

# Climate Action Revenue Incentive Program (CARIP)

## Climate Actions and Carbon Neutral Progress Public Reporting 2014



City of Revelstoke

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## INTRODUCTION

The Climate Action Revenue Incentive Program (CARIP) is a conditional grant program that provides funding to Climate Action Charter signatories equivalent to one-hundred percent of the carbon tax that they pay directly. The City of Revelstoke signed the Climate Action Charter on February 18, 2009.

To be eligible for the conditional grant, local governments must:

- Sign on to the BC Climate Action Charter, and by doing so commit to take actions and develop strategies to achieve the following three goals:
  1. Being carbon neutral in their corporate operations by 2012.
  2. Measure and report on their community GHG emissions profile.
  3. Create complete, compact, energy efficient rural and urban communities.
- Report publicly on their plan and progress toward meeting their climate action goals.

This report is written to satisfy the last requirement. The report details the City of Revelstoke's progress with regards to measuring emissions at the corporate and community levels as well as actions taken in 2014 and planned for 2015 in the areas of broad planning, buildings, energy generation, greenspace, solid waste, transportation, and water and waste water. The report also provides information on the City's 2014 corporate greenhouse gas emissions and actions taken toward making progress toward carbon neutrality.

## MEASURE

In 2010 the Community Energy and Emissions Inventory (CEEI), developed by the Province using 2007 data, was refined with the addition of district energy to develop the City of Revelstoke Community Energy and Emissions Plan (CEEP). The City provided input toward the development of the 2010 CEEI and plans to work further with the Province to ensure district energy is included in subsequent CEEIs, creating a valuable tool to measure progress. In May 2010 the City adopted a greenhouse gas emissions reduction target, including policies and actions towards meeting this target. Following completion of the Community Energy and Emission Plan (CEEP) and the District Energy Expansion Pre-feasibility Plan (DEEP) in 2011, an amended greenhouse gas emissions reduction target of 8% by 2020 and 15% by 2030 from 2007 baseline emission was adopted into the OCP.

The City has completed and maintains a corporate energy and emissions inventory which meets both the Provincial Climate Action Charter "traditional services" model, including contracted out services, and the Federation of Canadian Municipalities Partners for Climate Protection model. An excel spreadsheet is being used to track energy, emissions and cost related to corporate operations.

## REDUCE

### BROAD PLANNING

Broad Planning refers to the high level, strategic planning that sets the stage for GHG reductions. Land use planning that focuses on Smart Growth principles (compact, complete, connected and centred) plays an especially important role in energy and GHG reduction.

	Yes	No	Please specify or comment
Since initially establishing OCP targets, policies, and actions for the reduction of greenhouse gas (GHG) emissions, as required by the Local Government Act, has your local government updated those targets, policies and actions?	True		target was increased

	Response
Does your local government use the Community Energy and Emissions Inventory (CEEI) to measure progress?	No
Has your local government established Development Permit Areas (DPAs) for climate action (i.e. energy conservation, water conservation and/or GHG emission reduction)?	No

### CORPORATE - Broad Planning

	Actions taken in 2014	Actions proposed for 2015
Feasibility Studies, Research, Analysis		Evaluate the recommendations in the 2011 Corporate Energy and Greenhouse Gas Emissions Inventory and Reduction Strategy
Plans, Policies, Regulations	Developed an Asset Management Policy	Update the City's Official Community Plan
Committees, Staffing	Created a part time Asset Management staff position	

## COMMUNITY-WIDE - Broad Planning

Actions taken in 2014      Actions proposed for 2015

Feasibility Studies, Research, Analysis	Research best practices and feasibility to implement a renewable energy policy, i.e. solar heating, district energy ready, geothermal
Plans, Policies, Regulations	Update the City's Official Community Plan. Adopt revised environmental mapping into the OCP, including habitat types, environmentally sensitive habitat mapping and buildable lands analysis.  Evaluate the recommendations in the Community Energy and Emissions Plan (CEEP)
Community Education, Engagement	Create a public display of the Integrated Sustainability Community Plan (ISCP), highlighting actions completed to date and provide an opportunity for the public to comment and identify new community priorities.

## BUILDINGS

Low-carbon buildings use the minimum amount of energy needed to provide comfort and safety for their inhabitants, and tap into renewable energy sources for heating, cooling and power. These buildings can save money, especially viewed over the long term.

Variable	Response
Does your local government have green building/construction policies, plans or programs?	No

## CORPORATE - Buildings

	Actions taken in 2014	Actions proposed for 2015
Physical Improvements, Construction	DDC upgrades at the Aquatic Centre, Arena and Courthouse were completed.  Upgrades to museum lighting were completed.  Completed a district energy retrofit to the arena furnace.	Complete DDC upgrades at City Hall.  Complete lighting upgrades at City Hall.
Funding	Resort Municipality Initiative and Columbia Basin Trust	



## COMMUNITY-WIDE - Buildings

	Actions taken in 2014	Actions proposed for 2015
Physical Improvements, Construction		Evaluate options to retrofit street lighting to LED during street lighting replacement projects
Community Education, Engagement	Educational information was provided to the public regarding energy efficiency changes to the BC Building Code	Continue providing educational information regarding changes to the BC Building Code
Funding	The City provided a wood stove exchange program rebate program	Continue to provide a wood stove exchange rebate program

## ENERGY GENERATION

A transition to renewable or low-emission energy sources for heating, cooling and power supports large, long-term GHG emissions reductions. Renewable energy including waste heat recovery (e.g. from biogas and biomass), geo-exchange, micro hydroelectric, solar thermal and solar photovoltaic, heat pumps, tidal, wave, and wind energy can be implemented at different scales, e.g. in individual homes, or integrated across neighbourhoods through district energy or co-generation systems.

Variable	Response
Has your local government undertaken district energy projects in 2014?	Yes
Has your local government undertaken renewable energy projects 2014?	No
Are you aware of the integrated resource recovery (IRR) guidance page on the BC Climate Action Toolkit? ( <a href="http://www.toolkit.bc.ca/tool/integrated-resource-recovery-irr">http://www.toolkit.bc.ca/tool/integrated-resource-recovery-irr</a> )	Yes

## CORPORATE - Energy Generation

Actions taken in 2014

Actions proposed for 2015

Plans, Policies, Regulations	In conjunction with Wood Waste 2 Rural Heat, completed a business case to convert the Water Treatment Plant from propane to a biomass boiler
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## COMMUNITY-WIDE - Energy Generation

Actions taken in 2014

Actions proposed for 2015

Feasibility Studies, Research, Analysis	Issued a Request for Expression of Interest for projects to utilize waste wood generated in the Community	Continue to work with proponents to develop a sustainable solution to utilize waste wood generated in the Community
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## GREENSPACE

Greenspace refers to parks and greenways, boulevards, community forests, urban agriculture, riparian areas, gardens, recreation/school sites, and other green spaces, such as remediated brownfield/contaminated sites. Greenspaces support climate change mitigation (reducing emissions by absorbing and sequestering GHG) and adaptation (providing shade, cooling, deflecting strong wind, and improving air quality).



### Variable

### Response

Does your local government have urban forest policies, plans or programs?

Yes

## COMMUNITY-WIDE - Greenspace

### Actions taken in 2014

### Actions proposed for 2015

Physical Improvements, Construction		Replace trees as needed
Plans, Policies, Regulations	A Food Security Strategy was completed that identifies sites within the City that are suitable for community gardens and urban farming	Explore options through the DCC Bylaw to increase parkland contribution
Policy Implementation	The City has a Tree replacement policy in place	

Community Education, Engagement	Supported the development of community gardens to provide awareness and education of water conservation, food sustainability and use of native plants. Educational brochures regarding invasive species, including a weed guide were provided to Parks staff	Continue to support community gardens. Continue to support the Farmer's Market
Committees, Staffing		Continue to be a member of the Columbia Shuswap Invasive Species Society. Provide an Invasive Species workshop for Parks Staff
Funding		Review funding opportunities to hire a Food Security Strategy Coordinator

## SOLID WASTE

Reducing, reusing, recycling, recovering and managing the disposal of the residual solid waste minimizes environmental impacts and supports sustainable environmental management, greenhouse gas reductions, and improved air and water quality.

Variable	Response
Does your local government have construction and demolition waste reduction policies, plans or programs?	No
Does your local government have organics reduction/diversion policies, plans or programs?	No

## CORPORATE - Solid Waste

	Actions taken in 2014	Actions proposed for 2015
Physical Improvements, Construction	Windrow compost/septage facility completed	
Feasibility Studies, Research, Analysis		Continue to work with the Regional District to look at options to divert

		household organic waste
Plans, Policies, Regulations	Sustainable procurement policy adopted as part of the Asset Management Policy	In conjunction with the Regional District, complete the Solid Waste Management plan review, including a new five year implementation schedule
Policy Implementation	Coffee grounds generated at City Hall are composted	Continue to compost coffee grounds generated at City Hall
Funding		Review funding opportunities for household organic waste processing



## COMMUNITY-WIDE - Solid Waste

Actions taken in 2014

Actions proposed for 2015

Funding	Responsibility of recycling collection was transferred to industry through MMBC
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## TRANSPORTATION

Transportation actions that increase transportation system efficiency, emphasize the movement of people and goods, and give priority to more efficient modes, e.g. walking, cycling, ridesharing, and public transit, can contribute to reductions in greenhouse gas emissions and more livable communities.



Variable	Response
Does your local government have policies, plans or programs to support alternative modes and technologies of transportation (e.g. walking, cycling, transit, electric vehicles)	Yes
Does your local government have a transportation demand management (TDM) strategy? ( <a href="http://www.toolkit.bc.ca/resource/transportation-demand-management-small-and-mid-sized-communities-toolkit">http://www.toolkit.bc.ca/resource/transportation-demand-management-small-and-mid-sized-communities-toolkit</a> )	No
Does your local government have policies, plans or programs to support local food production (thus reducing transportation emissions)?	Yes

## CORPORATE - Transportation

	Actions taken in 2014	Actions proposed for 2015
Physical Improvements, Construction	GPS have been added to the city fleet	
Feasibility Studies, Research, Analysis		Utilize GPS monitoring of fleet for fuel efficiency and idling.

Complete a E3 Fleet Review of the City fleet

## COMMUNITY-WIDE - Transportation

	Actions taken in 2014	Actions proposed for 2015
Physical Improvements, Construction	Completion of sidewalk and bike lanes along Nichol Road as identified in the Active Transportation plan	Install an electric vehicle charging station
Feasibility Studies, Research, Analysis	Revised the transit service to improve ridership and efficiency	
Community Education, Engagement	Stakeholder meeting to look at ways to improve public transportation	Stakeholder engagement to improve efficiencies in the transit system. Continue to support Bike to Work week
Funding		BC Hydro

## WATER and WASTEWATER

Managing and reducing water consumption and wastewater is an important aspect of developing a sustainable built environment that supports healthy communities, protects ecological integrity, and reduces greenhouse gas emissions.

Variable	Response
Does your local government have water conservation policies, plans or programs?	Yes

## CORPORATE - Water and Wastewater

	Actions taken in 2014	Actions proposed for 2015
Physical Improvements, Construction	Verified and calibrated distribution water meters	Replace two district water meters to aid in leak detection
Plans, Policies, Regulations		Complete a Storm Water Management plan which

Funding		considers climate change impacts
	Received funding from CBT Water Smart. Applied for funding through CBT Environment fund	Apply for funding through CBT Water Smart



### COMMUNITY-WIDE - Water and Wastewater

	Actions taken in 2014	Actions proposed for 2015
Community Education, Engagement	Water conservation education and items provided to residents at farmers markets and other public events	Utilize yellow flags to educate residents of the City's Watering Restriction Bylaw. Continue to provide water conservation education and items at farmers markets and other public events
Funding		Apply for funding through the New Building Canada Fund

## OTHER CLIMATE ACTIONS

This section is intended to give local governments a chance to record other climate actions that could not be captured in the above sectors, including climate change adaptation actions and air quality actions.

Variable	Response
Has your local government begun to integrate the impacts of a changing climate (adaptation) into its planning and operations?	Yes
Are you aware of the climate change adaptation guidance page on the BC Climate Action Toolkit? ( <a href="http://www.toolkit.bc.ca/adaptation-challenges-and-opportunities">http://www.toolkit.bc.ca/adaptation-challenges-and-opportunities</a> )	Yes

## CORPORATE - Other Climate Action

	Actions taken in 2014	Actions proposed for 2015
Committees, Staffing	The City contracts an Environmental Sustainability Coordinator	Continue to contract the Environmental Sustainability Coordinator

## COMMUNITY-WIDE - Other Climate Action

	Actions taken in 2014	Actions proposed for 2015
Community Education, Engagement		Update and expand the Environmental Sustainability page on the City's website

## INNOVATION

### CORPORATE - Innovation

The Community/Aquatic Center, Arena and City Hall are all connected to biomass district energy resulting in a saving of approximately 550 tCO<sub>2</sub> annually. The heat reclamation system installed at the pool in 2011 has resulted in significant energy savings and an additional reduction of approximately 100 tCO<sub>2</sub> annually

### COMMUNITY-WIDE - Innovation

The City's resort shuttle bus has been a big success. The resort shuttle was added in the 2008/09 ski season to transport people to and from Revelstoke Mountain Resort and reduce vehicle travel. In the first year the service saw approximately 15,000 trips. Since then additional buses have been added and

the 2013/14 season saw ridership increase to 46,000 trips, an increase of more than 300% since the service began.

## CARBON NEUTRAL PROGRESS REPORTING

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	TonnesCO2e
GHG emissions from services delivered directly by the City of Revelstoke	977 tCO2(e)
GHG emissions from contracted services	97 tCO2(e)
<b>TOTAL Corporate Emissions for 2014</b>	<b>1074 tCO2(e)</b>

### Reporting Reductions and Offsets

To be carbon neutral, a local government must balance their TOTAL corporate GHG emissions by undertaking Option 1 (GCC-supported) or Option 2 (alternative) community GHG emissions reduction projects that meet project eligibility requirements; and/or; purchase carbon offsets from a credible offset provider.

The City of Revelstoke did not undertake any community reduction projects or purchase carbon offsets in 2014, but continues to make progress toward carbon neutrality by:

1. Setting aside funds in a climate action reserve fund
2. Completing energy saving retrofits to municipal buildings; and
2. Undertaking the actions indicated in this report

The City of Revelstoke has achieved Level 2 under the Green communities Committee (GCC) Climate Action Recognition program.