

Climate Action Revenue Incentive Program (CARIP) Public Report

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Public Report for YEAR 2013

City of Richmond

Metro Vancouver



Report Submitted by

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The City of Richmond has completed the 2013 Climate Action Revenue Incentive Program (CARIP) Public Report as required by the Province of BC. The CARIP report summarizes actions taken in 2013 and proposed for 2014 to reduce corporate and community-wide energy consumption and greenhouse gas emissions (GHG).

July 31, 2014

General Information

Name of Local Government	City of Richmond
Member of Regional District (RD)	Metro Vancouver
Regional Growth Strategy (RGS) in region	Yes
Population	205,000

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Community Wide Actions for 2013

1.1 Measure

Community Wide Measurement Actions

Question	Have you been using the Community Energy and Emissions Inventory (CEEI) to measure progress? What else have you been using instead of/in addition to CEEI?
Answer	Yes

1.2 Plan

Community Wide Targets

Question	Does your OCP(s) have targets, policies and actions to reduce GHG emissions, as per the requirements under the <i>Local Governments Act (LGA)</i> ? If yes, please identify the targets set. If no or in progress, please comment.
Answer	Yes
Additional Information	The 2041 Official Community Plan (OCP) GHG emissions reduction targets are 33% below 2007 levels by 2020 and 80% below 2007 levels by 2050. The OCP also includes an energy reduction target of 10% below 2007 levels by 2020.

1.3 Reduce

Supportive Community Wide Actions

Action Type	Broad Planning
<p>Actions Taken this Year</p>	<p>Continued implementation of the long-term Climate Change Response chapter of the OCP reducing GHG emissions and sequestering carbon. Policies and objectives include: protection and enhancement of the natural habitat; increasing the use of sustainable modes of transportation with the 2041 goal of increasing the mode share of transit, walking, and cycling by a combined 34%; and developing further densification, transportation, and sustainable building plans for shopping centres outside the City Centre. Continued implementation of the City Centre Area Plan (CCAP) directing the majority of City growth to the City Centre near Canada Line Stations. Updated the Steveston Heritage Strategy promoting increased transit usage, walkable neighbourhoods and energy efficient construction in the Steveston neighbourhood. Undertook BC Hydro funded neighbourhood energy study as part of Hamilton Area Plan and completed Community Implementation Offer project “Neighbourhood Energy Planning for Local Government Policy Makers.”</p>
<p>Proposed Actions for Next Year</p>	<p>Continue to implement the OCP and CCAP. The citywide Community Energy and Emissions Plan and the Hamilton Area Plan—improving transit, promoting walkability, and planning for more energy efficient mixed-use and multi-unit residential buildings (MURB)—are anticipated to be adopted.</p>

Action Type	Building and Lighting
<p>Actions Taken this Year</p>	<p>Continued implementation of CCAP requirement that all rezoning applications with development over 2,000 m² are equivalent to LEED silver standards. Continued to require District Energy Utility (DEU) ready development in the Alexandra neighbourhood of West Cambie. Developed Service Area Bylaw for the River Green District Energy Utility (RGDEU) to ensure mandatory connection of all new developments in the area to RGDEU. Formed District Energy Coordinator part time position.</p>
<p>Proposed Actions for Next Year</p>	<p>Continue to implement CCAP policies through new development applications. Develop higher minimum energy standard for City Centre and assess sustainability requirements for rezoning applications greater than 2,000 m² outside of City Centre. Develop a long-term City Centre district energy strategy, update the heat load map to identify DEU project priorities, establish a mandatory DEU ready service area bylaw for City Centre and implement RGDEU Service Area Bylaw.</p>

Action Type	Energy Generation
Actions Taken this Year	Completed due diligence phase for RGDEU design, construction, financing, and operation.
Proposed Actions for Next Year	Execute agreement with utility partner and develop implementation plan for the design, construction, financing, and operation of RGDEU. Complete pre-feasibility study that will explore opportunities to develop district energy node with renewable energy source(s) for the new aquatic centre, older adults centre, fire hall and existing buildings in the City Precinct area.

Action Type	Green Space
Actions Taken this Year	Completed the 2022 Parks and Open Space Strategy (POSS) with actions to support expanded walking, rolling and cycling networks, increased ecological connectivity and integration of green infrastructure within the parks and open space system.
Proposed Actions for Next Year	Develop the Urban Forest Management Strategy to consider GHG reduction. Continue to implement POSS and complete the Community Gardens Strategic Plan including proposed conservation of bog areas and agricultural uses.

Action Type	Transportation
Actions Taken this Year	Increased funding for walking, cycling and transit improvements consistent with OCP goals and targets. Expanded mandate of City bicycle advisory committee to include other forms of active transportation and supported education and encouragement programs (e.g. annual bike tour, Walk Richmond program and cycling education courses for students and adults). Facilitated expansion of car-share services in Richmond.
Proposed Actions for Next Year	Collaborate with TransLink to begin update of Richmond Area Transit Plan. Continue to forward education and encouragement programs for cycling and walking, implement transportation-related OCP policies and continue to support any interest in the expansion of car-share services.

Action Type	Waste
Actions Taken this Year	Completed annual report on waste reduction and diversion progress in conjunction with the Strategic Waste Program. Developed multilingual communications and outreach materials promoting recycling. Continued community engagement through workshops, theatrical shows at elementary schools, outreach displays and other events (e.g. Public Works Open House and Richmond Earth Day Youth (REaDY) Summit).
Proposed Actions for Next Year	Advance the Strategic Waste Program and implement initiatives to reach the adopted waste diversion target of 70% by 2015. Continue annual reporting on waste reduction and diversion progress and promote new recycling initiatives and pending disposal bans.

Action Type	Water/Sewer
Actions Taken this Year	Delivered water quality and conservation education through workshops and events (e.g. Public Works Open House, Project WET, H2Whoa!, Waterwise) and supported BC Water & Waste Association Drinking Water Week. Installed water stations at community events to promote high-quality tap water. Issued 852 rebates through the low-flow retrofit Toilet Rebate Program.
Proposed Actions for Next Year	Continue engagement events including education on tap water consumption and water sprinkling regulations. Continue Toilet Rebate Program and introduce redeveloped Rain Barrel Program.

Direct Community Wide Actions

Action Type	Buildings
Actions Taken this Year	Implemented City Centre rezoning consideration for developments to be DEU ready with 8,000 DEU-ready units currently approved. Incorporated city-owned corporation Lulu Island Energy Company Ltd to manage district energy systems. Required 20% of MURB parking stalls to have 120V receptacles for EV charging and an additional 25% of stalls to be constructed to facilitate future installation (e.g. conduit for future wiring).
Proposed Actions for Next Year	Formalize and adopt DEU ready policy for all City Centre MURB development and create implementation plan to provide district energy service for North City Centre Area development. Continue to implement policies supporting the use of electric vehicles.

Action Type	Energy Generation
Actions Taken this Year	Provided ADEU service to second building (260 units).
Proposed Actions for Next Year	Provide ADEU service to third building (250 units) and commence Phase 3 to expand ADEU.

Action Type	Transportation
Actions Taken this Year	Completed mobility initiatives to promote sustainable modes of transportation including: construction of 350m of neighbourhood walkway and 300m of off-street multi-use path; addition of anti-skid surface at greenway-road intersections; upgrade of 3 crosswalks and 10 existing bus stops with accessible pedestrian features; expansion of bus stop benches and connecting pathways; implementation of traffic calming measures in school zones.
Proposed Actions for Next Year	Complete all outstanding 2013 transportation initiatives and implement the 2014 capital program which includes an increased number of projects from 2013.

Action Type	Waste
Actions Taken this Year	Introduced the Green Cart and large item pickup programs to 41,000 single-family and townhome dwellings. Commenced 15-month food scraps recycling pilot for 5,500 MURB units to inform design of full-scale program in 2015. Expanded Recycling Depot services to collect Styrofoam, batteries, cell phones, used books and plastic bags. Evaluated and improved recycling containers to ensure attractiveness and operability for use in public spaces. Engaged as a collection contractor with Multi-Material BC as part of the provincial product stewardship program.
Proposed Actions for Next Year	Undertake pilot to determine optimal cart sizing and collection frequency for waste and recycling. Obtain Council approval for full-scale MURB organics recycling program (30,000 units). Expand recycling under the Multi-Material BC stewardship program and continue intensive outreach to maximize recycling participation. Evaluate Recycling Depot expansion to an Eco-Centre model.

Action Type	Water/Sewer
Actions Taken this Year	Continued implementation of water metering program to include 69% single-family, 23% MURB units and 100% industrial and commercial properties. Subsidized 70 barrels through the Rain Barrel Program and supported implementation of Metro Vancouver water sprinkling restrictions.
Proposed Actions for Next Year	Continue to support water conservation initiatives and programs and advance implementation of the water metering program. Promote the redeveloped Rain Barrel Program.

Action Type	Green Space
Actions Taken this Year	Continued implementation of POSS including tree planting in parks and schools sites, maintenance of urban forest and addition of park spaces and facilities.
Proposed Actions for Next Year	Continue to implement POSS and capital program.

Question	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	Richmond is committed to increasing the share of walking and other modes of sustainable transportation. In order to support this effort and in anticipation of the needs of an aging population, the City is improving accessibility and walkability via implementation of an Accessible Pedestrian Signal (APS) program. To the City's knowledge, it is the only city of its size to commit to the upgrade of all City-owned signalized intersections and special crosswalks to include APS features. Currently, the City has 75 special crosswalks and 38 pedestrian signal locations with APS features. Approximately 25% of the City's 149 signalized intersections have APS features and completion of the program is anticipated by 2020.

Corporate Actions for 2013

2.1 Measure

Corporate Measurement Actions

Question	What steps has your local government taken toward completing its corporate emissions inventory?
Answer	Richmond established a corporate energy and emissions baseline of 2007, embedding it within its broader sustainability framework. The City has developed a database to track energy consumption of buildings and other assets, and the Green Fleet Action Plan adopted in 2013 improves its ability to manage fleet fuel use and related emissions.

Question	What tool are you using to measure, track and report on your corporate emissions?
Answer	Richmond is using a spreadsheet to meet requirements for this reporting year. The City is in the process of upgrading its energy tracking database to a platform that allows greater flexibility to meet multiple GHG reporting commitments.

2.2 Reduce

Supportive Corporate Actions

Action Type	Broad Planning
Actions Taken this Year	Continued upgrade of corporate energy use database and developed energy use targets for new infrastructure.
Proposed Actions for Next Year	Complete upgrade of corporate energy use database and define administrative procedures for improved energy performance of existing facilities. The revised corporate High Performance Building Policy including better than code energy performance for new buildings, no net increase of overall building energy and GHG emissions and a target of net zero and carbon neutral buildings by 2030 is anticipated to be adopted.

Action Type	Building and Lighting
Actions Taken this Year	Completed energy demand profile for corporate buildings estimating long term baseline given population growth projections.
Proposed Actions for Next Year	Complete long term energy assessment and retro-commissioning plan for corporate buildings.

Action Type	Energy Generation
Actions Taken this Year	Advanced opportunity review for corporate building projects.
Proposed Actions for Next Year	Complete Energy Strategy and Options Evaluation for new buildings in City Precinct.

Action Type	Transportation
Actions Taken this Year	Continued initiatives to encourage use of alternative modes of transportation for commuting and corporate travel including Bike to Work week promotion, corporate bike fleet and promotion of transit fare tickets and passes. Developed Green Fleet Action Plan to improve fuel efficiency, minimize overall environmental impact of equipment and vehicle operations and reduce GHG emissions 20% by 2020. Undertook best-in-class procurement of 44 fleet units, including units with highest fuel efficiency (tier 4 compliant models for excavator equipment, one electric forklift and two solar powered message board signs). Increased seating capacity of vans used in carpool program. Installed eleven electric vehicle charging stations for community and fleet use, and included anti-idling bylaw awareness in driver training and orientation.
Proposed Actions for Next Year	Continue to implement Green Fleet Action Plan actions including: demand side management; improved maintenance, monitoring and reporting; and alternative fuels. Explore expansion of employee carpool program, upgrade units upon replacement and support use of alternative modes of transportation for work related travel and other corporate initiatives.

Action Type	Water/Sewer
Actions Taken this Year	Reviewed >100 pump electricity account listings and reconciled data for location and use.
Proposed Actions for Next Year	Upgrade energy use database to generate monthly reports of water and sewer energy consumption.

Direct Corporate Actions

Action Type	Building and Lighting
Actions Taken this Year	Completed City Hall, Community Safety Building, and South Arm, West Richmond and Thompson Community Centres lighting retrofits. Replaced faulty couplings, end-of-life boiler and improved building envelope at Gateway Theatre to reduce natural gas consumption. Upgraded Works Yard building controls to improve energy efficiency. Active participant in the BC Hydro Workplace Conservation Awareness Program.
Proposed Actions for Next Year	Complete major equipment replacement and upgrade at Richmond Ice Centre and Watermania. Complete lighting retrofits at Kwantlen building and three other suitable locations. Replace end-of-life gas fired rooftop units with efficient electric heat pumps. Develop and implement Workplace Conservation Awareness Program for Year 4.

Action Type	Energy Generation
Actions Taken this Year	Completed installation of solar thermal air wall at South Arm Community Centre.
Proposed Actions for Next Year	Complete installation of heat recovery system at Richmond Ice Centre to pre-heat ice flood water and optimize solar thermal energy system at South Arm Community Centre Pool. Complete Energy Strategy and Options Evaluation to identify appropriate renewable energy source(s) for City Precinct buildings.

Action Type	Fleet
Actions Taken this Year	Undertook review of fuel management system and improved fuel security. Implemented tracking measures to establish baseline—correlating vehicle kilometres traveled with fuel consumption—and enable measurement of the effectiveness of new initiatives. Prepared for implementation of new fleet management software with business improvement processes and reviewed GPS systems for potential pilot program.
Proposed Actions for Next Year	Initiate Fraser Basin Council E3 Fleet Certification and implement new fleet software management system. Complete GPS pilot with 50 units to measure impact on fuel consumption and vehicle resource use efficiency.

Action Type	Waste
Actions Taken this Year	Delivered 14 adult workshops on composting, harvesting compost, eco-cleaning, and related waste reduction and recycling strategies. Supported Climate Change Showdown and 2nd REaDY Summit for youth. Coordinated the delivery of two theatrical productions (Zero Heroes and Clean Up Your Act) to 10 elementary schools reaching 3,500 students and “Make Richmond Sparkle” show to 8 elementary schools reaching 850 students. Provided recycling services at community events and organized Green Ambassador Program with student volunteers contributing 1,500 hours to promote recycling.
Proposed Actions for Next Year	Expand food scraps collection at City facilities in conjunction with expansion of organics recycling services to MURB units.

Action Type	Water/Sewer
Actions Taken this Year	Continued upgrading corporate facilities with lower flow units (e.g. Minoru Arena and Gateway Theatre).
Proposed Actions for Next Year	Continue to implement corporate and departmental initiatives for more efficient use of high-quality tap water.

Action Type	Green Space
Actions Taken this Year	Completed Phase 1 of 5km Railway Greenway multimodal trail connecting neighbourhoods from the Middle Arm Dyke Trail to the Steveston Waterfront. Planted 1,200 trees on streets and in parks.
Proposed Actions for Next Year	Continue to acquire land for parks and open space, begin construction of 4 acre neighbourhood park in City Centre and plant 800 trees on streets and in parks.

2.3 Corporate Innovation

Question	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	Richmond’s long-term corporate energy use analysis indicates that, without additional action, building energy use will increase 25% by 2020. This projection informs the revised High Performance Building Policy target of no net increase in building energy use from 2012 levels. In addition to this target, the policy—to be considered by Council in early 2014—sets the direction for new corporate buildings to achieve energy performance of 24% better than code.

Carbon Neutral Progress Reporting

3.1 Carbon Neutral Progress Reporting

Emissions/Offsets	Tonnes CO2e
Annual corporate emissions using SMARTTool or equivalent inventory tool	8,467
<i>Emissions from services delivered directly by the local government</i>	7,057
<i>Emissions from contracted services</i>	1,410
Less:	2,784
GHG reductions being claimed for this reporting year from Option 1 - GHG reduction project	
<i>Energy Efficient Building Retrofits and Fuel Switching</i>	
<i>Solar Thermal</i>	
<i>Household Organic Waste Composting</i>	2,784
<i>Low Emissions Vehicles</i>	
Less:	11,478
GHG reductions being claimed for this reporting year from Option 2 - GHG reduction projects	
<i>Option 2 Project A – City of Richmond Organic Waste Diversion (Waste Drop-off Service)</i>	4,507
<i>Option 2 Project B – Metro Vancouver, Vancouver Landfill Gas Capture Optimization Project - Allocation</i>	6,971
Less:	
<i>Offsets purchased for this reporting year (Option 3). Please identify your offset provider in the offset provider information section below.</i>	
Balance of corporate emissions for this reporting year. <i>(If the corporate emissions balance is zero, your local government is carbon neutral for this reporting year)</i>	-5,795