

# Climate Action Revenue Incentive (CARIP) Public Report for 2017



**Local Government:** Town of Comox

**Report Submitted by:**

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The Town of Comox has completed the 2017 Climate Action Revenue Incentive Program (CARIP) Public Report as required by the Province of BC. The CARIP report summarizes actions taken in 2017 and proposed for 2018 to reduce corporate and community-wide energy consumption and greenhouse gas emissions (GHG) and reports on progress towards achieving carbon neutrality.

## 2017 BROAD PLANNING ACTIONS

### 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, centred) plays an especially important role in energy and GHG reduction.

<b>Community-Wide Actions Taken in 2017</b>	
	Primary area of reduction in community GHG production through our Official Community Plan is projected to be through transit oriented development policies of the OCP. The resulting more compact development pattern in association with pedestrian and cycling infrastructure improvements also reduces GHG production.
	The Town continues to require energy efficient construction standards through the rezoning process.
	The Town has also enacted a Downtown Revitalization incentive program that requires energy efficient construction to qualify for full incentives.
<b>Community-Wide Actions Proposed for 2018</b>	
	As in prior years, our targets for community wide reductions from the OCP remain, along with requirements for rezoning and Downtown Revitalization incentives – at least until Dec 31 <sup>st</sup> .

<b>Corporate Actions Taken in 2017</b>	
<b>Corporate Actions Proposed for 2018</b>	

<b>Broad Planning</b>	
What is (are) your current GHG reduction target(s)?	2011 OCP Bylaw (section 2.3.11) identifies a 28% reduction (from 4.99 to 3.60 tCO <sub>2</sub> e per person) over a 20 year time frame in comparison to the previous OCP.
Are you familiar with your community's community energy and emissions inventory (e.g. CEEI 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>• Community Energy and Emissions (CEE) Plan</li> <li>• Climate Action Plan</li> <li>• Integrated Community Sustainability Plan</li> <li>• Official Community Plan (OCP)</li> <li>• Regional Growth Strategy (RGS)</li> <li>• Other:</li> </ul>	No No No Yes Yes No
Does your local government have a corporate GHG reduction plan?	No

## 2017 BUILDINGS 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.

<b>Community-Wide Actions Taken in 2017</b>	
<b>Community-Wide Actions Proposed for 2018</b>	

<b>Corporate Actions Taken in 2017</b>	
	New Marina buildings completed in 2017 are heated by electricity instead of natural gas, reducing GHG impact of buildings. They were also built to current energy efficiency standards to minimize utility consumption.
<b>Corporate Actions Proposed for 2018</b>	
	The Town will consider the BC Hydro program for updating streetlights with energy efficient LED fixtures and is reviewing the option of 3000 kelvin LED (warm light) streetlight for the future.

**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 BC Energy Step Cost?	Yes
Is your local government implementing the BC Energy Step Code?	Yes

## 2017 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 Actions Taken in 2017	
Community-Wide Actions Proposed for 2018	

Corporate Actions Taken in 2017	
Corporate Actions Proposed for 2018	

Energy Generation	
Is your local government developing, or constructing:	
• A district energy system	No
• A renewable energy system	No
Is your local government operating:	
• A district energy system	No
• A renewable energy system	No

Is your local government connected to a district energy system that is operated by another energy provider?	No
Are you aware of the Integrated Resource Recovery guidance page on the <a href="#">BC Climate Action Toolkit</a> ?	Yes
Are you familiar with the 2017 " <a href="#">List of Funding Opportunities for Clean Energy Projects Led by First Nations and Local Governments?</a> "	Yes

## 2017 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 Actions Taken in 2017	
Community-Wide Actions Proposed for 2018	
	North East Storm Water Management Plan to monitor surface and ground water flow to support agricultural sensitive areas.
	Anderton Corridor Storm Water Plan to protect downstream agriculture and fish habitat.

Corporate Actions Taken in 2017	
Corporate Actions Proposed for 2018	

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?	No

## 2017 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 Actions Taken in 2017	
	We continue to participate in a pilot project to collect & compost (gore cover aerated) organics, and continue to encourage the Regional District to expand that program here in the Comox Valley.
Community-Wide Actions Proposed for 2018	
	We will continue with the organics pilot with our lobbying of the Regional District.

Corporate Actions Taken in 2017	
	Discussions with Recycle BC for residential recycling.
Corporate Actions Proposed for 2018	
	The Town signed an agreement with Recycle BC for residential recycling.

Solid Waste	
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?	Yes

## 2017 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, ridesharing, and public transit, can contribute to reductions in greenhouse gas emissions and more livable communities.

Community -Wide Actions Taken in 2017	
	We continue to work with the Regional District to implement its Transit Future Plan with the goal of increasing ridership in public transit.
	We completed phase 2 of widening a section of Robb Avenue (for bicycles) and added a sidewalk.
Community-Wide Actions Proposed for 2018	
	We will continue to work with the Regional District to implement its Transit Future Plan.


Corporate Actions Taken in 2017	
Corporate Actions Proposed for 2018	

Transportation	
Does your local government have policies, plans or programs to support:	
• Walking	No
• Cycling	No
• Transit Use	No
• Electric Vehicle Use	No
• Other (please specify)	No
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 behavior)?	No
Does your local government have policies, plans or programs to support local food production (thus reducing transportation emissions)?	No

## 2017 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 greenhouse gas emissions.

Community-Wide Actions Taken in 2017	
	In 2017 we installed 53 new residential water meters many in response to suspected leaks.
	We continued our program of reading meters monthly and contacting high use customers who may have leaks.
Community-Wide Actions Proposed for 2018	
	We will continue to install residential meters and follow up with high use customers to find and fix leaks.

<b>Corporate Actions Taken in 2017</b>	
	New leak detection equipment was purchased by Public Works.
	Billing threshold for high residential use was reduced from 600 m3 to 500 m3 per customer.
<b>Corporate Actions Proposed for 2018</b>	
	Purchasing new water meter software to manage measuring water use and detecting leaks.
	Hiring a consultant to provide a water meter feasibility study, which will address water savings for the Town.
<b>Water Conservation</b>	
Does your local government have water conservation policies, plans or programs?	Yes

## 2017 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.

<b>Please identify the THREE climate impacts that are most relevant to your Local Government.</b>	
<ul style="list-style-type: none"> <li>Warmer winter temperatures reducing snowpack</li> </ul>	Yes
<ul style="list-style-type: none"> <li>Changes to temperature and precipitation causing seasonal drought</li> </ul>	Yes
<ul style="list-style-type: none"> <li>Heatwaves impacting population health</li> </ul>	Yes
<ul style="list-style-type: none"> <li>Increased temperatures increasing wildfire activity</li> </ul>	Yes
<ul style="list-style-type: none"> <li>Increased temperatures affecting air quality</li> </ul>	Yes
<ul style="list-style-type: none"> <li>Changing temperatures influencing species migration and ecosystem shifts</li> </ul>	Yes
<ul style="list-style-type: none"> <li>Extreme weather events contributing to urban and overland flooding</li> </ul>	Yes
<ul style="list-style-type: none"> <li>Sea level rise and storms causing coastal flooding and/or erosion</li> </ul>	Yes
Other:	

<b>In 2017 has your local government addressed the impacts of a changing climate using any of the following?</b>	
Risk and Vulnerability Assessments	No
Risk Reduction Strategies	No
Emergency response planning	Yes
Asset management	Yes
Natural/Eco asset management strategies	No



Infrastructure upgrades (e.g. storm water system upgrades)	Yes
Beach Nourishment projects	No
Economic diversification initiatives	No
Strategic and financial planning	Yes
Cross-department working groups	No
OCP policy changes	Yes
Changes to zoning and other bylaws and regulations	Yes
Incentives for property owner (e.g. reducing storm water run-off)	No
Public education and awareness	No
Research	No
Mapping	No
Partnerships	No
Other:	

<b>Climate Change Adaptation Actions Taken in 2017</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.	
	In 2017 we completed replanting native vegetation along the Lazo foreshore works.
<b>Climate Change Adaptation Actions Proposed for 2018</b>	
<b>For more information please contact:</b>	

<p>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?</p>	
<p> <a href="#">Indicators of Climate Change for British Columbia, 2016</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: An Implementation Guide for Local Governments</a>  <a href="#">The Public Infrastructure and Engineering Vulnerability Committee’s (PIEVC) protocol</a>  <a href="#">Sea Level Rise Primer</a>  <a href="#">BC Regional Adaptation Collaborative Webinars</a>  <a href="#">www.ReTooling.ca</a>  <a href="#">Water Balance Model</a>  <a href="#">The 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> </p>	<p>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  Haven’t Used  Haven’t Used  Haven’t Used  Haven’t Used  Haven’t Used  Haven’t Used  Useful</p>
<p><b>Other:</b></p>	

## 2017 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.

<b>Community-Wide Actions Taken in 2017</b>	
<b>Community-Wide Actions Proposed for 2018</b>	

<b>Corporate Actions Taken in 2017</b>	
<b>Corporate Actions Proposed for 2018</b>	

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Other	
Are you familiar with the <a href="#">Community Lifecycle Infrastructure Costing Tool (CLIC)</a> ?	Yes
Have you used CLIC?	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 repeat 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 raising their profile through applications to [CEA's Climate and Energy Action Awards](#), [UBCM Climate and Energy Action Award](#), [FCM Sustainable Communities Awards](#) or through submissions to [FCM's National Measures Report](#).

<b>Community-Wide Action</b>
<b>Corporate Action</b>

### 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.

#### Mitigation

Programs and Funding
Community Works Funds (Federal Gas Tax transfers through UBCM) for bike lanes, paths & sidewalks Western Economic Diversification Canada (WEDC) and Island Coastal Economic Trust (ICET) for new marina energy efficient buildings.

## Adaptation

### Programs and Funding

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## 2017 CARBON NEUTRAL REPORTING

Local governments are required to report on their progress in achieving their carbon neutral goal under the 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 [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 greenhouse gas (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 you measure your local government's corporate GHG emissions in 2017?	Yes
If your local government measured 2017 corporate GHG emissions, please report the number of corporate GHG emissions (in tonnes of carbon dioxide equivalent) from services delivered <u>directly</u> by your local government:	337.35
If your local government measured 2017 corporate GHG emissions, please report the number of corporate GHG emissions (in tonnes of carbon dioxide equivalent) from <u>contracted</u> services:	248.8
<b>TOTAL A: CORPORATE GHG EMISSIONS FOR 2017</b>	<b>586.15 tCO<sub>2e</sub></b>

## Reporting Reductions and Offsets

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

- undertake GCC-supported Option 1 Projects
- undertake GCC-supported Option 2 Projects (community GHG emissions reduction projects that meet project eligibility requirements)
- purchase carbon offsets from a credible offset provider

**If applicable, please report the 2017 GHG emissions reductions (in tonnes of carbon dioxide equivalent (tCO<sub>2</sub>e)) being claimed from Option 1 GHG Reduction Projects:**

OPTION 1 PROJECTS	REDUCTIONS
Energy Efficient Retrofits	
Solar Thermal	
Household Organic Waste Composting	
178 t of kitchen scraps & 1,604 t of yard waste composted (calculation net of 75% landfill gas recapture standard)	55.43
Low Emission Vehicles	
1,350 km on electric vehicle	0.46
Avoided Forest Conversion	
<b>TOTAL B: REDUCTIONS FROM OPTION 1 PROJECTS FOR 2017</b>	<b>55.89 tCO<sub>2</sub>e</b>

**If applicable, please report the names and 2017 GHG emissions reductions (in tonnes of carbon dioxide equivalent (tCO<sub>2</sub>e)) being claimed from Option 2 GHG Reduction Projects:**

OPTION 2 PROJECT NAME	REDUCTIONS
<b>TOTAL C: REDUCTIONS FROM OPTION 2 PROJECTS FOR 2017</b>	<b>0 tCO<sub>2</sub>e</b>

If applicable, please report the number of offsets purchased (in tonnes of carbon dioxide equivalent (tCO2e)) from an offset provider for the 2017 reporting year:

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

OFFSET PROVIDER NAME	OFFSETS
3Degrees Group Inc	530.26 tCO2e
<b>TOTAL D: OFFSETS PURCHASED FOR 2017</b>	<b>530.26 tCO2e</b>

**TOTAL REDUCTIONS AND OFFSETS FOR 2017 (Total B+C+D) = 586.15 tCO2e**

### Corporate GHG Emissions Balance for 2017

Your local government's Corporate GHG Emissions Balance is the difference between total corporate 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 2017 = (A – (B+C+D)) = 0 tCO2e**

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

If applicable, please record any emissions reductions you will be carrying over for future years and the source of the emissions reductions, including the year they were earned (E.g., Organics diversion, 2016 100 tCO2e).

SOURCE OF CARRY OVER EMISSION REDUCTIONS (and year earned)	REDUCTIONS
<b>BALANCE OF REDUCTIONS ELIGIBLE FOR CARRY OVER TO NEXT YEAR</b>	<b>tCO2e</b>

Carbon Neutral Reporting	
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Does your local government have a climate reserve fund or something similar?	No
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## GCC CLIMATE ACTION RECOGNITION PROGRAM

### Green Communities Committee (GCC) 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 (i.e: 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.

**For purposes of 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 or financial resources and is intended to result in significant GHG reductions:**

<b>PROJECT NAME:</b>

**Based on your local government's 2017 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	
Level 3 – Accelerating Progress on Charter Commitments	
Level 4 - Achievement of Carbon Neutrality	<b>yes</b>
Not Sure	