



# Climate Action Revenue Incentive (CARIP) Public Report for 2018

Local Government: City of Colwood

Report Submitted by:

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Date: May 23, 2019

The City of Colwood has completed the 2018 Climate Action Revenue Incentive Program (CARIP) Public Report as required by the Province of BC. The CARIP report summarizes actions taken in 2018 and proposed for 2019 to reduce corporate and community-wide energy consumption and greenhouse gas emissions (GHG) and reports on progress towards achieving carbon neutrality.

## 2018 BROAD PLANNING ACTIONS

Broad Planning refers to high level planning that sets the stage for GHG emissions reductions, including plans such as Official Community Plans, Integrated Community Sustainability Plans, Climate Action Plans or Community Energy Emissions Plans. Land use planning that focuses on Smart Growth principles (compact, complete, connected, and centred) plays an especially important role in energy and GHG reduction.

Community-Wide Broad Planning Actions Taken in 2018 + Additional Actions	
	Adopted a new Official Community Plan (Bylaw No.1700).
	Adopted an Urban Forest Bylaw (Bylaw No.1735).
Community-Wide Broad Planning Actions Proposed for 2019	
	Commence update of the Transportation Master Plan.
	Commence work towards new zoning, parking, and sign bylaws.
	Complete strategic planning with Council.

Corporate Broad Planning Actions Taken in 2018 + Additional Actions	
	Started to prepare a pavement condition assessment and plan for asset management of roads.
	Started to prepare a Stormwater Master Plan.
	Continued to work on an update of the Subdivision and Development of Land bylaw.
	Continued to work on an update of the Roads Development Cost Charge bylaw.
Corporate Broad Planning Actions Proposed for 2019	
	Complete the update of the Subdivision and Development of Land bylaw.
	Complete the update of the Roads Development Cost Charge bylaw.
	Complete the Stormwater Master Plan.
	Complete the pavement condition assessment and plan for asset management of roads.

Broad Planning	
What is (are) your current GHG reduction target(s)?	Per capita GHG emissions reduction from 2007 levels: 50% by 2020, 75% by 2030, and 93% by 2050  Total GHG emissions reduction from 2007 levels: 33% by 2020, 49% by 2030, and 80% by 2050
Are you familiar with your local government's community energy and emissions inventory (e.g. <a href="#">CEEI</a> or another inventory)?	Yes
What plans, policies or guidelines govern the implementation of climate mitigation in your community?	<ul style="list-style-type: none"> <li>• Community Energy and Emissions Plan</li> <li>• Integrated Community Sustainability Plan</li> <li>• Community-Wide Climate Action Plan</li> <li>• Official Community Plan</li> <li>• Regional Growth Strategy</li> <li>• Do not have a plan</li> </ul>
Does your local government have a corporate GHG reduction plan?	Yes

## 2018 BUILDING AND LIGHTING ACTIONS

### Building and Lighting Actions

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 when calculated over the long term. This category also includes reductions realized from energy efficient street lights and lights in parks or other public spaces.

Corporate Building and Lighting Actions Taken in 2018 + Additional Actions	
	Made energy improvements to Emery Hall and St. John's Church by replacing oil heating source with heat pumps.
	Started to prepare a multi-year plan to upgrade HPS street lights to LED.
Corporate Building and Lighting Actions Proposed for 2019	
	Complete the multi-year plan to upgrade HPS street lights to LED and start the upgrade work of approximately 60 street lights.

Building and Lighting	
Is your local government aware of the <a href="#">BC Energy Step Code</a> ?	Yes
Is your local government implementing the <a href="#">BC Energy Step Code</a> ?	Yes, date TBD

## 2018 ENERGY GENERATION ACTIONS

### Energy Generation Actions

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.

Energy Generation	
Is your local government developing, or constructing a <ul style="list-style-type: none"> <li>• district energy system</li> <li>• renewable energy system</li> <li>• none of the above</li> </ul>	No No
Is your local government operating a <ul style="list-style-type: none"> <li>• district energy system</li> <li>• renewable energy system</li> <li>• none of the above</li> </ul>	No Yes
Is your local government connected to a district energy system that is operated by another energy provider?	No
Are you familiar with the 2018 <a href="#">List of Funding Opportunities for Clean Energy Projects Led by First Nations and Local Governments</a> ?	Yes

## 2018 GREENSPACE/NATURAL RESOURCE PROTECTION ACTIONS

### Greenspace Actions

Greenspace/Natural Resource Protection refers to the creation of parks and greenways, boulevards, community forests, urban agriculture, riparian areas, gardens, recreation/school sites, and other green spaces, such as remediated brownfield/contaminated sites as well as the protection of wetlands, waterways and other naturally occurring features.

Community-Wide Greenspace Actions Taken in 2018 + Additional Actions	
	Adopted an Urban Forest Bylaw.
	Facilitated creation of a community garden on city-owned land.
	Two parks were dedicated as a result of subdivision developments (total area of 3,130m <sup>2</sup> ).
Community-Wide Greenspace Actions Proposed for 2019	
	Additional park areas are to be dedicated as part of subdivision developments.

Corporate Greenspace Actions Taken in 2018 + Additional Actions	
	Invasive plants were removed in an area of Colwood Creek Park and 28 trees and 30 shrubs were planted in their place.
	Invasive plants were removed from 4 other Colwood parks resulting in revitalization of +600m <sup>2</sup> .
Corporate Greenspace Actions Proposed for 2019	
	Continue removal of invasive plants from 5 other Colwood parks.

Greenspace	
Does your local government have urban forest policies, plans or programs?	Yes
Does your local government have policies, plans or programs to support local food production?	Yes

## 2018 SOLID WASTE ACTIONS

### Solid Waste Actions

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.

Community-Wide Solid Waste Actions Taken in 2018 + Additional Actions	
	Held twice monthly branch drop off service for residents at the Public Works Yard.
	Allowed tree service companies to dispose of chipped branches in the Public Works yard for use as mulch by Colwood Public Works and public.
	Held a spring cleanup for residents to dispose of large waste loads in Colwood closer to their homes rather than the landfill. Sorted the waste to divert, if possible, from the regional landfill.

<b>Community-Wide Solid Waste Actions Proposed for 2019</b>	
	Continue with branch drop off services.
	Continue to allow tree service companies to dispose of chipped branches in Public Works yard.
	Hold spring cleanup for residents.

<b>Corporate Solid Waste Actions Taken in 2018 + Additional Actions</b>	
	Continued using three digesters located beside City Hall for staff food wastes

<b>Corporate Solid Waste Actions Proposed for 2019</b>	
	Continue using three digesters located beside City Hall for staff food wastes

<b>Solid Waste</b>	
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

## 2018 TRANSPORTATION ACTIONS

### Transportation Actions

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 and public transit, can contribute to reductions in GHG emissions and more livable communities.

<b>Community-Wide Transportation Actions Taken in 2018 + Additional Actions</b>	
	Worked with BC Transit to improve bus service.
	Started to upgrade 22 bus stops to handicap accessible.

<b>Community-Wide Transportation Actions Proposed for 2019</b>	
	Commence review and update of the Transportation Master Plan.
	Commence review and update of a standalone Off-Street Parking bylaw.
	Work with BC Hydro to install additional DC faster chargers for electric vehicles.
	Complete upgrading 22 bus stops to handicap accessible.

<b>Corporate Transportation - Actions Proposed for 2019</b>	
	Prepare designs for adding bicycle lanes and sidewalks on Painter and Metchosin Road(s).

Transportation	
<b>Does your local government have policies, plans or programs to support:</b> <ul style="list-style-type: none"> <li>• Walking</li> <li>• Cycling</li> <li>• Transit Use</li> <li>• Electric Vehicle Use</li> </ul>	Yes Yes Yes Yes
<b>Does your local government have a Transportation Demand Management (TDM) strategy (e.g. to reduce single-vehicle occupancy trips, increase travel options, provide incentives to encourage individuals to modify travel behaviour)?</b>	No
<b>Does your local government integrate its transportation and land use planning?</b>	Yes

## 2018 WATER AND WASTEWATER ACTIONS

### Water and Wastewater Actions

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 reduce greenhouse gas emissions.

Water Conservation	
<b>Does your local government have water conservation policies, plans or programs?</b>	No

## 2018 CLIMATE CHANGE ADAPTATION ACTIONS

This section of the CARIP survey is designed to collect information related to the types of climate impacts local governments are experiencing and how they are being addressed.

Q 66 Please identify the THREE climate impacts that are most relevant to your Local Government.	
<ul style="list-style-type: none"> <li>• Warmer winter temperatures reducing snowpack</li> <li>• Changes to temperature and precipitation causing seasonal drought</li> <li>• Heatwaves impacting population health</li> <li>• Increased temperatures increasing wildfire activity</li> <li>• Increased temperatures affecting air quality</li> <li>• Changing temperatures influencing species migration and ecosystem shifts</li> <li>• Changing temperatures influencing ecosystem shifts</li> <li>• Extreme weather events contributing to urban and overland flooding</li> <li>• Sea level rise and storms causing coastal flooding and/or erosion</li> </ul>	
<b>In 2018 has your local government addressed the impacts of a changing climate using any of the following?</b>	
Risk and Vulnerability Assessments	Yes
Risk Reduction Strategies	Yes

Emergency Response Planning	No
Asset Management	Yes
Natural/Eco Asset Management Strategies	Yes
Infrastructure Upgrades (e.g. stormwater system upgrades)	No
Beach Nourishment Projects	No
Economic Diversification Initiatives	No
Strategic and Financial Planning	No
Cross-Department Working Groups	No
Official Community Plan Policy Changes	Yes
Changes to Zoning and other Bylaws and Regulations	Yes
Incentives for Property Owners (e.g. reducing storm water run-off)	No
Public Education and Awareness	No
Research	Yes
Mapping	No
Partnerships	Yes

<b>Climate Change Adaptation Actions Taken in 2018</b>	
Please elaborate on key actions and/or partnerships your local government has engaged in to prepare for, and adapt to a changing climate. Add links to key documents and information where appropriate.	
	Participating in the <i>Together for Climate</i> project with ICLEI Canada in developing a community climate change adaptation plan.
	Participating in the Adaptation to Climate Change Team (ACT) with Simon Fraser University (SFU) and the Integrated Climate Action in BC Communities Initiative (ICABBC) to integrate climate action framework streamlining climate change adaptation and mitigation in decision-making and planning.
	Chose a location to relocate the Ocean Boulevard wastewater pump station where it would not be affected by sea level rise before the year 2200.
	Completed a study on the erosion of a section of Colwood's coastline between Lagoon Road and the Esquimalt Lagoon Bridge with recommendations for protection.
	Started a study on the erosion of a section of Colwood's coastline south of Lagoon Road.
<b>Climate Change Adaptation Actions Proposed for 2019</b>	
	Continue to participate in the <i>Together for Climate</i> project with ICLEI Canada in developing a community climate change adaptation plan.
	Continue to participate in the Adaptation to Climate Change Team (ACT) with Simon Fraser University (SFU) and the Integrated Climate Action in BC Communities Initiative (ICABBC) to integrate climate action framework streamlining climate change adaptation and mitigation in decision-making and planning.
	Complete a preliminary design of a relocated Ocean Boulevard wastewater pump station.
	Receive a study on erosion of a section of Colwood's coastline south of Lagoon Road.
	Complete a study on erosion of Colwood's coastline north of the Esquimalt Lagoon Bridge.
<b>For more information please contact:</b>	
	Jill Collinson, MCIP, RPP

The following are key resources that may be helpful to your local government in identifying climate impacts, as well as, strategies, actions and funding to deal with them. For those resources that you have used, please indicate whether they were useful in advancing your work in climate change adaptation?

<a href="#">Indicators of Climate Change for British Columbia</a> <a href="#">Plan2Adapt</a> <a href="#">Climate Projections for Metro Vancouver</a> <a href="#">Climate Projections for the Capital Region</a> <a href="#">Climate Projections for the Cowichan Valley Regional District</a> <a href="#">Province of BC's BC Adapts Video Series</a> <a href="#">Preparing for Climate Change: Implementation Guide for Local Governments</a> <a href="#">Public Infrastructure and Engineering Vulnerability Committee's (PIEVC)</a> <a href="#">Sea Level Rise Adaptation Primer</a> <a href="#">BC Regional Adaptation Collaborative Webinars</a> <a href="#">Retooling for Climate Change</a> <a href="#">Water Balance Model</a> <a href="#">Water Conservation Calculator</a>  Funding: <a href="#">National Disaster Mitigation Program (NDMP)</a> <a href="#">Community Emergency Preparedness Fund (CEPF)</a> <a href="#">Municipalities for Climate Innovation Program (MCIP)</a> <a href="#">Climate Adaptation Partner Grants (FCM)</a> <a href="#">Infrastructure Planning Grants (MAH)</a> <a href="#">Federal Gas Tax Fund</a>	Haven't Used Haven't Used Not Useful Useful Not Useful Haven't Used Haven't Used Useful Useful Useful Haven't Used Haven't Used Haven't Used  Haven't Used Haven't Used Haven't Used Haven't Used Useful Useful
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## 2018 OTHER CLIMATE ACTIONS

### Other Climate Actions

This section provides local governments the opportunity to report other climate actions that are not captured in the categories above.

Community-Wide Other Actions Taken in 2018	
	Cool It! Climate Leadership Training Program delivered to two classrooms (50 kids).

Other	
Are you familiar with the <a href="#">Community Lifecycle Infrastructure Costing Tool (CLIC)</a> ?	Yes
Is your local government using the <a href="#">CLIC</a> tool?	No



## INNOVATION AND PEER-TO-PEER LEARNING

### Innovation

This section provides the opportunity to showcase an innovative *Corporate and/or Community-Wide* GHG reduction and/or climate change adaptation activity that your local government has undertaken and that has had, or has the potential to have, a significant impact. You are welcome to highlight an action that has already been listed.

Projects included here may be featured as success stories on the [B.C. Climate Action Toolkit](#) and/or shared with other local governments to inspire further climate action. Please add links to additional information where possible.

Communities that have conducted innovative initiatives may want to consider making applications to [CEA's Climate and Energy Action Awards](#), [FCM Sustainable Communities Awards](#) or to [FCM's National Measures Report](#).

<b>Community-Wide Innovation Action</b>
In 2018 the <i>Cool It!</i> Program reached 50 students in the City of Colwood through workshops at 2 schools. During the program challenge students committed to energy saving actions over a 4 week period. Student energy conservation and emission saving actions at home resulted in a projected savings of 42.252 tonnes of carbon dioxide (CO <sub>2</sub> e) if they continue their actions for one year.
<b>For more information on actions described above contact</b>
Jill Collinson, MCIP, RPP

### Programs, Partnerships and Funding Opportunities

Local governments often rely on programs, partnerships and funding opportunities to achieve their climate action goals. Please share the names of programs and organizations that have supported your local government's climate actions by listing each entry in the box below separated by a forward slash (e.g. program1/program2).

#### Mitigation

<b>Mitigation Programs, Partnerships and Funding</b>
<ul style="list-style-type: none"><li>• ICLEI Canada</li><li>• Adaptation to Climate Change Team (ACT) ICABCC initiative (Integrated Climate Action in BC Communities) with Simon Fraser University (SFU)</li><li>• CRD Climate Action Program – Cool It!</li></ul>

#### Adaptation

<b>Adaptation Programs, Partnerships and Funding</b>
<ul style="list-style-type: none"><li>• ICLEI Canada</li><li>• Adaptation to Climate Change Team (ACT) ICABCC initiative (Integrated Climate Action in BC Communities) with Simon Fraser University (SFU)</li></ul>

## 2018 CARBON NEUTRAL REPORTING

Local governments are required to report on their progress in achieving their carbon neutral goal under the [B.C. Climate Action Charter](#). Working with B.C. local governments, the joint Provincial-UBCM Green Communities Committee (GCC) has established a common approach to determining carbon neutrality for the purposes of the Climate Action Charter, including a Carbon Neutral Framework and supporting guidance for local governments on how to become carbon neutral.

Prior to completing this portion of the survey, please ensure that you are familiar with guidance available on the [B.C. Climate Action Toolkit website](#), especially the [Workbook](#) and [Becoming Carbon Neutral: A Guide for Local Governments in British Columbia](#).

*Please note: As a result of the BC Recycling Regulation, local governments are no longer required to account for GHG emissions from vehicles, equipment and machinery required for the collection, transportation and diversion of packaging and printed paper, in their annual Climate Action Revenue Incentive Program (CARIP) reports.*

### Reporting Emissions

Did your local government measure corporate GHG emissions for 2018?	<b>Yes</b>
If your local government measured 2018 corporate GHG emissions, please report the number of corporate GHG emissions from services delivered directly by your local government (in tonnes of carbon dioxide equivalent)	<b>204.64</b>
If your local government measured 2018 corporate GHG emissions, please report the number of corporate GHG emissions from contracted services (in tonnes of carbon dioxide equivalent)	<b>198.61</b>
<b>TOTAL A: CORPORATE GHG EMISSIONS FOR 2018</b>	<b>403 tCO<sub>2</sub>e</b>

### Reporting Reductions and Offsets

To be carbon neutral, a local government must balance their TOTAL corporate GHG emissions generated in 2018 by one or a combination of the following actions:

- undertake GCC-supported Option 1 Project(s)
- undertake GCC-supported Option 2 Project(s)
- purchase carbon offsets from a credible offset provider

*For more information about options to balance or offset corporate GHG emissions please refer to [Becoming Carbon Neutral: A Guidebook for Local Governments in British Columbia](#).*

If applicable, please report the 2018 GHG emissions reductions (in tonnes of carbon dioxide equivalent (tCO<sub>2</sub>e)) being claimed from any of the following Option 1 GHG Reduction Projects:

<b>OPTION 1 PROJECTS</b>	<b>REDUCTIONS</b>
Energy Efficient Retrofits (in tonnes of carbon dioxide equivalent (tCO2e))	
Solar Thermal (in tonnes of carbon dioxide equivalent (tCO2e))	
Household Organic Waste Composting (in tonnes of carbon dioxide equivalent (tCO2e))	<b>179.2</b>
Low Emission Vehicles (in tonnes of carbon dioxide equivalent (tCO2e))	
Avoided Forest Conversion (in tonnes of carbon dioxide equivalent (tCO2e))	
<b>TOTAL B: REDUCTIONS FROM ALL OPTION 1 PROJECTS FOR 2018</b>	<b>179.2 tCO2e</b>

**Corporate GHG Emissions Balance for 2018**

Your local government's Corporate GHG Emissions Balance is the difference between total corporate offset table GHG emissions (direct + contracted emissions) and the GHG emissions reduced through GCC Option 1 and Option 2 projects and/or the purchase of offsets.

**Q 96 CORPORATE GHG EMISSIONS BALANCE FOR 2018 = (A – (B+C+D)) = 223.8 tCO2e**

**If your Corporate GHG Emissions Balance is negative or zero,  
your local government is carbon neutral.  
CONGRATULATIONS!**

Carbon Neutral Reporting	
<b>Does your local government set aside funds in a climate reserve fund or similar?</b>	<b>Yes</b>

## GCC CLIMATE ACTION RECOGNITION PROGRAM

### Green Communities Committee Climate Action Recognition Program

The joint Provincial-UBCM Green Communities Committee (GCC) is pleased to be continuing the Climate Action Recognition Program again this year. This multi-level program provides the GCC with an opportunity to review and publicly recognize the progress and achievements of each Climate Action Charter (Charter) signatory.

Recognition is provided on an annual basis to local governments who demonstrate progress on their Charter commitments, according to the following:

**Level 1 – Demonstrating Progress on Charter Commitments:** For local governments who demonstrate progress on fulfilling one or more of their Charter commitments.

**Level 2 – Measuring GHG Emissions:** For local governments that achieve Level 1, and who have measured their Corporate GHG Emissions for the reporting year and demonstrate that they are familiar with their community's energy and emissions inventory (i.e. CEEI)

**Level 3 – Accelerating Progress on Charter Commitments:** For those local governments who have achieved Level 1 and 2 and have demonstrated undertaking significant action (corporately or community wide) to reduce GHG emissions in the reporting year (e.g. through undertaking a GHG reduction project, purchasing offsets, establishing a reserve fund).

**Level 4 - Achievement of Carbon Neutrality:** For local governments who achieve carbon neutrality in the reporting year.

**Based on your local government's 2018 CARIP Climate Action/Carbon Neutral Progress Survey, please check the GCC Climate Action Recognition Program level that best applies:**

<input type="checkbox"/>	Level 1 – Demonstrating Progress on Charter Commitments	
<input checked="" type="checkbox"/>	Level 2 – Measuring GHG Emissions	X
<input type="checkbox"/>	Level 3 – Accelerating Progress on Charter Commitments	
<input type="checkbox"/>	Level 4 - Achievement of Carbon Neutrality	
<input type="checkbox"/>	Not Sure	