

CLIMATE ACTION REVENUE INCENTIVE PROGRAM (CARIP) PUBLIC REPORT

For Reporting Year =

2011

GENERAL INFORMATION	Fill in the boxes below
Name of Local Government	<i>City of Vancouver</i>
Member of Regional District (RD)	<i>Metro Vancouver</i>
Regional Growth Strategy (RGS) in region	<i>Yes</i>
Population	<i>578,000</i>
Report Submitted by	
Name	<i>Malcolm Shield</i>
Title	<i>Climate Programs Engineer, Sustainability Group, City Manager's Office</i>
Email	<i>Malcolm.shield@vancouver.ca</i>
Phone	<i>604-673-8189</i>

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Corporate Actions

2.1 MEASURE

Corporate Measurement Actions QUESTION

What steps has your local government taken toward completing its corporate emissions inventory (e.g. corporate assets gathered related to energy and fuel data and calculated GHG emissions from energy use)?

What tool are you using to measure, track and report on your corporate emissions (e.g. SMARTtool, other tools including excel spreadsheets)?

Answer

- Conducted a 2008 inventory and a 2009 report for GHG emissions for the City of Vancouver's municipal operations and for the community
- Original 1990 and 2000 greenhouse gas inventories and targets for Vancouver were developed under the Partners for Climate Protection Program (PCP), a program of the Federation of Canadian Municipalities (FCM)
- The 2008 inventory followed ICLEI's International Local Government GHG Emissions Analysis Protocol which applies to both municipal operations and the community
- Also published a Climate Protection Progress Report in 2007
- Currently using Excel spreadsheet tools, but plan to issue an RFP in 2012 for energy and GHG enterprise software to help manage and track corporate emissions.

2.2 REDUCE

Supportive Corporate Actions

Please describe the **supportive corporate actions** you have taken in 2011 or propose to take in 2012 to contribute to reducing GHG emissions and energy consumption within your corporate boundary.

Supportive actions refer to activities that provide a framework or foundation for direct actions to be implemented. These include the development of committees or new staff positions, education and engagement, feasibility studies, policy development and engagement with programs and partnerships.

If your actions do not fit into the categories provided, please describe them under "other actions".

Lists of some of the actions reported in these categories in 2010 can be found here:

<http://www.gov.bc.ca>

Supportive Corporate Actions

Broad Planning (e.g. developed corporate climate action plan)

Building and Lighting (e.g. developed energy reduction plan for all corporate buildings)

Energy Generation (e.g. undertook feasibility study of green energy generation for civic buildings)

Transportation (e.g. created anti-idling policy for city vehicles, bike to work week promotion)

Waste (e.g. completed waste audit of City Hall)

Water/Sewer (e.g. completed study of sewer and water energy use)

Actions Taken in 2011

• Revised the draft Carbon Neutral Operations Strategy, with new strategy document under development by staff to better reflect the current landscape for carbon planning.

• In the process of developing a Building Energy Management Plan

• Completion of a Green Fleets Strategy for implementation out to 2020

• Develop understanding of waste sources and quantities in support of broader waste strategy for City facilities

Proposed Actions for 2012

• Complete the City's Corporate Carbon Strategy which will contain new long range corporate greenhouse gas reduction strategies (primarily related to facility and fleet operation) and pro-active initiatives on carbon management.

• Complete 2011 inventory of Corporate GHG emissions.

• Develop in more detail the specific role to be played by different offsets in carbon management

• Complete and implement the Building Energy Management Plan

• Will work with BC Gov't and the Pacific Carbon Trust to understand potential for landfill to provide clean energy and/or offsets.

• Continue to review, and where appropriate, adopt new technologies and fuelling solutions where applicable (eg. electric, natural gas, and higher blends of biodiesel)

• Begin to track City 'hired truck' GHG's for delivery of traditional City services.

• Renew City fuel contract with tougher green provisions

• Development of the Green Operations plan including waste strategy for City facilities

• Develop Green Operations Plan to implement strategy for water use in major City operations

Other Actions

- Continued to worked with BC Gov't to develop an offset project framework.
- Developed Environmental Framework for greening corporate operations, includes sustainable procurement strategy, IT renewal strategy, carbon and energy strategy and waste strategy.

- Develop Green Operations Plan to implement elements for each area of operations using the Environmental Framework

Direct Corporate Actions

Please describe the **direct corporate actions** you have taken in 2011 and propose to take in 2012 to contribute to reducing GHG emissions and energy consumption within your corporate boundary.

Direct actions refer to activities that can be directly implemented by local governments.

We encourage you to report all the corporate actions that contribute to reduced emissions even if they might not directly contribute to the achievement of your carbon neutral commitment. For example, the introduction of recycling programs do not contribute to carbon neutrality but is a direct action to reduce GHG emissions.

If your actions do not fit into the given categories please describe them under "other actions".

Some of the actions reported in these categories in 2010 can be found here:

<http://www.cscd.gov.bc.ca/lgd/greencommunities/carip.htm>

Direct Corporate Actions**Actions Taken in 2011****Proposed Actions for 2012**

Building and Lighting (e.g. energy efficiency retrofits to municipal buildings)

- Continue building retrofits - Included in that was some 30 buildings within the Parks portfolio including Sunset CC as well as the Museum, Manitoba and National Yards and the Central Library.
- Completed Energy studies for QET and 2120 Cambie.

- With audits complete, need to review findings to inform projects for 2012 and beyond.
- Continue work in Firehalls.

Energy Generation (e.g. implemented heat recovery systems, solar)

- Continued to collect landfill gas for use at site facilities and Maxim power facility.
- Achieved funding to redevelop landfill gas capture system to increase capture efficiency, work commenced in 2011.

- Continue with landfill gas capture and utilization.
- Updated landfill gas capture system will be completed in 2012

Fleet (e.g. anti-idling policies for fleet vehicles, purchasing of hybrid)

- Integrated into standard City operations four battery electric vehicles for use in fleet car-share, Parking Enforcement and by the Parks Board.
- Expanded the use of car-share for City use and introduced first electric car-share vehicle to be used by City staff during office hours and the public for evenings and weekends.
- Continued to retrofit cab heaters, anti-idle and idle-stop devices in to City fleet where appropriate.
- Expanded the use of propane in City fleet where applicable

- Continue to adopt new technologies and fuelling solutions where applicable (eg. electric, natural gas, and higher blends of biodiesel)
- Introduction electric and natural gas light-duty and aerial trucks.
- Implement a 'quick-start' operational review to reduce fuel use
- Continue 'right-sizing' of City fleet

Waste (e.g. introduction of composting and recycling programs and education)

- Initiated RFP for waste hauler contract for waste diversion program in City facilities

- Select consultant and implement waste diversion for City facilities
- Hire corporate zero-waste coordinator to waste reduction and diversion programs in City facilities
- Start programs to divert from landfill organic waste from single family homes

Water/Sewer (e.g. initiated water conservation and reduction initiatives)

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- Develop Green Operations Plan to implement strategy for water use in major City operations

Green Space (e.g. planting of trees)

- Increased planting of street trees – over 3,200 street trees planted in 2010 and 2,800 in 2011 (there was a descending amount of \$ in the last capital plan for new street tree planting)
- Increased number of community garden plots in the City – over 450 plots added in 2010. In 2011, one new community garden in a park was added, at 4,000 square feet (it's not been divided up into plots yet). Other community garden plots are in the realm of social policy

- Begin tracking tree planting in parks more closely and tracking progress.
- Issue the 2 grant programs

Other Actions

- Adopted 100% use of 100% Post-consumer waste paper for all photocopy printing paper

- Expand landfill gas recovery, bio-gas production and utilization project
- Encourage local food in City procurement processes
- Create a Green Events Toolkit

2.3 CORPORATE INNOVATION**Answer**

Is there any activity that you have been engaged in over the past year(s) that you are particularly proud of and would like to share with other local governments? Please describe and add links to additional information where possible.

NOTE: If you wish to insert a "hard return" (i.e. Enter Key) while typing in a given cell, you need to hold the ALT+ENTER instead.

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Community-Wide Actions

1.1 MEASURE	ANSWER	ADDITIONAL INFORMATION
Community Wide Measurement Actions QUESTION Have you been using the <i>Community Energy and Emissions Inventory</i> (CEEI) to measure progress? What else have you been using instead of/in addition to CEEI?	Yes	<ul style="list-style-type: none"> • CEEI was used, in part, to inform some of the actions listed in the City's "Greenest City Action Plan" as approved by Council in July 2011 • Conducted a 2008 inventory and a 2009 report for GHG emissions for the City of Vancouver's municipal operations and for the community • Original 1990 and 2000 greenhouse gas inventories and targets for Vancouver were developed under the Partners for Climate Protection Program (PCP), a program of the Federation of Canadian Municipalities (FCM) • The 2008 inventory followed ICLEI's International Local Government GHG Emissions Analysis Protocol which applies to both municipal operations and the community • Also published a Climate Protection Progress Report in 2007

1.2 PLAN	ANSWER	ADDITIONAL INFORMATION
Community Wide Targets QUESTION Do your OCP(s) have targets, policies and actions to reduce GHG emissions, as per the requirements under the <i>Local Governments Act</i> (LGA)? If yes, please identify the targets set. If no or in progress, please comment.	Yes	The City of Vancouver has an Official Development Plan addressing reduction of GHG emissions. TARGETS FOR REDUCTION OF GHG EMISSIONS: <ul style="list-style-type: none"> • to 6% below 1990 GHG levels by 2012, • to 33% below 2007 GHG levels by 2020, and • to 80% below 1990 GHG levels by 2050; and • to require that all new construction be carbon neutral by 2020. POLICIES FOR REDUCTION OF GHG EMISSIONS: <ul style="list-style-type: none"> • To eliminate Vancouver's dependence on fossil fuels - staff are developing an implementation plan to meet our 2020 reduction target. The 2005 Community Climate Change Action Plan identifies policies to meet GHG emission reduction targets, including: <ul style="list-style-type: none"> • smart growth land use planning; building energy retrofit programs and policies; regulation of new building energy performance; neighbourhood scale renewable district energy systems; programs and infrastructure to support sustainable transportation; programs and infrastructure to support the use of lower carbon vehicles and fuel; and expansion of the Landfill Gas Recovery project ACTIONS FOR REDUCTION OF GHG EMISSIONS INCLUDE: <ul style="list-style-type: none"> • to continue to pursue and implement the policies outlined in the Community Climate Change Action Plan • to develop a new climate change action plan to meet the 2020 GHG emission reduction target as part of the Greenest City 2020 implementation planning program
If you are a Regional District, does your RGS have targets, policies and actions to reduce GHG emissions, as per the requirements under the <i>Local Governments Act</i> (LGA)? If yes, please identify the targets set. If no or in progress, please comment.	Yes	<ul style="list-style-type: none"> • Targets in the Metro Vancouver Integrated Air Quality and GHG Management Plan, 15% reduction in GHGs by 2015 against a 2007 baseline and 33% by 2020, p.29 (http://www.metrovancouver.org/about/publications/Publications/IntegratedAirQualityGreenhouseGasManagementPlan-October%202011.pdf) • Targets of 33% below 2007 levels by 2020 and 80% by 2050 also listed in the Regional Growth Strategy on p.40 (http://www.metrovancouver.org/planning/development/strategy/RGSDocs/RGSAdoptedbyGVRDBoardJuly292011.pdf)

1.3 REDUCE	ANSWER	ADDITIONAL INFORMATION
Supportive Community-Wide Actions Please describe the supportive community-wide actions you have taken in 2011 (or propose to take in 2012) to contribute to reducing GHG emissions and energy consumption in your community. Supportive actions refer to activities that provide a framework or foundation for direct actions to be implemented. These include the development of committees or new staff positions, education and engagement, feasibility studies, policy development and engagement with programs and partnerships. If your actions do not fit into the given categories please describe them under "other actions". Some of the actions reported in these categories in 2010 can be found here:		
Supportive Community-Wide Actions	http://www.cscd.gov.bc.ca/lgd/greencommunities/carip.htm	
Supportive Community-Wide Actions	Actions Taken in 2011	Proposed Actions for 2012

Broad Planning (e.g. creation/revision of OCPs, CEPs, transportation plans)

Adopted the Greenest City Action Plan with 10 Goal Areas:

1. Green Economy - Double the number of green jobs
2. Climate adaptation - Reduce community-based emissions by 33% from 2007 levels by 2020
3. Green Buildings - Require all buildings constructed from 2020 on to have carbon neutral operations, reduce GHG from buildings by 20% over 2007 levels by 2020
4. Green Transportation - Make majority of trips (over 50%) by foot, bike or transit
5. Zero Waste - Reduce total waste by 50% from 2008 levels by 2020
6. Access to Nature - Plant a total of 150,000 new trees
7. Clean Water - Reduce residential water consumption by 33% from 2006 levels
8. Clean Air - Have the highest quality air by most stringent standards
9. Lighter Footprint - Reduce per capita ecological footprint by 33% from 2006 levels
10. Local Food - Increase the city's local food assets by 50% by 2020

- Implementation of Greenest City Action Plan.
- Complete update on Transportation Plan
- Develop Local Food Strategy

Building and Lighting (e.g. developed green building policy, increased density in the downtown)

- Developed a new Carbon Neutral Buildings Strategy to achieve carbon neutral buildings by 2020 and reduce CO2 emissions and energy use in existing buildings by 20% by 2020
- New requirement in the Vancouver Building By-law requiring energy efficiency upgrades for all buildings applying for a renovation permit.

- Developing financing tools to increase affordability of energy efficiency upgrades.
- Continuing to promote LiveSmart BC within the city.
- Working with BC Hydro and large site developers to identify additional financially viable opportunities for renewable district heating and potentially power generating systems.
- Working with BC Hydro to launch a Smart Neighborhood pilot program that seeks to integrate all of these initiatives using Smart Meters and a Smart Grid in a select Vancouver neighborhood.
- Staff increased code compliance and assist in development of new codes

- Start to work with developers to establish 4 new renewable energy systems of the next 8 years

Energy Generation (e.g. signed on to provincial 'solar ready' regulation, explored options for bioheating for buildings)

Green Space (e.g. developed urban forestry policy, adopted park acquisition policy)

- The Park Board is implementing the Stanley Park Forest Plan - 3 main contracts in place to: 1. Develop best management practices for species at risk. 2. Restoration of the Beaver Lake bog. 3. Mapping of invasive species, and development of best management practices for controlling of invasive species.
- The Park Board is developing a wide range of actions to improve the ecological integrity of Stanley Park.
- Protection of Trees Bylaw. The bylaw took effect in January 2010 and allows property owners who remove a tree to replace it with two fruit or nut trees
- Adopted Greenest City Access to Nature target for planting trees and creating more mini-parks

- Initiate work on the development of an Urban Forest Management Plan

Transportation (e.g. developed sustainable transportation plan, completed bicycle master plan)

- Initiated plans for comprehensive update to the City transportation plan.
- 2020 Greenest City Planning- External Advisory Group supported development of draft Green Transportation Targets, strategies and actions to feed into City transportation planning.
- Adopted Greenest City Action Plan 2020 Transportation Targets
- Partner with BC Hydro and BC Gov't to implement an electric vehicle charging pilot program for home, work and on the go, to accelerate adoption of electric vehicles
- 2020 Greenest City Planning- External Advisory Group supported development of draft Green Transportation Targets, strategies and actions to feed into City transportation planning.

- Continue plans for comprehensive update to the City transportation plan.

Waste (e.g. introduced composting and recycling education programs)

- Developed deconstruction pilot
- Explored bylaw revision to allow ticketing for illegal yard sprinkling (underway)

- Continue work to explore expansion of extended producer responsibilities

- Continue development of strategy to eliminate combined sewer overflows

Other Actions

- Understand fully the implications of Air Quality planning and start to formulate a frame work for its inclusion in City planning, understanding that Metro Vancouver has jurisdictional control.

Direct Community-Wide Actions

Please describe the **direct community-wide actions** you have taken this year and propose to take next year to contribute to reducing GHG emissions and energy consumption in your community.

Direct actions refer to activities that can be directly implemented by local government.

If your actions do not fit into the given categories please describe them under "other actions".

Lists of some of the actions reported in these categories in 2010 can be found here: <http://www.gov.bc.ca>

Community-Wide Direct Actions

Actions Taken in 2011

Proposed Actions for 2012

Buildings (e.g. implement use of sustainability checklists and development permit guidelines for new buildings)

- Continued implementation of Green Condo Retrofit Program to provide low interest and long-term loans to condo associations for major retrofits
- Continued Vancouver's residential solar hot water pilot program - partnership between City of Vancouver, BC Hydro, Solar BC, and Offsetters to offer grants to cover half the cost of an installed solar hot water system in new construction for up to 50 buildings
- Continued program (with BC Hydro, Terasen Gas and a non-profit organization called Embers) a residential air sealing pilot program which tested the energy efficiency benefits of air-sealing on 60 homes. Trained unemployed people in home energy efficiency, and will seed a new social enterprise offering air-sealing services at an affordable rate
- Launched Home Energy Loan program
- Hire Green Building Home Energy Loan officer to deliver workshops and encourage participation in the program
- Undertook costing study to look at cost of upgrading Part 3 of the building code from ASHRAE 90.1 2007 to 2010 (using an industry steering committee) and cost of upgrading Part 9 of the building code from Energuide 77 to Energuide 84
- Launched a Home Energy Loan Program and a Condo Retrofit Loan Program
- Undertook a deconstruction pilot that diverted 90% of construction waste from the landfill, and introduced code to
- Produced Vancouver renovation guides for homeowners that provide guidance on how to renovate sustainably.

- Developed new building code for Single Family homes (Part 9) including a list of 10 prescriptive measures for bringing to council in 2012
- Developed new building code for Part 3 (large Buildings) with a list of energy savings measures for bringing to council in 2012
- Developed a code for improving the energy efficiency of buildings at the time of renovation permit for council approval in 2012
- Assist Province in developing provincial boiler regulations for new construction (for boilers under 300,000 BTU). Completed in Dec 2012.
- LEED GOLD CERTIFICATION requirement for all rezonings.
- Complete evaluation of deconstruction pilot program

Energy Generation (e.g. implement district energy, geothermal, solar)

- Continued work to develop the Neighbourhood Energy Utility (NEU) service to additional buildings. The NEU, serving the Southeast False Creek area, uses sewage-waste heat recovery technology to provide space heating and domestic hot water. Sewage heat recovery provides 70% of the neighbourhood's annual energy requirements lowering greenhouse gas emissions by more than 60%
- Continued to collect landfill gas for use at site facilities and Maxim power facility.
- Achieved funding to redevelop landfill gas capture system to increase capture efficiency, work commenced in 2011.

- Start to work with developers to establish 4 new renewable energy systems over the next 8 years
- Will work with BC Gov't and the Pacific Carbon Trust to understand potential for the NEU to provide.

Transportation (e.g. implement bike lanes, pedestrian paths, upgrade transit service and infrastructure, improve roads, parking fees etc.)

- Continue to provide electric vehicle charging at City owned Easy Park lots, expanding number of installed charge stations.
- Secured funding for electric vehicle charging pilot for home work and 'on the go' to accelerate adoption of electric vehicles.
- Adopted 2020 Greenest City Green Transportation Targets,

- Continue with finalizing updates to the City Transportation Plan.
- Explore development of bike share program
- Develop in partnership with BC Hydro and BC Gov't the scope, scale and implementation strategy for electric vehicle charging pilot. Commence station installs and data collection.

Waste (e.g. introduce composting and recycling programs)

- Expanded Residential Food Waste Collection & Composting – completed implementation plan for phase 2 (all food waste) and working to expand program to multi-family units for food waste
- Pilot full expansion of food scraps to two area in city
- Pilot newspaper and mixed paper recycling on the streets
- Piloting deconstruction pilot program
- Adopted the Greenest City 2020 Goal to Create Zero Waste. 2020 TARGET: Reduce total solid waste going to landfill or incinerator by 50% from 2008 levels.

- Pilot multi-family food scraps collection
- Complete evaluation of deconstruction pilot program

Water/Sewer (e.g. implement water conservation and reduction initiatives)

- Continued program to encourage use of rain barrels for apartments
- Completed evaluation of lawn sprinkling education and awareness program pilot

- Continue development of strategy to eliminate combined sewer overflows
- Require water metering on all new single and dual family home services (new construction and major renovations) effective 2012;
- Develop and commence enhanced water education, incentive and conservation programs
- Continue to expand public access to drinking water
- Eliminate combined sewer overflows from sewage outfalls at Crowe and Burrard Streets and develop Integrated Stormwater Management Plan.

Green Space (e.g. plant trees, conserve forest etc.)

- Increased planting of street trees – over 3,200 street trees planted in 2010 and 2,800 in 2011 (there was a descending amount of \$ in the last capital plan for new street tree planting)
- Increased number of community garden plots in the City – over 450 plots added in 2010. In 2011, one new community garden in a park was added, at 4,000 square feet (it's not been divided up into plots yet). Other community garden plots are in the realm of social policy
- Increased number of on-street gardens cared for by residents – added 67 new green street gardens in 2010 and 52 in 2011
- Planted some small urban orchards in two city parks
- One new park under construction in 2011 - East Fraserlands Neighbourhood Park North (working name). There were three major park renewals completed: Grandview, Norquay and Mount Pleasant

- Create 2-3 new parks in priority neighbourhoods
- Aim to plant an additional 400 street trees/yr, on average, over next three years (over past 3 yr capital plan)
- Will begin process of converting small lengths of streets to mini-parks (likely won't have any finished in 2012, more likely this will happen in 2013/14)
- Begin tracking tree planting in parks more closely and tracking progress.
- Issue the 2 grant programs

Other Actions

- Continued to support community-led greenspace and food-in-park projects through the Neighbourhood Matching Grants (9 projects worth \$41,900 in 2011) and the Greenest City Neighbourhood Grants (3 projects for \$11,000 for 'trees/greening' projects in the overall \$100k and 16 projects).

1.4 COMMUNITY-WIDE INNOVATION

Is there any activity that you have been engaged in over the past year(s) that you are particularly proud of and would like to share with other local governments? Please describe and add links to additional information where possible.

Answer

- Adopted the Greenest City Action Plan with 10 Goal Areas:
1. Green Economy - Double the number of green jobs
 2. Climate adaptation - Reduce community-based emissions by 33% from 2007 levels by 2020
 3. Green Buildings - Require all buildings constructed from 2020 on to have carbon neutral operations, reduce GHG from buildings by 20% over 2007 levels by 2020
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