



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

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Cowichan Valley Regional District – Engineering Services

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## 2017 INTRODUCTION

The Cowichan Valley Regional District 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.

	2013	2014	2015	2016	2017
<b>Emissions (tonnes CO<sub>2</sub>e)</b>					
Emissions from Services delivered directly by CVRD	1428	1312	1148	1135	1475
Emissions from Contracted Services	246	330	362	523	443
<b>Total Emissions</b>	<b>1674</b>	<b>1642</b>	<b>1510</b>	<b>1658</b>	<b>1918</b>
<b>Offsets (tonnes CO<sub>2</sub>e)</b>					
Energy Efficient Building Retrofits and Fuel Switching*	(28.8)	(27.3)	(27)	(26.7)	(27.1)
Household Organic Waste Composting**	(1645.2)	(1614.7)	(1483)	(1631.3)	(1890.9)
<b>Total Offsets</b>	<b>(1674)</b>	<b>(1642)</b>	<b>(1510)</b>	<b>(1,658)</b>	<b>(1918)</b>
<b>CORPORATE GHG EMISSIONS BALANCE (tonnes CO<sub>2</sub>e)</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

\*see separate report: "Cowichan Station Hub Energy Efficient Building Retrofit and Fuel Switching: Carbon Credits for Carbon Neutral Reporting 2016"

\*\*see separate report "Yard and Garden Organics Diversion: Carbon Credits for Carbon Neutral Reporting 2016"

## 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.

Community-Wide Actions Taken in 2017	
	Cowichan 2050: a regional collaboration approach is being negotiated with the two primary issues being climate change and growth management, issues that are interlinked.
Community-Wide Actions Proposed for 2018	
	New consolidated OCP will reflect the new provincial GHG targets and any benchmark indicators consistent with previous work.

Broad Planning		
What is (are) your current GHG reduction target(s)?	<b>33% Reduction by 2020 and 80% reduction by 2050 below 2007 levels.</b>	
Are you familiar with your community's community energy and emissions inventory (e.g. CEEI or another inventory)?		<b>Yes</b>
What plans, policies or guidelines govern the implementation of climate mitigation in your community?		
•	Community Energy and Emissions (CEE) Plan	<b>Yes</b>
•	Community- Wide Climate Action Plan	<b>No</b>
•	Integrated Community Sustainability Plan	<b>No</b>
•	Official Community Plan (OCP)	<b>Yes</b>
•	Regional Growth Strategy (RGS)	<b>No</b>
Does your local government have a corporate GHG reduction plan?		<b>Yes</b>

## 2017 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.

<b>Community-Wide Actions Taken in 2017</b>	
	Cobble Hill Hall: provided community works funds to install geothermal heating system

<b>Corporate Actions Taken in 2017</b>	
	Island Savings Centre: Replaced heat exchanger; ongoing window replacements, heat exchanger for ice melt heat reclaim, and automated Recommissioning Pilot Project
	CVRD Head Office: One additional electric vehicle for the fleet and one additional charging station, replaced two fridge's with energy star models
	Kerry Park Recreation Centre: Replaced the HVAC units supplying the dressing rooms, warm room, arena washrooms and arena concession; Install new domestic hot water storage tank; and Replaced 2 arena shell & tube chillers with 2 new plate & frame chillers, brine pumps and receiver, which will operate more effectively and use less energy and ammonia
	Shawnigan Lake Community Centre: Completed lighting upgrades
	Cowichan Lake Sports Arena: Replaced one arena shell & tube chiller with a new plate & frame chiller, brine pumps and VSD and control system, which will operate more efficiently and use less energy and ammonia; and Installation of new LED lighting
	Ornamental Street Lights: Retrofitted Arbutus mountain Estates, Cobble Hill Village, Twin Cedars and Twin Cedars systems with LEDs

<b>Corporate Actions Proposed for 2018</b>	
	Island Savings Centre: ongoing Automated Recommissioning Pilot project
	CVRD Head Office: Interior/exterior lighting retrofit to LEDs; and install new boiler
	Kerry Park Recreation Centre: Complete HVAC upgrade, complete exploratory drilling for water supply to supply sports fields
	Shawnigan Lake Community Centre: Install new doors at SLCC (Gym and foyer); and replace old electric hot water tank with energy star electric tank at Elsie Miles
	Cowichan Lake Sports Arena: install a capacitor for power factor correction
	Ornamental Street Lighting: Develop Ornamental Street Light guidelines for new developments

<b>Building and Lighting</b>	
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?	No

## 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.

<b>Corporate Actions Proposed for 2018</b>	
	Meade Creek Solar Brightfield Feasibility Study
	Solar Screening Feasibility Study for CVRD facilities

<b>Energy Generation</b>	
Is your local government developing, or constructing:	
<ul style="list-style-type: none"> <li>• A district energy system</li> <li>• A renewable energy system</li> </ul>	No No
Is your local government operating:	
<ul style="list-style-type: none"> <li>• A district energy system</li> <li>• A renewable energy system</li> </ul>	No Yes
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.

<b>Corporate Actions Taken in 2017</b>	
	Implemented the Hecate Park Green shores Beach Nourishment and Restoration Project
	Initiated Phase 3 of the Cobble Hill Village Purple Pipe Project to expand reclaimed water use for irrigation.
	Completed construction and opening of the 9 km Cowichan Valley Trail – Malahat Connection between Shawnigan Lake and Capital Regional District.
	Continue community and regional parks pathway development which is focused on the next pathway phase for Mill Springs, Ida Road pathway, trail improvements in Old Baldy Mountain Park, Polara Hill in the Cobble Hill Regional Recreation Area and the Shawnigan Lake Rail With Trail

	between Shawnigan Wharf and Elsie Miles Park.
	Initiated the Electoral Area E Community Parks and Trails Master Plan to provide guidance for community parks and pathway acquisition and development over the next 10 to 20 years.
	Ongoing parks volunteer programming includes knotweed removal in Bright Angel Park, shoreline restoration West Shawnigan Lake Park, Hecate Park and Lake Cowichan, scotch broom removal Stoney Hill Regional Park and Yellow Point Park.
	Invasive Species Management Program will be underway within all nine electoral areas and the regional parks and trails program. The annual program is focused both on targeted invasive species removal/control and subsequent habitat restoration/management.
	Initiated construction of the Cowichan Valley Trail to connect existing sections of the trail in Ladysmith/Saltair and Chemainus.
<b>Corporate Actions Proposed for 2018</b>	
	Complete Phase 3 of the Cobble Hill Village Purple Pipe Project to expand reclaimed water use for irrigation.
	Complete an Active Transportation Roadside Pathways Design Guidelines Manual in partnership the Ministry of Transportation and Infrastructure and the RDN, SCR, and Comox Valley RD.
	Continue community and regional parks pathway development which is focused on the next pathway phase for Mill Springs, Ida Road pathway, trail improvements in Old Baldy Mountain Park, Polara Hill in the Cobble Hill Regional Recreation Area and the Shawnigan Lake Rail With Trail between Shawnigan Wharf and Elsie Miles Park.
	Ongoing parks volunteer programming
	Complete the Bright Angel Park Management Plan to guide park development, use and environmental enhancement/restoration management over the next 12 to 15 years.
	Initiate preparation of parks management plans for several parks inclusive of Saltair Centennial Park and Stoney Hill Regional Parks to guide ongoing use and management of these parks for the next 10 to 15 years.
	Complete construction of the Cowichan Valley Trail to connect existing sections of the trail in Ladysmith/Saltair and Chemainus.
	Undertake annual removal/restoration work as provided for in detailed prescriptive work developed for the Invasive Species Management Program within all nine electoral areas and the regional parks and trails program. The annual program is focused both on targeted invasive species removal/control and subsequent habitat restoration/management.
	Initiate detailed design for completion in 2019 a section of the Cowichan Valley Trail to connect the existing section at the south end of Chemainus with Westholme.

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

## 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.

Corporate Actions Taken in 2017	
	Complete the Meade Creek Recycling Centre and Landfill Closure
	Continue to support the Cowichan Biodiesel Co-op
	Continue to offer free yard and garden waste collection at CVRD Recycling Centres
	Complete the Solid Waste Management Plan Amendment
	Continue to support the wood stove exchange program

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

## 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	
	Pilot project to implement Saturday service on the Commuter routes between Cowichan and Victoria starting in September 2017
	Worked with BC Transit and the Federal government on design and construction of a new (\$15M) Cowichan Valley Transit maintenance facility to support long term operations & maintenance and future fleet growth
	Worked with BC Transit and TRAN to confirm and implement short term capacity improvements necessary to support the Frayne Road Park and Ride site
	Worked with BC Transit and TRAN to source out long term capacity improvements necessary and funding to support the Frayne Road Park and Ride site. Commence exploratory discussions with

	possible land owners
	Replaced 50% (6 of 12) of the conventional fleet buses that are 17 years old with new Vicinity buses in second half of 2017
	Continue existing and new transit promotions introduced in 2016 as a means to increase awareness and build ridership
	Hired a summer student to do surveys on routes, collect ridership data and complete the bus stop inventory so that the CVRD can implement Google Transit, as a tool for riders to better understand the location of stops and the routes
	In partnership with TRAN and the Municipality of North Cowichan, continue to make bus stop improvements with leveling and new asphalt at customer waiting areas
<b>Community-Wide Actions Proposed for 2018</b>	
	Service changes and 1,500 hour expansion coming July 2, 2018
	Review Saturday service between Cowichan and Victoria to evaluate the success of this service and any potential adjustments
	Implement July 2018 local service changes to offer more direct routing connections on Routes 3, 4 and 5 and to provide an additional weekday morning trip on Route 6 and an additional weekday evening trip on Route 7. Two additional weekday trip on Route 2 also added between Cowichan Commons and Village Green Mall
	Work with BC Transit to seek approval for development and building permits, includes various meetings with CVRD Committees, and work then on construction of the new transit operations and maintenance facility to accommodate growing bus fleet and future expansions
	Collect ridership data on South Cowichan Routes 8 and 9 to understand current ridership patterns and trends to consider service changes (optimization or future expansion requirements)
	Confirm potential funding options and investigate property options for longer term South Cowichan park and ride expansion
	Provide free public transit for 4 days to the BC Summer Games (July 2018) and promote this option for transportation to games events and venues
	Replace 2 more conventional fleet buses in April 2018 and 4 buses in Fall 2018
	Implement Google Transit Trip Planning tool on BC Transit's Cowichan Valley website to allow customers to route plan online for improved service
	Continue working with TRAN and the Municipality of North Cowichan on potential bus stop improvements



<b>Corporate Actions Taken in 2017</b>	
	One new electric fleet vehicle purchased
	Two new fleet charging stations installed (CVRD Head Office and Bings Creek Recycling Centre)
	Completed Fleet Karma Electric Vehicle Suitability Assessment for CVRD Fleet
<b>Corporate Actions Proposed for 2018</b>	
	Implement charging time policy and signage for CVRD electric vehicle stations to help maintain public access and turnover for stations with increasing EV usage in the region

<b>Transportation</b>	
Does your local government have policies, plans or programs to support:	
• Walking	No
• Cycling	Yes
• Transit Use	Yes
• Electric Vehicle Use	Yes
• 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 integrate its transportation and land use planning?	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.

<b>Community-Wide Actions Taken in 2017</b>	
	Cowichan Water Use Plan – water supply planning for Lake Cowichan to provide long term flow to the Cowichan River. This is a substantial policy process that will involve a wide range of players to determine and quantify future water needs in the basin with Climate projections.
	A public advisory committee has been struck to take part in a Structured Decision Making process that will attempt to reach a consensus decision on the balance of new storage needs for fisheries and the impact on property owners around the lake. It is anticipated that the results of this process will effectively support the first eight of 13 steps to a new water licence and approval to build updates storage infrastructure. Work continues in the following areas: biological impacts on SARA listed species and lower lake levels, impacts and legal requirements for increased water storage on private properties. Potential increase to flooding and hazards to due changing climatic conditions.
	Review and assessment of CVRD dam structures to ensure that they meet new guidelines as well as climate projected impacts and stresses.
	Development of new proposed Service for the community to address growing issues with regards to water and watershed management.

<b>Corporate Actions Taken in 2017</b>	
	Updating South Sector Liquid Waste Management Plan to ensure existing commitments are met and emerging issues are considered.
	Implemented inclined block pricing rate structure and universal metering for Shawnigan Lake North Water System
	Investigated groundwater option and shared facility with Ladysmith for Saltair Water System
	Registered all groundwater wells and established transducer monitoring system
<b>Corporate Actions Proposed for 2018</b>	
	Install a solar powered mixing system at Shawnigan Lake North Reservoir.
	Ongoing update to the South Sector Liquid Waste Management Plan
	Twin Cedars and Cobble Hill waste water system integration with energy analysis

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

## 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>THREE climate impacts that are most relevant to your Local Government.</b>	
<ul style="list-style-type: none"> <li>• Changes to temperature and precipitation causing seasonal drought</li> <li>• Increased temperatures increasing wildfire activity</li> <li>• Extreme weather events contributing to urban and overland flooding</li> </ul>	

<b>In 2017 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	Yes
Asset management	Yes
Natural/Eco asset management strategies	No
Infrastructure upgrades (e.g. storm water system upgrades)	Yes
Beach Nourishment projects	Yes
Economic diversification initiatives	Yes
Strategic and financial planning	No
Cross-department working groups	Yes

OCP policy changes	No
Changes to zoning and other bylaws and regulations	No
Incentives for property owner (e.g. reducing storm water run-off)	No
Public education and awareness	Yes
Research	Yes
Mapping	Yes
Partnerships	Yes

<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.	
	Initiated a refresh of the CVRD Asset Management Policy to include a climate change lens
	Initiated a Climate Vulnerability Study of CVRD engineered Infrastructure
	Initiated the definition of CVRD Levels of Service to include climate impacts
<b>Climate Change Adaptation Actions Proposed for 2018</b>	
	Complete refresh of the CVRD Asset Management Policy to include a climate change lens
	Complete Climate Vulnerability Study of CVRD engineered Infrastructure
	Complete the definition of CVRD Levels of Service to include climate impacts
<b>For more information please contact:</b>	
	Kate Miller - <a href="mailto:kmiller@cprd.bc.ca">kmiller@cprd.bc.ca</a> or Austin Tokarek – <a href="mailto:atokarek@cprd.bc.ca">atokarek@cprd.bc.ca</a>

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, 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>	Useful Useful Haven't Used Useful/Not Useful Useful Haven't Used Useful Not Useful Useful Haven't Used Haven't Used Useful Useful  Useful Useful Useful Useful Useful Useful

## 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 and ongoing through 2018</b>	
	Mapping and risk analysis of three floodplains in the region with significant public and private infrastructure and settlements (Shawnigan Lake, Lake Cowichan, and Riverbottom Road areas).
	Formal development of a Flood management steering committee for the lower Cowichan and Koksilah Floodplains to coordinate and administer flood protection works as well as ongoing sediment management for risk reduction objectives.
	Refined risk assessment for sea level rise impact areas on eastern boundary area based on projected 1 m sea level rise inundation zone as well as a projected 5 m sea level rise affected area for planning purposes
	Slope stability and flood torrent flow analysis case study of increasing impacts of climate change and changes in precipitation on downstream communities. Exploration of initial mitigative actions

	that may be appropriate.
	Upgrading of public information website New Normal Cowichan to focus on adaptive or mitigative actions members of the community can take at a home and neighbourhood level.
	Partnership with Social Planning Cowichan to deliver climate risk analysis and readiness training to social service agencies in the region to enhance and support their capacity and resiliency to provide ongoing services to the community.
	Education and outreach on the growing issues related to air quality and public health. Installation of purple air monitoring stations and web based air quality mapping and analysis.
	Development of future focused rain and storm water management plan in partnership with Cowichan Tribes to identify risk based strategies to reduce future flooding events while at the same time recognizing differing visions of development for the area.
<b>Community-Wide Actions Proposed for 2017</b>	
	Integration of climate impacts to the CVRD asset management strategy to allow for early awareness and tracking of climate related changes to infrastructure and ongoing O and M. as well as identification of potential changes to levels of service provision.

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

<b>Programs and Funding</b>
<ul style="list-style-type: none"> <li>• BC Hydro – Energy Manager Funding</li> <li>• Ministry of Farming, Natural Resources and Industry – Community Energy Leadership Program</li> </ul>

## Adaptation

Programs and Funding
<ul style="list-style-type: none"> <li>• Clean Water and Waste Program</li> <li>• National Disaster Mitigation Program</li> <li>• Pacific Climate Impacts Consortium</li> <li>• Catalyst Paper</li> <li>• Cowichan Tribes</li> <li>• Cowichan Watershed Board</li> <li>• Plan H – Healthy Communities Program</li> <li>• Ministry of Environment (BC)</li> <li>• Ministry of Forest Lands and Natural Resources (BC)</li> <li>• Partnership for Water Sustainability</li> <li>• Local Government Taxation requisition</li> <li>• Federation of Canadian Municipalities</li> </ul>

## 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?	<b>Yes</b>
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:	1475 tCO <sub>2</sub> e
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:	443 tCO <sub>2</sub> e

<b>TOTAL A: CORPORATE GHG EMISSIONS FOR 2017</b>	<b>1918 tCO2e</b>
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## Reporting Reductions and Offsets

To be carbon neutral, a local government must balance their TOTAL corporate GHG emissions generated in 2017 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

**If applicable, please report the 2017 GHG emissions reductions (in tonnes of carbon dioxide equivalent (tCO2e)) being claimed from Option 1 GHG Reduction Projects:**

<b>OPTION 1 PROJECTS</b>	<b>REDUCTIONS</b>
Energy Efficient Retrofits	27.1
Solar Thermal	
Household Organic Waste Composting	1890.9
Low Emission Vehicles	0
Avoided Forest Conversion	0
<b>TOTAL B: REDUCTIONS FROM OPTION 1 PROJECTS FOR 2017</b>	<b>1918 tCO2e</b>

**If applicable, please report the names and 2017 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>
Not applicable	<b>Not applicable</b>
<b>TOTAL C: REDUCTIONS FROM OPTION 2 PROJECTS FOR 2017</b>	<b>0 tCO2e</b>

**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 2017 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>
Not applicable	Not applicable
<b>TOTAL D: OFFSETS PURCHASED FOR 2017</b>	<b>0 tCO2e</b>

**TOTAL REDUCTIONS AND OFFSETS FOR 2017 (Total B+C+D) = 1918 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**

**In 2017 the CVRD 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).

<b>SOURCE OF CARRY OVER EMISSION REDUCTIONS (and year earned)</b>	<b>Credits Generated</b>	<b>Credits Claimed</b>	<b>Credits Carried Forward</b>
2007-2012 Yard and Garden Waste Diversion	4109.9	0	0
2013 Yard and Garden Waste Diversion	449.1	1645.2	2913.8
2014 Yard and Garden Waste Diversion	1792.5	1614.7	3091.5
2015 Yard and Garden Waste Diversion	1605.6	1483.0	3214.2
2016 Yard and Garden Waste Diversion	1390.9	1631.3	2973.7
2017 Yard and Garden Waste Diversion	1456.2	1890.9	2539.0
<b>BALANCE OF REDUCTIONS ELIGIBLE FOR CARRY OVER TO NEXT YEAR</b>			<b>2539 tCO2e</b>

Carbon Neutral Reporting	
Does your local government have a climate reserve fund or something similar?	<b>No</b>



## 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.

**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:**

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