

Carbon Neutral Action Report BC Pavilion Corporation

Executive Summary

BC Pavilion Corporation (PavCo), operating the Vancouver Convention Centre and BC Place, is undertaking an aggressive program to achieve the carbon neutrality mandate set out by the BC Government.

Since the mandate to Crown organizations was announced, PavCo has worked with its Divisions to communicate a philosophy of corporate sustainability which has resulted in positive change. During the 2008 calendar year PavCo engaged management and staff in educational opportunities on how to reduce carbon emissions; developed a system to collect and track carbon emissions; retained outside consultants to identify areas where emissions can be further reduced; worked with management and employees to seek ideas and determine what is economically viable for our operations; implemented as many opportunities as possible to reduce emissions.

In addition, the Vancouver Convention Centre Expansion (VCC West), which opened its doors on April 3, 2009 was constructed to LEED Gold standards with a 6-acre living roof housing indigenous plants and recovering rainwater for irrigation; seawater heating and cooling and on-site water management; a marine habitat was built into the foundation of the building; and, natural lighting and ventilation systems. VCC West has also been designated as a PowerSmart Convention Centre by BC Hydro.

Objectives

- **Increasing employee engagement**

PavCo strongly believes that engaging employees is key to the effective implementation of the carbon neutral goals. Through this engagement, the Vancouver Convention Centre has formed the Environmental Committee which is made up of employees from various departments who collaborate on sustainability initiatives that can be practiced at the organizational level and offered to clients as event products/services.

- **Promoting financial responsibility**

Steps taken in 2008 to conserve energy have already decreased operating costs, and retrofits to the facilities are expected to further reduce energy consumption and costs. Sustainable practices, such as switching to electronic documentation where possible and reducing paper usage, have also contributed to accrued savings. The new VCC West facility, with its state-of-the-art infrastructure and technologies, will promote additional financial responsibility by reducing energy consumption.

- **Operating a sustainable operation**

Sustainability is part of PavCo's organizational philosophy. Clients are already recognizing the Convention Centre for its leadership in sustainable practices and are seeking its expertise in delivering sustainable or carbon neutral events and PavCo hopes to expand this leadership to its BC Place operations.

- **Encouraging social responsibility**

The Convention Centre is recognized throughout the Vancouver community for its socially responsible behaviour. Regularly practiced activities such as donating prepared untouched leftover food to local shelters and missions, sourcing locally grown organic food and ingredients, using fairly traded products, and giving preference to local contractors are only a few of the positive social changes adopted by the Convention Centre. PavCo's goal is to expand this practice to BC Place.

- **Promoting healthy living**

Healthy living is important to PavCo; healthy employees are happier and more productive. To encourage participation in behaviour that contributes to healthy living, PavCo promotes active transportation such as biking to/from work by providing shower facilities and bike lockers.

Part 1: Actions Taken to Reduce Greenhouse Gas Emissions in 2008

Overview

PavCo undertook numerous key actions toward achieving carbon neutrality in calendar year 2008. Key actions included the following:

- facility upgrades to the VCC East building, controlling climate with both programmable HVAC and Energy Management Systems
- reducing waste through a facility-wide recycling program
- encouraging alternative transportation modes for commuting staff
- continued use of 100% bio-degradable garbage bags
- recycling all of scrap metal (i.e., brass, copper (including copper wire), aluminum, iron)
- recycling of all corrugated cardboard, beverage bottles and cans, glass, batteries (including vehicle batteries)
- commitment to purchasing 'green' cleaning products
- recycling of all left over paints and chemicals that are no longer required or that have been left behind from various trade and consumer shows
- use of 30% - 100% recycled paper in the office environment for printers and copiers and collect all discarded paper in all the office areas for recycling

Scheduled renovations and retrofits in 2009 will further support PavCo's objective to become carbon neutral.

1.1 Mobile Fuel Combustion

Action	Action Taken	Outcome/Performance Measure	Notes Clarifying Action Taken
Replaced # of TYPE OF VEHICLE with MORE EFFICIENT VEHICLE/Hybrid	in progress		New vehicles that are considered for purchase will utilize an alternative fuel source instead of an internal combustion engines, budget permitting.
Initiated new fleet maintenance program (could include – changing filters, checking tire pressure, regular check-ups)	in progress		To be implemented in 2009 as part of the preventative maintenance program
Established anti-idling behaviour change program (e.g. signs, stickers, messages)	Complete		Once vehicles have entered the building or loading bay areas, they must shut off their engines. This is continually monitored.
Encouraged use of public transit/active transportation	Complete		PavCo has partnered with TransLink to participate in the Employer Pass Program.
Encouraged alternatives to travel in fleet vehicles – bicycles, scooters, electric carts	Complete		Monthly programs are in place to discuss and encourage health & fitness with speakers coming in to outline and encourage alternative transportation options
Vehicle Fluids	Complete		Vehicle fluids are collected and sent out for recycling to a contractor.

1.2 Stationary fuel combustion and electricity

Action	Action Taken	Outcome/Performance Measure	Notes Clarifying Action Taken
Undertaken workstation tune-ups to help staff understand what they can do to reduce personal energy use	Complete		Budget permitting, LCD monitors have replaced old monitors in administrative offices
Replaced # computers with EnergyStar models	Complete		Policy in place to ensure that all future computer and printing equipment purchases are EnergyStar rated
Asked staff to close blinds daily	Complete		

Encouraged staff to use stairs	Complete	Encouraged as part of the overall wellness program
Turned off lights in unused rooms	Complete	Where possible, areas have been fitted with their own light switches
Installed multi-function devices (and removed stand-alone printers/faxes)	Complete	Budget permitting, newly sourced equipment is multifunctional
Replaced standard bulbs with CFLs	In Progress	Where (and when) possible, lights are changed to CFLs
Installed motion activated lights	In Progress	Installed occupancy sensors in meeting rooms (complete) and most washrooms (in progress)
Undertaken lighting retrofit	In Progress	Lighting upgrades / retrofits are continuing.
Utilized desk-top power management settings on computer	Complete	Computers are set to power save after a period of non-activity
Initiated corporate computer shut-down/wake-up for maintenance	Complete	Policy is in place to ensure computers, monitors, and printers are turned off at night
Unplugged unused equipment	Complete	Staff are encouraged to unplug non-essential equipment
Applied for LEED existing building rating	Complete	The Convention Centre Expansion was built to LEED Certification standards.
Undertaken building energy audit at LOCATION(s)	In Progress	An energy audit of PavCo's facilities (HVAC, building management controls and heat recovery) was completed; recommendations for renovations to be implemented in 2009.
Use natural lighting and ventilation	Complete	The new West facility takes advantage of natural sunlight and ventilation, reducing electricity that would otherwise be needed to power lighting and operate HVAC systems
Adopt seawater heating/cooling system	In Progress	The seawater system will reduce greenhouse gas emissions by using seawater to heat and cool the new West facility
Powered down escalators & Turned off digital signs	Complete	Escalators are turned off at night and at times of low occupancy; advertising signs are turned off using timers
Scheduled HVAC operation	Complete	Temperatures are lowered when exhibition space is vacant. Event space HVAC is scheduled to operate only during specific event hours. Scheduling is programmed weekly by engineering staff to coincide with event hours
Office Space Energy Management System	Complete	Office space is controlled by an Energy Management System, and is operated only during office hours

1.3 Supplies			
Action	Action Taken	Outcome/Performance Measure	Notes Clarifying Action Taken
Committed to use 30% recycled paper	Complete		The Stadium and PavCo's corporate office are currently utilizing 30% recycled paper
Committed to use 100% recycled paper	Complete		The Convention Centre is currently purchasing 100% recycled paper;
Initiated automatic double sided printing	Complete		Where possible, printers and computers have been set to default double-sided printing
Developed document library (online and one printed copy) for large documents	Complete		Publication are posted on the website, along with other electronic, downloadable files
Used collaborative software to edit on-line	Complete		Documents are circulated via email for editing
Re-used non-confidential scrap paper	Complete		Some employees have adopted this initiative to make note pads from scrap paper.
Restructured a process to use less paper	Complete		Some internal documentation, such as financial statements, are now converted to PDF format in lieu of printing.
Encouraged re-use of furniture and equipment	Complete		Furniture and equipment are reused as often as possible; items no longer required are relocated through Crown Asset Disposal.
Encouraged email recipients not to print email	Complete		A statement encouraging people not to print out emails has been appended to employee email signatures
Reduced wastebasket size	Complete		Where appropriate, wastebaskets have been reduced to less than one-half their normal size
Developed supplier employee guidebook that adds provisions to supplier contracts	Complete / In Progress		Environmental provisions are being incorporated into Supplier contracts. The Convention Centre has developed a new supplier employee guidebook, portions of which concentrate on environmental policies and behaviours; the Stadium has informed all suppliers of its commitment to environmental issues.
Toner Cartridges	Complete		High capacity toner is used in printers; when possible, replacement toner is sourced from companies who remanufacture toner cartridges.
Batteries	Complete		Batteries are disposed of through a contracted source.
1.4 Travel			
Action	Action Taken	Outcome/Performance Measure	Notes Clarifying Action Taken
Installed Video Conferencing facilities	Complete		Video conferencing will be used as often as possible.
Initiated Travel Policy	Complete		Travel policy in place for core business
Supported alternative travel (bike/skateboard/walk/transit) for meetings	Complete		Biking to work, including meetings, is encouraged; when possible, car pooling is also

1.5 Employee Engagement			
Action	Action Taken	Outcome/Performance Measure	Notes Clarifying Action Taken
Provided conservation education	Complete		Lunch and Learn sessions with staff and key suppliers have been held and suppliers have been encouraged to measure their own GHG inventories
Developed Green Teams	Complete		The Convention Centre has an established Environmental Committee comprised of team members from various departments
1.6 Sustainability Actions (others)			
Action	Action Taken	Outcome/Performance Measure	Notes Clarifying Action Taken
Ran dishwasher only when full	Complete		
Reduced/replaced bottled water with filtered or refrigerated water	Complete		Where possible, staff eliminated bottled water for planned events and used water coolers and containers instead
Improved recycling measures	Complete		A comprehensive, facility-wide recycling program is in place
Supported composting	Complete		Convention Centre catering staff compost all organic waste
Used re-usable dishes	Complete		Staff are encouraged to use reusable dishes; catering functions at the Convention Centre use re-usable dishes and service ware
Purchased green cleaning products	Complete		Green Seal certified cleaning products are used throughout the facilities
Supported sustainable procurement practices	Complete		Locally grown, organic foods and ingredients and fair trade products are used where possible
Surcharge policy in place for excessive refuse	Complete		The Convention Centre bills clients a fee for large trash items
Purveyed catering supplies in re-usable containers	Complete		A request is made to purveyors to deliver goods in re-usable containers
Purchased Green Power Certificates	Complete		VCC East makes a financial contribution through its landlord towards the purchase of Green Power Certificates to ensure that power generated from renewable sources enters the power grid
Biodegradable Garbage Bags	Complete		

Part 2: Plans to Continue Reducing Greenhouse Gas Emissions 2009 -- 2011

Overview

PavCo will continue its commitment to becoming carbon neutral over the next few years. Key components for achieving this goal are outlined below.

- Undertake a comprehensive energy and lighting system renovations.
- Reduce the bulk handling of loose cardboard at BC Place by converting a yard compactor to a "cardboard only" compactor; reducing hauling at by an estimated 600%.
- Purchasing equipment that will reduce fluorescent bulbs to a fragment of their size and then will be disposed of through a contracted service. This will reduce hauling and disposal costs and the number of trips required to the site by the contractor. This service will be offered to employees
- We will be implementing a preventative maintenance program in 2009 for our rolling fleet so we will be able to keep them in a much better condition which will assist in reducing the amount of fuel they burn, produce less carbon emissions
- establishing a Green Committee at BC Place to promote the awareness of "Going Green" while at work for 2009 and how it can flow over to the home environment.
- Implement a Poster/Awareness program to remind employees about the sensitivities of the environment and the benefits of living a healthy lifestyle.

2.1 Mobile Fuel Combustion

Action	Action Planned	Outcome/Performance Measure	Notes Clarifying Action Taken	Timeframe
Establish travel reduction goals	In Progress		Only critical travel will be encouraged	2009 - 2011
Exhaust Scrubbers	In Progress		Exhaust scrubbers to be added to all vehicles that have an internal combustion engine.	

2.2 Stationary Fuel Combustion (including electricity)

Action	Action Planned	Outcome/Performance Measure	Notes Clarifying Action Taken	Timeframe
Undertaken Monitor turn-off challenge	In Progress			2009
Use air dry setting on dishwashers	In Progress		Will be done when possible	2009 / ongoing
Replace Refrigerators (EnergyStar rated appliance)	In Progress		Newly purchased appliances will be EnergyStar rated	ongoing
Replace other appliances (with EnergyStar rated appliance)	In Progress		Newly purchased appliances will be EnergyStar rated	ongoing
Install motion activated lights	In Progress		Where possible the facilities will be equipped with occupancy sensors and daylight harvesting control systems.	2009
Initiate or complete a building energy retrofit	Planned		VCC East is experiencing ongoing renovations to reduce emissions from stationary fuel combustion	2009 - 2011
Go carbon neutral	Planned	Achieving carbon neutral status will be determined according to the measured greenhouse gases and the offsets required	PavCo's goal is to be carbon neutral by 2010	2010

Shut off washroom ventilation fans	Planned	Occupancy sensors in washrooms to control exhaust fans will be implemented during East renovation	2009 - 2011
Integrate HVAC and Event Booking Management System	Planned	By September 2009 the Convention Centre will have integrated the East facility HVAC systems with the Event Booking Management System to better coordinate heating with occupancy	September 2009
Light fixture upgrades	Planned	An application was submitted in February 2009 to BC Hydro PowerSmart program to reduce electricity through fixture upgrades for the Convention Centre	2009 - 2011

2.3 Supplies

Action	Action Planned	Outcome/Performance Measure	Notes Clarifying Action Taken	Timeframe
Commit to hold paperless meetings	In Progress		When possible paperless meetings will be held	2009 / ongoing
Develop document library (online and one printed copy) for large documents	In Progress		Offering and encouraging electronic, downloadable files will be maintained and may expand to include more documents	2009 - 2011
Purchase cradle to cradle goods	Planned			ongoing
Choose "Green" items from Distribution Centre	Planned			ongoing
Consider expanding provisions in supplier contracts	In Progress		Continue to include environmental provisions in supplier contracts and consider expanding the environmental criteria of suppliers	2009 - 2011

2.4 Travel

Action	Action Planned	Outcome/Performance Measure	Notes Clarifying Action Taken	Timeframe
Purchase carbon offsets for air travel	In Progress		Continue to purchase carbon offsets for all air travel	2009 - 2011

2.5 Employee Engagement

Action	Action Planned	Outcome/Performance Measure	Notes Clarifying Action Taken	Timeframe
Provide climate change education	In Progress			2009
Hold contests/support to generate ideas	Planned		The Environmental Committee will be encouraged to generate more ideas regarding energy reduction strategies	2009 - 2011
Develop Green Teams	Planned		Environmental Committee will be created for BC Place	2009

Support professional development	In Progress	Cleaning staff have been trained, and will continue to be educated, in sustainable cleaning methods	2009 - 2011
Encourage employee bicycle commuting	In Progress	Bicycle commuting will be promoted by expanding bike storage and maintaining showers for employees	2009 - 2011
Facilitate employee car pooling to/from work	In Progress	Rideshare notices will continue to be posted on employee bulletin boards	2009 - 2011

2.6 Sustainability Actions (others)

Action	Action Planned	Outcome/Performance Measure	Notes Clarifying Action Taken	Timeframe
Reduce/replace bottled water with filtered or refrigerated water	Planned		Staff aspire to eliminate bottled water for all planned events , changing to water coolers and containers exclusively	2009 - 2011
Support composting	In Progress		Expansion of the program will be initiated where possible	2009 - 2011
Purchase green cleaning products	In Progress		Green Seal certified cleaning products will be used in the facilities	2009 - 2011
Adopt low-carbon contracting practices	In Progress		When possible, local contractors will still be used in both facilities following expansions and renovations	2009 - 2011
Purchase a pulper for catering functions	Planned		Consideration of purchasing a pulper that would pulp and dry organic food waste before the waste is removed via truck. Organic waste with a reduced mass would result in less greenhouse gases associated with trucking the waste to the composter	2009 - 2010