</b>					
Develop a green lease policy that requires green features to conserve energy be included in all lease negotiations	Ongoing/In Progress	The PCC works proactively with SSBC to ensure that all leases adhere to and go beyond government green lease policies.	continue to work proactively with SSBC to ensure that all leases adhere to and go beyond government green lease policies.	2011	No End Date (Continuous)
<b>Owned buildings</b>					
Establish energy performance baseline for owned buildings	Ongoing/In Progress	Energy audits conducted in all PCC owned buildings completed annually.	Continue to conduct annual energy audits.	2010	No End Date (Continuous)
Register for performance labelling/certification for operations and maintenance of owned buildings (e.g., LEED EB:O&M)	Not Yet Evaluated				No End Date (Continuous)

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Action	Status	Steps Taken	Steps Planned	Start Year	End Year
Register for performance labelling/certification for commercial interiors of owned buildings (e.g., LEED CI)	Not Yet Evaluated				No End Date (Continuous)
Perform energy retrofits on existing, owned buildings	Ongoing/In Progress	With the support of BC Hydro Power Smart program, the PCC updated the lighting systems at 613 Pandora Avenue, Victoria Belleville Terminal, and 812 Wharf Street, which currently consist of fluorescent luminaries with T12 technology lamps and electromagnetic ballasts. Based on energy audits, upgrading to the current T8 and T5 energy saving technology lamps and high efficiency electronic ballasts will provide significant (estimated at 61%, 59%, and 43% respectively) 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.	continue to identify places where the PCC can perform energy retrofits in owned buildings.	2008	No End Date (Continuous)
<b>Planning/management</b>					
Install a real time metering system (e.g. Pulse, Reliable Controls, Houle Controls)	Ongoing/In Progress	The feasibility of installing DDC in all our buildings was researched in 2011/12 following the successful installation of the system on one of our owned buildings in 2010.	Install system at CPR Steamship Terminal Building in 2013. Continue to install monitoring systems where feasible/necessary.	2010	No End Date (Continuous)
<b>Retrofit details for owned buildings</b>					
Upgrade mechanical systems (heating, cooling, ventilation) during retrofits	Ongoing/In Progress	HVAC systems installed in one major owned buildings pre-2012 during renovations.	When retrofits are planned for other owned buildings, upgrades to mechanical systems will take place.	2008	No End Date (Continuous)
Upgrade lighting systems during retrofits	Ongoing/In Progress	With the support of BC Hydro Power Smart program, the PCC updated the lighting systems at 613 Pandora Avenue, Victoria Belleville Terminal, and 812 Wharf Street, which currently consist of fluorescent luminaries with T12 technology lamps and electromagnetic ballasts. Based on energy audits, upgrading to the current T8 and T5 energy saving technology lamps and high efficiency electronic ballasts will provide significant (estimated at 61%, 59%, and 43% respectively) 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.	Upgrade lighting systems when retrofits occur.	2008	No End Date (Continuous)
Upgrade/adjust control systems during retrofits	Not Yet Evaluated				No End Date (Continuous)
Improve building insulation (including windows) during retrofits	Ongoing/In Progress	CPR Steamship Terminal Building insulation upgraded with the seismic upgrade.	Continued upgrades to the CPR Steamship Terminal Building as new tenant retrofit spaces.  Continue to improve building insulation when retrofits occur.	2008	No End Date (Continuous)
<b>Supplies (Paper)</b>					
<b>Behaviour change program</b>					
Encourage staff to hold paperless meetings or presentations (i.e., no handouts)	Completed (in Previous Year)				No End Date (Continuous)
<b>Electronic media in place of paper</b>					
Install collaborative software for electronic editing (e.g. SharePoint,	Completed (in	The PCC employs a common drive for all document sharing and		2012	2012

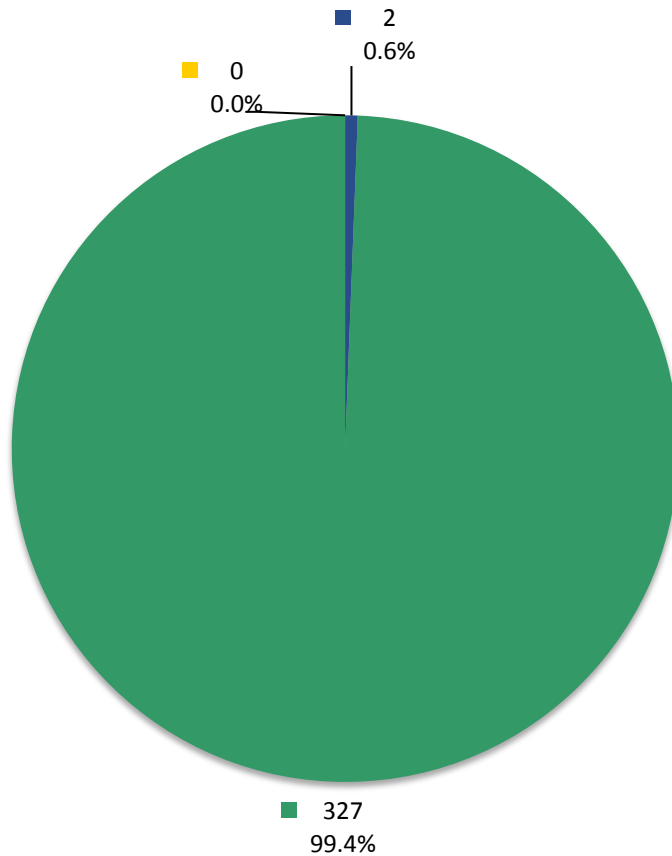
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Action	Status	Steps Taken	Steps Planned	Start Year	End Year
Groove, etc.)	Reporting Year)	electronic editing. Given this common drive, software such as sharepoint is not required given the size of our organization.			
Use electronic document library for filing common documents	Completed (in Previous Year)				No End Date (Continuous)
Switch to an electronic payroll notification system in place of paper pay stubs	Completed (in Previous Year)				No End Date (Continuous)
<b>Paper Type</b>					
Purchase 30% post-consumer recycled paper	Completed (in Previous Year)				No End Date (Continuous)
Purchase 100% post-consumer recycled paper	Completed (in Reporting Year)	Switched all desktop printing paper to 100% post-consumer recycled paper.		2012	2012
<b>Printer/document settings</b>					
Switch networked printers and photocopiers to automatic double-sided	Completed (in Reporting Year)	Switching networked printers and photocopiers to automatic double-sided printing was discussed with all staff. It was determined that this would not be appropriate given operational requirements. This may be reviewed in the future.		2012	2012

**Provincial Capital Commission  
Greenhouse Gas Emissions by Source  
for the 2012 Calendar Year (tCO<sub>2</sub>e\*)**



**Total Emissions: 329**

- Mobile Fuel Combustion (Fleet and other mobile equipment)
- Stationary Fuel Combustion (Building Heating and Generators) and Electricity
- Supplies (Paper)

**Offsets Applied to Become Carbon Neutral in 2012 (Generated May 27, 2013 12:16 PM)**

Total offsets required: **328**. Total offset investment: **\$8,200**. Emissions which do not require offsets: **1** \*\*

\*Tonnes of carbon dioxide equivalent (tCO<sub>2</sub>e) 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.