



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

The Town of Golden 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.

## 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	
Community-Wide Broad Planning Actions Proposed for 2019	

Corporate Broad Planning Actions Taken in 2018	
Corporate Broad Planning Actions Proposed for 2019	

Broad Planning		
What is (are) your current GHG reduction target(s)?	To reduce greenhouse gas emissions from Town operations by 20% from 2009 to 2020, and to reduce greenhouse gas emissions from community-wide specified sectors by 33% from 2007-2020.	
Are you familiar with your local government's community energy and emissions inventory (e.g. <a href="#">CEEI</a> or another inventory)?		No
What plans, policies or guidelines govern the implementation of climate mitigation in your community?	<ul style="list-style-type: none"> <li>• Official Community Plan (OCP)</li> <li>• Other: Columbia Basin Trust Climate Action Charter</li> </ul>	Yes Yes
Does your local government have a corporate GHG reduction plan?		No

## 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.

Community-Wide Building and Lighting Actions Taken in 2018	
	n/a
Community-Wide Building and Lighting Actions Proposed for 2019	
	n/a

Corporate Building and Lighting Actions Taken in 2018	
	One Solar Light Standard installed on the community pathway system.
	Nine Solar Light Standards donated to for installation on community pathway system in 2019.
	One street light requiring a head replacement was changed to LED.
	Buildings are being transferred to LED as lighting replacements are required and conversion is practicable.
Corporate Building and Lighting Actions Proposed for 2019	
	Installation of nine Solar Light Standards along community pathway system.
	Upgrade lighting systems at the fire hall
	Continue other municipal buildings transfer to LED as lighting replacements are required and conversion is practicable.

Building and Lighting	
The Province has committed to taking incremental steps to increase energy-efficiency requirements in the BC Building Code to make buildings net-zero energy ready by 2032. The BC Energy Step Code--a part of the BC Building Code--supports that effort	
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> ?	No

## 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.

Community-Wide Energy Generation Actions Taken in 2018	
	n/a
Community-Wide Energy Generation Actions Proposed for 2019	
	n/a

Corporate Energy Generation Actions Taken in 2018	
	Heat pump HVAC system installed in Airport terminal building.
Corporate Energy Generation Actions Proposed for 2019	
	n/a

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> </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> </ul>	No No
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>	No

## 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	
	n/a
Community-Wide Greenspace Actions Proposed for 2019	
	n/a

Corporate Greenspace Actions Taken in 2018	
	Re-planted 23 Boulevard trees (rather than removing)
Corporate Greenspace Actions Proposed for 2019	
	Plant 3-2.5" caliper trees, 100 #1 pot Junipers, and 650 Pine/Fir seedlings.

Greenspace	
Does your local government have urban forest policies, plans or programs?	No
Does your local government have policies, plans or programs to support local food production?	No

## 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	
	n/a
Community-Wide Solid Waste Actions Proposed for 2019	
	n/a

<b>Corporate Solid Waste Actions Taken in 2018</b>	
	Continuation and growth of the seasonal curbside yard waste collection program
	Continuation and growth of curbside recycling program
<b>Corporate Solid Waste Actions Proposed for 2019</b>	
	Continuation and growth of the seasonal curbside yard waste collection program
	Continuation and growth of curbside recycling program

<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</b>	
	n/a
<b>Community-Wide Transportation Actions Proposed for 2019</b>	
	n/a

<b>Corporate Transportation Actions Taken in 2018</b>	
	Continued walking/biking trails enhancements – Rotary Trail to KKMP/Selkirk Community
	Addition of Solar powered lamp standards for increased safe pathways use
	Ongoing trail brushing and upkeep program
	Annual sidewalk renewal program
	Installed local charging stations for electric vehicles
<b>Corporate Transportation - Actions Proposed for 2019</b>	
	Continued walking/biking trails enhancements
	Addition of Nine Solar powered lamp standards for increased safe pathways use
	Ongoing trail brushing and upkeep program
	Annual sidewalk renewal program
	Ongoing fleet procurement of emissions compliant units

<b>Transportation</b>	
Does your local government have policies, plans or programs to support: <ul style="list-style-type: none"> <li>• Walking</li> <li>• Cycling</li> <li>• Transit Use</li> <li>• Electric Vehicle Use</li> <li>• Other (please specify)</li> </ul>	Yes Yes No No n/a
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)?	No
Does your local government integrate its transportation and land use planning?	n/a

## 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 reduces GHG emissions.

<b>Community-Wide Water and Wastewater Actions Taken in 2018</b>	
	Lawn & Garden Water Conservation - Intensive communication plan
<b>Community-Wide Water and Wastewater Actions Proposed for 2019</b>	
	Lawn & Garden Water Conservation - Intensive communication plan

<b>Corporate Water and Wastewater Actions Taken in 2018</b>	
	Lagoons Blower Replacement Construction
	New sections of Sanitary Main CIPP Lining totalling 290m
	Lawn & Garden Water Conservation - Intensive communication plan
	Lift Station Odour control installation (Charcoal filter system)
	Continued with water system leak detection and repair. Lined 2 lagoons to reduce ground water effects (reduce treatment volume)
<b>Corporate Water and Wastewater Actions Proposed for 2019</b>	
	New sections of Sanitary Main CIPP Lining
	Hypalon Liner Replacement
	Lawn & Garden Water Conservation - Intensive communication plan
	Continue with water system leak detection and repair.

<b>Water Conservation</b>	
Does your local government have water conservation policies, plans or programs?	Yes

## 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.

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>• <b>Increased temperatures increasing wildfire activity</b></li> <li>• <b>Increased temperatures affecting air quality</b></li> <li>• Changing temperatures influencing species migration and ecosystem shifts</li> <li>• Changing temperatures influencing ecosystem shifts</li> <li>• <b>Extreme weather events contributing to urban and overland flooding</b></li> <li>• Sea level rise and storms causing coastal flooding and/or erosion</li> </ul>	Yes Yes  Yes
Other (please specify):	
In 2018 has your local government addressed the impacts of a changing climate using any of the following?	
Risk and Vulnerability Assessments	Yes
Risk Reduction Strategies	Yes
Emergency Response Planning	Yes
Asset Management	Yes
<i>Natural/Eco Asset Management Strategies</i>	No
Infrastructure Upgrades (e.g. storm water system upgrades)	Yes
<i>Beach Nourishment Projects</i>	No
<i>Economic Diversification Initiatives</i>	Yes
Strategic and Financial Planning	Yes
Cross-Department Working Groups	Yes
<i>Official Community Plan Policy Changes</i>	No
Changes to Zoning and other Bylaws and Regulations	No
<i>Incentives for Property Owners (e.g. reducing storm water run-off)</i>	No
Public Education and Awareness	Yes
Research	Yes
Mapping	Yes
Partnerships	Yes
Other (please specify):	



<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.	
	Facility Asset Management Planning
	Master Drainage Plan
	Dike: Vegetation Control and Removal
	Dike Improvement Project
	River Ice Floe Monitoring Planning
<b>Climate Change Adaptation Actions Proposed for 2019</b>	
	Ongoing Asset Management Planning
	Dike Improvement Project
	Kicking Horse River Ice Monitoring (Structural Flood Mitigation) construction and commission
	Integrate Master Drainage Plan Climate Adaptation recommendations/principles into storm system additions/renewals
<b>For more information please contact</b>	
	Chris Cochran, Manager of Operations – 250-344-2271

<b>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?</b>	
<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>	Useful Haven't Used Haven't Used Haven't Used Haven't Used Haven't Used Haven't Used Haven't Used Haven't Used Haven't Used Haven't Used Haven't Used Haven't Used Useful Useful Useful Useful Useful Useful
<b>Other (please specify)</b>	

## 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	
	n/a
Corporate Other Actions Taken in 2018	
	Replaced two older fire fleet vehicles with a new multi response vehicle (F550)
	Added services trailer for water/sewer system repair response to reduce worker trip generation

Other	
Are you familiar with the <a href="#">Community Lifecycle Infrastructure Costing Tool (CLIC)</a> ?	No
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](#).

Community-Wide Innovation Action	
	n/a
Corporate Innovation Action	
	n/a
For more information on actions described above contact	
	n/a

## 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

Mitigation Programs, Partnerships and Funding
<ul style="list-style-type: none"><li>• Columbia Basin Trust</li><li>• ICBC</li><li>• New Building Canada Fund</li><li>• Strategic Priorities Gas Tax Fund</li><li>• FCM MCIP</li><li>• Emergency Management BC (National Disaster Mitigation)</li><li>• Clean Water Wastewater Fund</li></ul>

### Adaptation

Adaptation Programs, Partnerships and Funding
<ul style="list-style-type: none"><li>• Columbia Basin Trust</li><li>• New Building Canada Fund</li><li>• Strategic Priorities Gas Tax Fund</li><li>• FCM MCIP</li><li>• Emergency Management BC (National Disaster Mitigation)</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>404</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>101</b>
<b>TOTAL A: CORPORATE GHG EMISSIONS FOR 2018 (Direct GHGs + Contracted GHGs)</b>	<b>505</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:

OPTION 1 PROJECTS	REDUCTIONS
Energy Efficient Retrofits (in tonnes of carbon dioxide equivalent (tCO <sub>2</sub> e))	
Solar Thermal (in tonnes of carbon dioxide equivalent (tCO <sub>2</sub> e))	
Household Organic Waste Composting (in tonnes of carbon dioxide equivalent (tCO <sub>2</sub> e))	
Low Emission Vehicles (in tonnes of carbon dioxide equivalent (tCO <sub>2</sub> e))	
Avoided Forest Conversion (in tonnes of carbon dioxide equivalent (tCO <sub>2</sub> e))	

<b>TOTAL B: REDUCTIONS FROM ALL OPTION 1 PROJECTS FOR 2018</b>	<b>tCO2e</b>
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If applicable, please report the names and 2018 GHG emissions reductions (in tonnes of carbon dioxide equivalent (tCO2e)) being claimed from Option 2 GHG Reduction Projects:

<b>Option 2 Project Name</b>	<b>REDUCTIONS</b>
Option 2 GHGs Reduced (tCO2e)	
Option 2 Project Name	
Option 2 GHGs Reduced (tCO2e)	
Option 2 Project Name	
Option 2 GHGs Reduced (tCO2e)	
Option 2 Project Name	
Option 2 GHGs Reduced (tCO2e)	
<b>Q 92 TOTAL C: REDUCTIONS FROM ALL OPTION 2 PROJECTS FOR 2018</b>	<b>tCO2e</b>

#### Offsets

If applicable, please report the name of the offset provider, type of project and number of offsets purchased (in tonnes of carbon dioxide equivalent (tCO2e)) from an offset provider for the 2018 reporting year:

*NOTE: DO NOT INCLUDE ANY FUNDS THAT MAY BE SET ASIDE IN A CLIMATE ACTION RESERVE FUND.*

<b>Offset Provider Name</b>	<b>OFFSETS</b>
Offsets (tCO2e)	
Offset Provider Name	
Offsets (tCO2e)	
<b>TOTAL D: OFFSETS PURCHASED FOR 2018</b>	<b>tCO2e</b>

**TOTAL REDUCTIONS AND OFFSETS FOR 2018 (Total B+C+D) = \_\_\_\_\_ tCO2e**

## Corporate GHG Emissions Balance for 2018

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

**CORPORATE GHG EMISSIONS BALANCE FOR 2018 = (A – (B+C+D)) = 505 tCO<sub>2</sub>e**

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

If your local government was carbon neutral in 2018, please record any emissions reductions you will be carrying over for future years and the source of the reductions, including the year they were earned (e.g. organics diversion, 2018 100 tCO<sub>2</sub>e)

SOURCE OF CARRY OVER EMISSION REDUCTIONS (and year earned)	REDUCTIONS
<b>BALANCE OF REDUCTIONS ELIGIBLE FOR CARRY OVER TO NEXT YEAR</b>	<b>tCO<sub>2</sub>e</b>

Carbon Neutral Reporting	
Does your local government set aside funds in a climate reserve fund or similar?	<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:

	Level 1 – Demonstrating Progress on Charter Commitments	
	Level 2 – Measuring GHG Emissions	<b>X</b>
	Level 3 – Accelerating Progress on Charter Commitments	
	Level 4 - Achievement of Carbon Neutrality	
	Not Sure	

Related to Level 3 recognition, if applicable, please identify any new or ongoing corporate or community wide GHG reduction projects (other than an Option 1 or Option 2 project) undertaken by your local government that reflects a significant investment of time and/or financial resources and is intended to result in significant GHG reductions:

<b>PROJECT NAME:</b>
n/a