



PORT METRO
vancouver

Building a Sustainable Gateway – Reducing GHGs moving to Carbon Neutral

Presentation to Greenport Americas 2010

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vancouver 2010

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Presentation Overview

- Introduction
- About Port Metro Vancouver
- Corporate Social Responsibility
- Air Action Program
- Carbon Neutral and Greenhouse Gas Emissions Context
- PMV - Moving Towards a Carbon Neutral Organization
- Questions

Port Metro Vancouver

- Amalgamated January 1 2008
 - Combined the Fraser River Port Authority, North Fraser Port Authority, and Vancouver Port Authority
- Operate and develop combined assets and jurisdictions
- Diverse Board represents government and industry
- Independent, timely decisions based on sustainable strategies
- Focus on long-term growth and competitiveness

The Vancouver Gateway



About the Port

- Largest and busiest port in Canada
- Largest port in North America in total foreign exports
- Handled 102 million tonnes of cargo in 2009
- Trade with more than 160 economies
- 28 major marine cargo terminals and three Class I railroads provide a full range of facilities and services



Business Sectors



Commitment to Sustainability

Our Vision

Port Metro Vancouver will be valued by customers, embraced as a member of the community and recognized globally as a leader in port sustainability.

Our Mission

To lead the efficient and reliable movement of cargo and passengers in a manner that supports Canadian growth and prosperity, now and in the future.



Corporate Social Responsibility

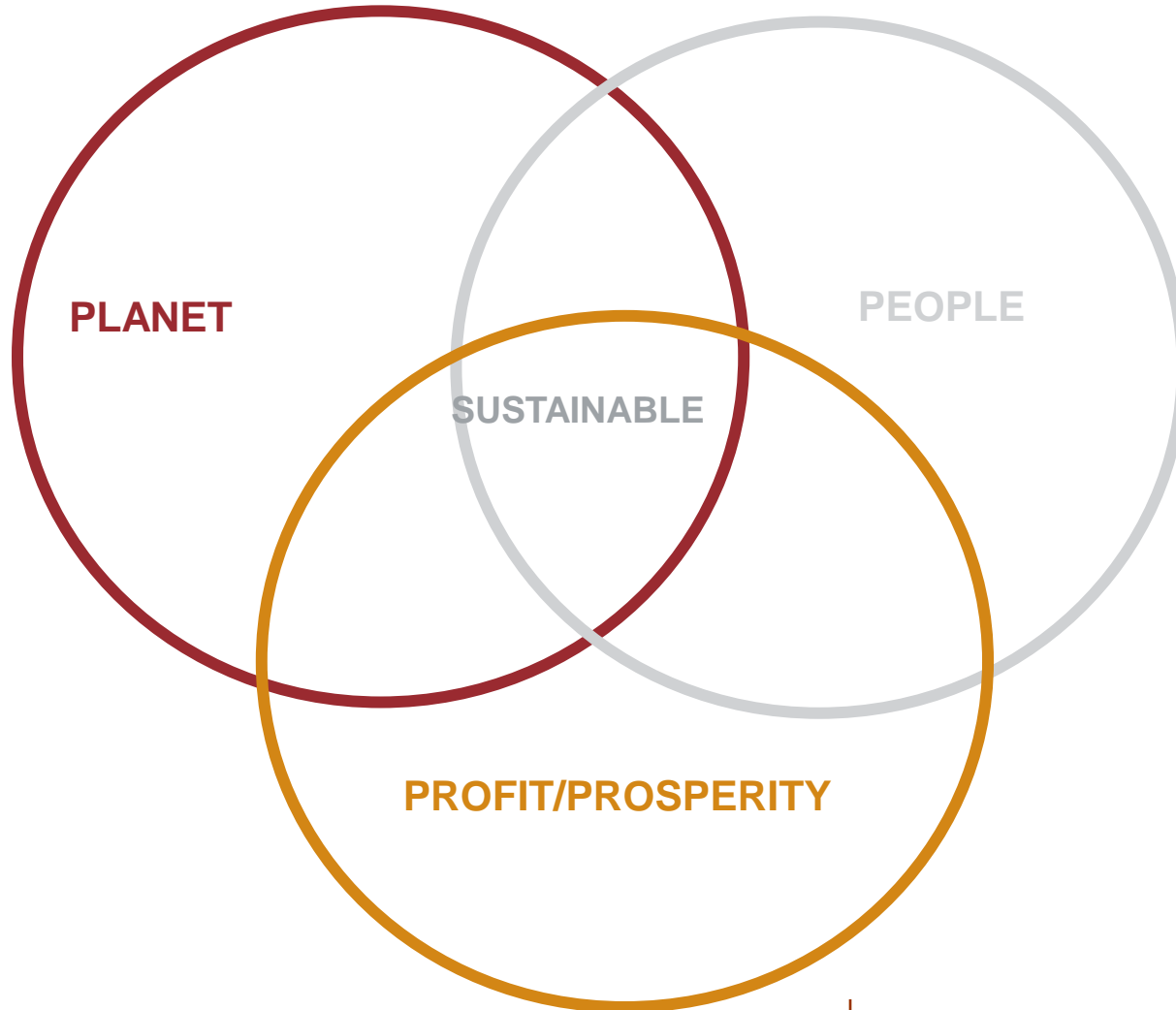


CSR Scorecard

- Employee Commuting
 - **Reduce** number of employees using single occupancy vehicles
- Energy Consumption
 - **Reduce** electrical consumption (in kWh) for Vancouver Office
- Fuel Consumption
 - **Reduce** fuel consumption in fleet vehicles and vessels
- Waste Management
 - **Reduce** solid waste (in kg) for Vancouver Office
- Truck Congestion
 - **Reduce** the number of drayage truck congestion events on city streets.
- Noise pollution
 - **Reduce** the number of noise events that occur above ambient port noise levels
- Air emissions
 - **Increase** number of vessels using low sulphur fuel
(< 0.1%)



Corporate Social Responsibility



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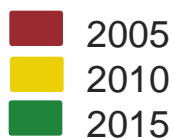
Air Action Program

- Committed to reducing port-related contributions to air quality and climate change and achieving co-benefits wherever possible to ensure both goals are met.
 - **Differentiated Harbour Dues Program** for vessels using cleaner low sulphur fuels.
 - Emission Inventories for Ocean Going Vessels and Port Land Side Activity.
 - **Container Truck Licensing Program** Environmental Requirements phasing out older trucks moving toward 2007 Engine Platforms.
 - **Anti-Idle Reduction Programs.**
 - **Northwest Ports Clean Air** reduces maritime and port-related air quality impacts and co-benefits of GHG on human health, environment and economy.

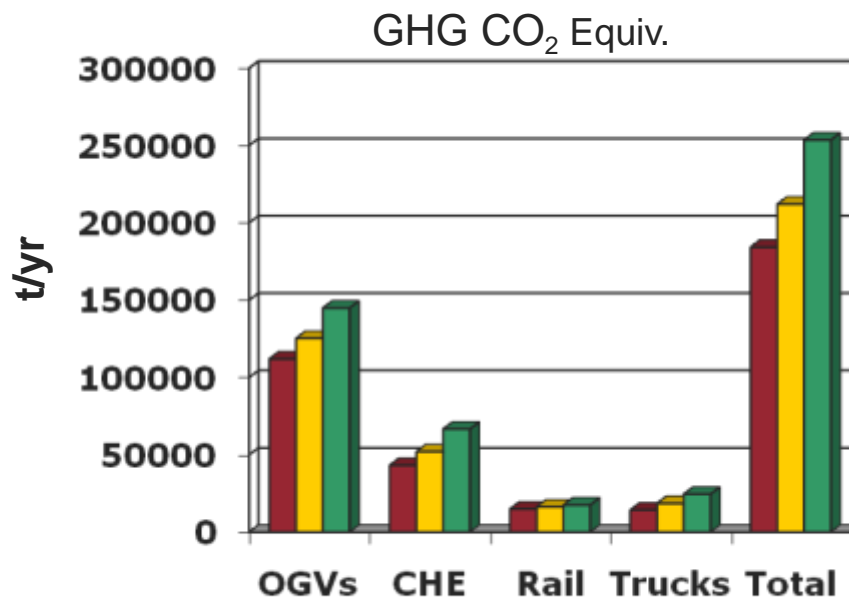
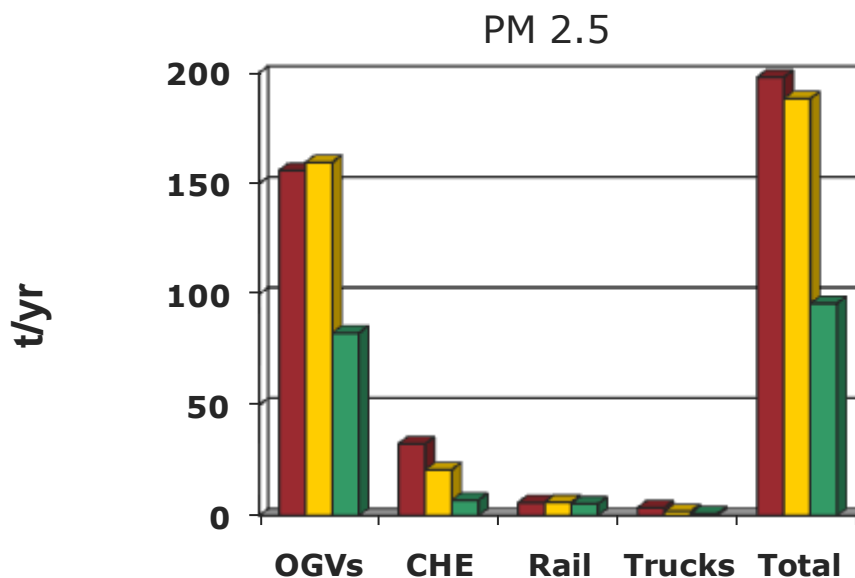
Port Air Emissions

Burrard Inlet and Roberts Bank only

Assumes Northwest Ports Clean Air Strategy (NWPCAS) 2010 and 2015 goals are met (including Emission Control Area (ECA) in 2015)



- OGV-ocean going vessel
- CHE-cargo handling equipment
- PM2.5-particulate matter with $\leq 2.5 \mu\text{m}$ in diameter
- GHG-greenhouse gas
- CO₂ Equivalent-GHG expressed as equivalent tonnes of carbon dioxide



What does Carbon Neutral mean?

- **Carbon neutral**, or having a **zero carbon footprint**, refers to achieving net zero carbon emissions by balancing a measured amount of carbon released with an equivalent amount sequestered or offset.
- **Best practice** is to reduce and/or avoid carbon emissions first so that only unavoidable emissions are offset.

GHGs – British Columbia Context

- **2007** - B.C. Government passes the *Greenhouse Gas Reduction Targets Act* requires all public-sector organizations to be carbon-neutral beginning 2010. (*Does not apply to PMV*)
- **2008** - Revenue-neutral **Carbon Tax** on carbon emissions introduced
 - Tax shift is intended to encourage everyone in the province to reduce their carbon emissions.
 - BC Carbon Tax equals 3.51 cents per litre of gasoline at the pump. The price will go up by 1.17 cents per litre each July 1 until 2012.

GHGs in Canada – Federal Context

- **2008** Federal regulation of heavy industry greenhouse gas emissions to achieve the Government's commitment of a 20% reduction in Canada's overall emissions by 2020. (*Does not include Ports or transportation industries*)
- The Federal “Turning the Corner” plan includes:
 - Establishing a market price for carbon;
 - Establishing a carbon emissions trading market, including a carbon offset system, to provide incentives for Canadians to reduce their greenhouse gas emissions.

GHGs - International Shipping Context

- **2009** UN International Maritime Organization (IMO) under pressure by UNFCCC Copenhagen climate conference (COP 15) to deliver results to reduce GHGs
- **2009** EU Commission issues direction to IMO to act to reduce GHG emissions by 2011 or EU will unilaterally impose regional regulations
- **2009** Second IMO GHG Study issued
- IMO development of the Ship Energy Efficiency Management Plan (SEEMP)
 - incorporates best practices for the fuel efficient operation of ships, such as better speed management throughout a ships voyage to reduce fuel consumption and, consequently, CO₂ emissions.



Strategic Air and Climate Initiatives For Port Metro Vancouver

PMV as a Carbon Neutral Company

- **Why?**

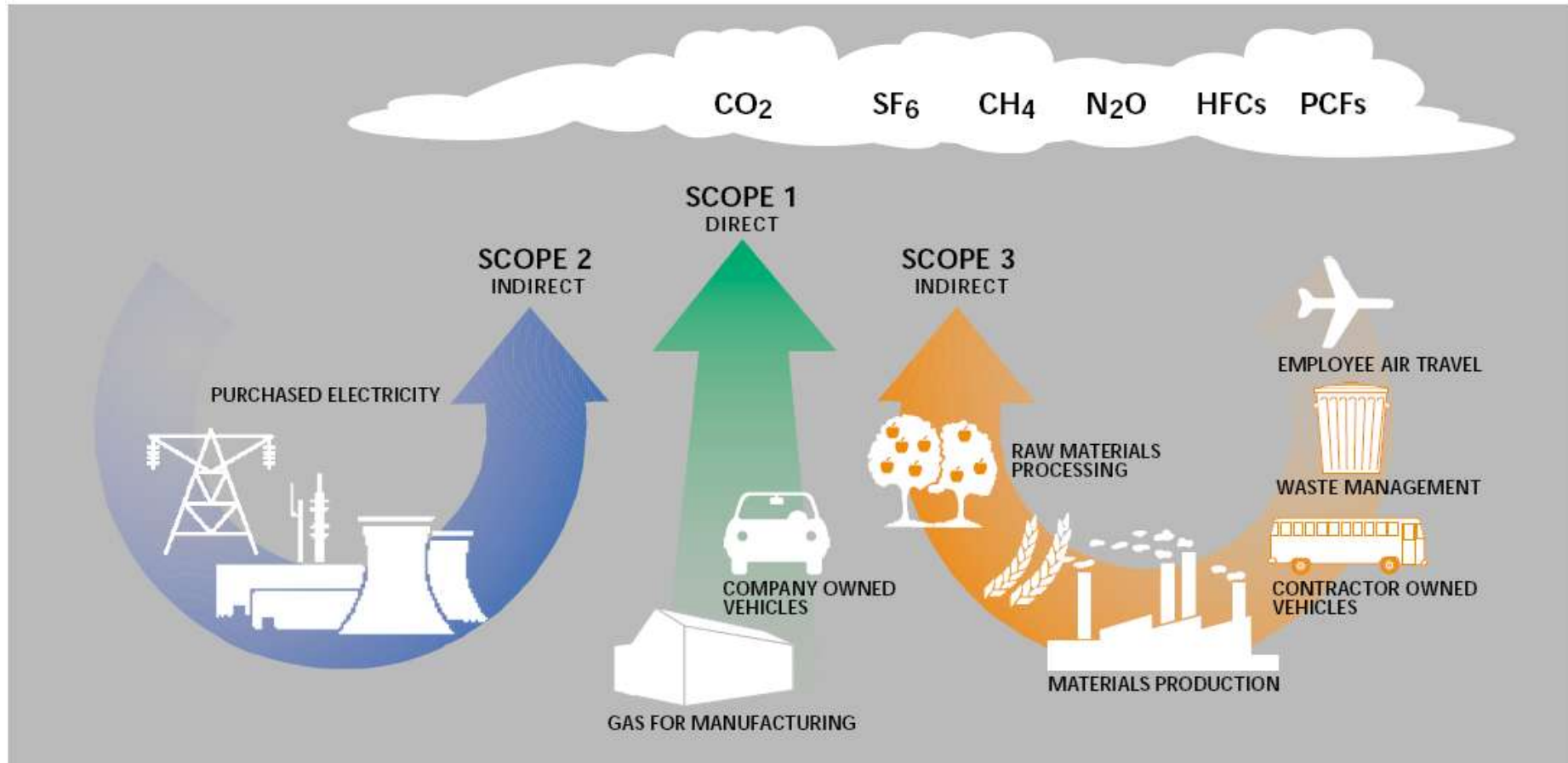
- Climate change is a global issue that requires real solutions. The causes of climate change and its impacts on the environment and human health are now more understood and action has advanced (Kyoto protocol and Copenhagen Climate Conference).
- Real GHG reduction is a local solution to climate change.
- By voluntarily measuring, calculating and assigning a cost to carbon emissions, PMV prepares for a future “cap and trade economy”
- PMV “walks the talk” of Corporate Social Responsibility and demonstrates leadership in the port sector as a **carbon neutral** organization

Strategic Air and Climate Initiatives For Port Metro Vancouver

How?

- i. Inventory emissions, set scope of inventory, identify targets and metrics for ongoing measurement
- ii. Implement programs to reduce energy usage and emissions
- iii. Obtain electricity and other energy from a renewable energy source, (either directly by generating it or by selecting an approved green energy provider), and by using low-carbon alternative fuels (eg. such as sustainable biofuels and H₂)
- iv. Offsetting the remaining emissions that cannot for the moment be avoided or generated from renewables in a responsible carbon project, by purchasing certified verifiable carbon credits.

Inventory Scope



Source: NZBCSD The Challenge of Greenhouse Gas Emissions (Aug 2002)

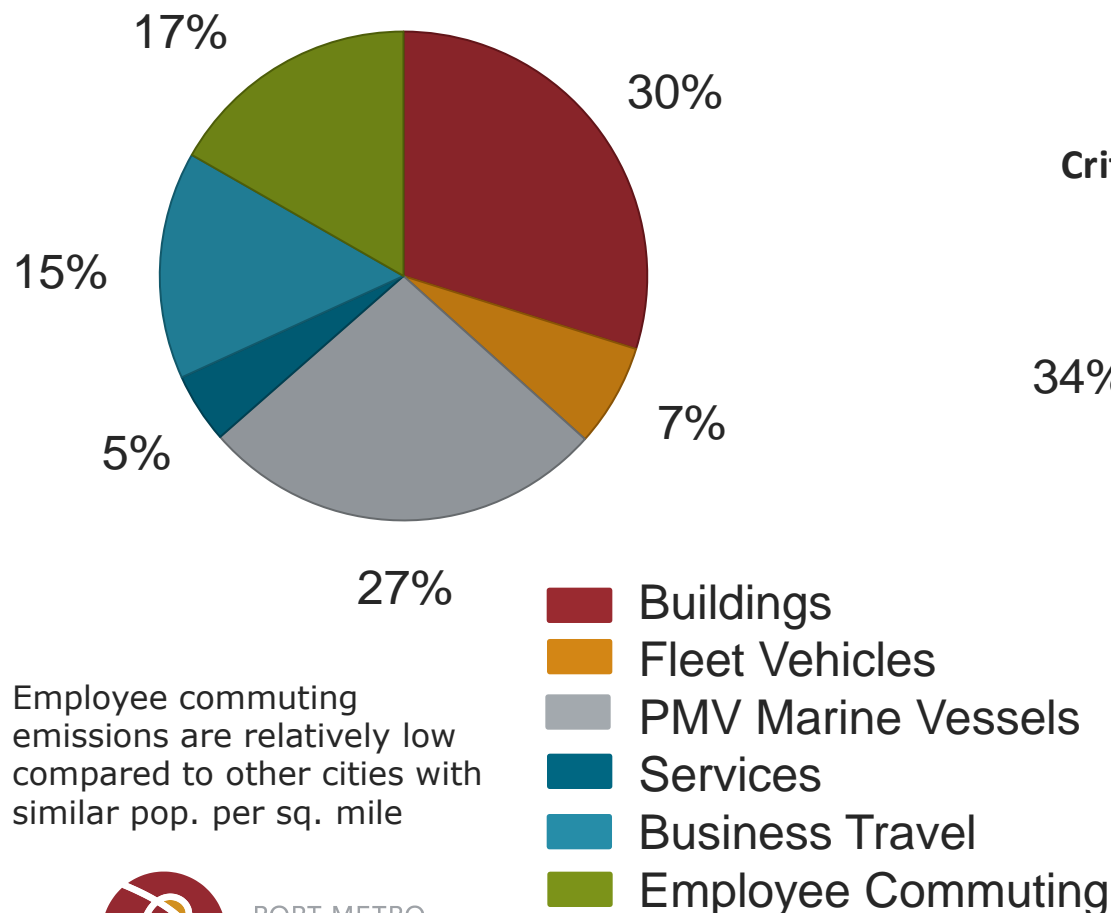
PMV Inventory

	Data / Metric	Details	VFPA Divisions										SNC-Lavalin	
			Controller	Finance	IT	Administration	Operations	Security	Environmental	Legal	Engineering	HR		
Scope 1 - Direct														
Building Heat /Hot Water	Fuel Consumed	size (sqft), equipment type, building construction, activity and function												
Maintenance Equipment		equipment type												
Fleet Vehicles														
Harbour Vessels														
Scope 2 - Indirect														
Purchased Electricity	KWh	heating, lighting, operations, monthly aggregate												
Scope 3 - Indirect														
Business Travel	Km by Mode	travel records, expenses												
Employee Commuting	Km by Mode	employee survey												
Future Sources		included in future inventories												

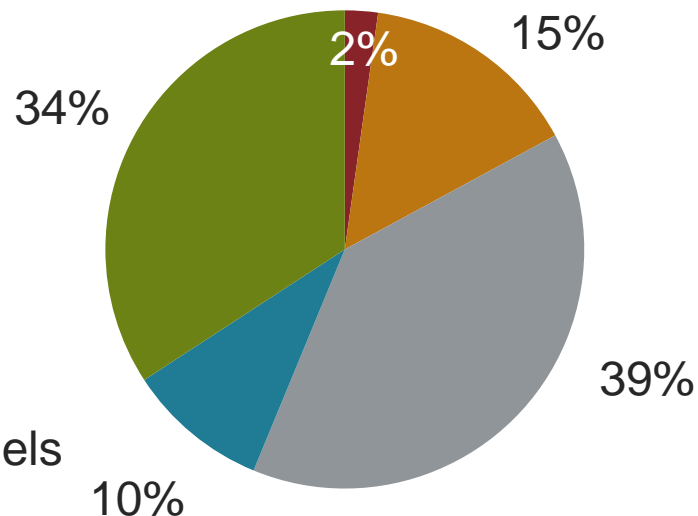
Air Emissions

Port Metro Vancouver (2008)

Greenhouse Gases (1180 tonnes/yr)



Criteria Air Contaminants (20 tonnes/yr)



2009 Highlight

Cruise Ship Shore Power

- First connection August 2009
- 11 *test* connections in 2009
- Average 48% reduction in fuel burned and emissions on shore power calls (2009)



Reductions	2009 (est. actual)	2010 (est. potential)
Fuel	93	946
Criteria Air Contaminants	7	73
Greenhouse Gases	289 (net)	3043 (gross)



Vancouver 2010 Winter Games



OFFSETTING THE GAMES

- Port Metro Vancouver was an Official Supplier of the Vancouver 2010 Olympic and Paralympic Winter Games, the Canadian Olympic Committee and the Canadian Olympic Team.
- Port Metro Vancouver partnered with the Vancouver Organizing Committee for the 2010 Olympic and Paralympic Winter Games (VANOC) and Offsetters to voluntarily offset carbon emissions during the games.

Games Period ran from January 4 March 24, 2010
and in addition to Operations included all
hospitality and accommodation during the games
and Torchbearer travel and accommodation



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Thank you.

Questions?



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