



# Climate Action Revenue Incentive Program 2017 Public Report

May 31, 2018

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

**Local Government:**  
Township of Esquimalt

**Report Submitted by:**  
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**Date:** May 29, 2018

The Township of Esquimalt 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.

## Legend

<b>DS</b>	Development Services
<b>EPW</b>	Engineering and Public Works
<b>FN</b>	Financial Services
<b>PR</b>	Parks and Recreation Services

## 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	
DS	Prepared draft Official Community Plan (OCP) which includes policies and guidelines to reduce GHG emissions in the community. The new OCP will set a target for carbon neutrality by 2050 and will contain design guidelines with an emphasis on transit oriented, density along transit corridors and the E and N railway and density bonusing for higher levels of the Step Code.
DS	Approved rezoning application for mixed use development in Esquimalt Village, which incorporates energy efficient initiatives including geothermal heating and cooling.
Community-Wide Actions Proposed for 2018	
DS	Adoption of an updated Official Community Plan.
DS	Implementation of policies and guidelines related to GHG reduction and resource conservation.
DS	Completion of rezoning application for 12-storey wood frame Passive House multi-family development.

Corporate Actions Taken in 2017	
DS	Purchase of 1237 Esquimalt Rd. for construction of a new Public Safety Building to be built to higher energy standards.
Corporate Actions Proposed for 2018	
DS	Establish a methodology for tree canopy assessments for the municipality in order to track urban forest coverage.


<b>Broad Planning</b>	
What is (are) your current GHG reduction target(s)?	To reduce community greenhouse gas emissions by at least 38% reduction by 2020, 83% by 2050 compared to 2007 levels.
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? <ul style="list-style-type: none"> <li>• Community Energy and Emissions (CEE) Plan</li> <li>• Community- Wide Climate Action Plan</li> <li>• Integrated Community Sustainability Plan</li> <li>• Official Community Plan (OCP)</li> <li>• Regional Growth Strategy (RGS)</li> <li>• Do not have a plan</li> <li>• Other:</li> </ul>	<b>No</b> <b>No</b> <b>No</b> <b>Yes</b> <b>Yes</b> <b>No</b>
Does your local government have a corporate GHG reduction plan?	<b>No</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.

Community-Wide Actions Taken in 2017	
DS	Participated in oil to heat pump replacement program-5 heat pumps installed.
DS	Implemented new urban design guidelines for projects located on Esquimalt Rd.
Community-Wide Actions Proposed for 2018	
DS	Continue with oil to heat pump replacement program.

Corporate Actions Taken in 2017	
PR	Converted 17 light panels, 44 light strips and 7 pot lights in the Archie Browning Sports Centre (ABSC) to LED.
PR	Converted 14 light panels, 27 pot lights and one fixture to LED in the Esquimalt Recreation Centre.
DS	Continued with Environmental Advisory Committee.
Corporate Actions Proposed for 2018	
PR	Replacement of the ice chiller in the Archie Browning Sports Centre will reduce the amount of ammonia being used on site and will be more energy efficient.
EPW	Preparing Scope of Work for replacement of HVAC control system in Municipal Hall.

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?	No

## 2017 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:	
<ul style="list-style-type: none"> <li>A district energy system</li> </ul>	<b>No</b>

<ul style="list-style-type: none"> <li>• A renewable energy system</li> </ul>	<b>No</b>
Is your local government operating: <ul style="list-style-type: none"> <li>• A district energy system</li> <li>• A renewable energy system</li> </ul>	<b>No</b> <b>No</b>
Is your local government connected to a district energy system that is operated by another energy provider?	<b>No</b>
Are you aware of the Integrated Resource Recovery guidance page on the <a href="#">BC Climate Action Toolkit</a> ?	<b>Yes</b>
Are you familiar with the 2017 " <a href="#">List of Funding Opportunities for Clean Energy Projects Led by First Nations and Local Governments</a> ?"	<b>Yes</b>

## 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	
PR	Hosted 'Branch Out' events in Highrock Park, Gorge Park, Saxe Point Park and Macaulay Park with over 100 volunteers assisting in the removal of invasive plants (100 m2 in each park) and the planting of 40-50 native trees and shrubs in each park. <a href="http://www.esquimalt.ca/parks-recreation/parks/branch-out-events-educational-materials">www.esquimalt.ca/parks-recreation/parks/branch-out-events-educational-materials</a>
PR	Hosted the 5 <sup>th</sup> Annual Earth Day celebration in Highrock Park. The event drew 800 students. Activities included invasive pulling of English Ivy and Himalayan Blackberry, trail building, Garry Oak planting, native plant understory planting, and 7 goats that fed on the invasive plants.
PR	Supported ecochamps program during the summer in Esquimalt Parks. Eco-education for ages 3-6.
PR	Planted 73 full-sized new boulevard trees.
PR	Removal of invasive species within a large area of Macaulay Point Park in order to protect three endangered plant species (for DND).
EPW	Remediation of Esquimalt Town Square construction was initiated and completed.
Community-Wide Actions Proposed for 2018	
PR	Beginning of public engagement process for amenity funds provided by the McLouglin Point Wastewater Treatment Plant (MPWTP). Amenity funds will be targeted towards acquisition of waterfront parkland and development of waterfront parkland.
EPW	Application for Certificate of Compliance for remediation of ETS will be submitted.
PR	Continued support for Anderson Community Garden

Corporate Actions Taken in 2017	
EPW	Working with CRD on development and implementation of common design guidelines for storm water management.
Corporate Actions Proposed for 2018	
DS	Implementation of policies to protect native ecosystems and shorelines through new Development Permit Areas in updated OCP.



EPW	Continuing membership on CRD integrated watershed management committee.

<b>Greenspace</b>	
Does your local government have urban forest policies, plans or programs?	<b>Yes</b>
Does your local government have policies, plans or programs to support local food production?	<b>Yes</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.

Community-Wide Actions Taken in 2017	
EPW	Composting bins and recycling collection provided at all community events.
EPW	Continued collection of kitchen scraps from households for composting.
Community-Wide Actions Proposed for 2018	

Corporate Actions Taken in 2017	
Corporate Actions Proposed for 2018	

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.

<b>Community -Wide Actions Taken in 2017</b>	
FN	Introduced user fee of \$1/hour for Level 2 electric vehicle charging to improve availability of the station to more users and to achieve cost neutrality.
EPW	502 m of sidewalk replaced or constructed during 2017. New sidewalk constructed on Wychbury Ave. between Kinver and Lampson St.
EPW	Two new transit shelters installed.
EPW	Colville/Hutchinson Intersection upgrade completed to facilitate pedestrian movements and bus stop shelters.
EPW	Reviewed crosswalk locations between Admirals and Fernhill Rds on Esquimalt Rd.
DS	Met with BC Transit to discuss improvements to public transit in Esquimalt.
<b>Community-Wide Actions Proposed for 2018</b>	
EPW	Sidewalk between Old Esquimalt and 832 Esquimalt Rd. to be completed.
EPW	Two pedestrian crossings to be installed at 1100 block of Esquimalt Rd. and Fraser St. based on the review conducted in 2017.
EPW	Conduct Lampson St. corridor cross section study to determine the corridor's ability to accept bike lanes in order to increase multi-modal orientation.
FN	Entering into licencing agreement with U Bike for 35 shared bikes within the municipality.
PR/EPW	Conduct public engagement for a new crossing of Tillicum Road between Craigflower Rd and Tillicum Bridge (connected with McLoughlin Point WTP amenity funds public engagement).

<b>Corporate Actions Taken in 2017</b>	
EPW	Two new solar pedestrian beacons installed on Esquimalt Rd.
	Employee participation in Greater Victoria Bike to Work Week.
DS	Bus tickets provided for employee trips to locations within the Greater Victoria area.
DS	A number of parking variances were approved in order to reduce the parking requirements associated with development.
<b>Corporate Actions Proposed for 2018</b>	
EPW	Conduct traffic count analysis.
EPW	Tender being prepared to confirm availability of electric truck for fleet.
EPW	Four new solar pedestrian crossing beacons planned.

<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>	<b>Yes</b> <b>Yes</b> <b>No</b> <b>Yes</b> <b>Yes/No</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 behavior)?	<b>No</b>
Does your local government integrate its transportation and land use planning?	<b>Yes</b>

## 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	
DS	Approved state of the art waste water treatment centre at MacLoughlin Point.
PR	New children's water play park filters water through raingarden prior to its release to the storm drain system.
PR	Reducing watering of boulevard and park trees by use of individual tree bags which hold a week's worth of water.
Community-Wide Actions Proposed for 2018	
EPW	Engineering to prepare preliminary modelling data of Inflow and Infiltration in the stormdrain system.
EPW	Engineering to prepare a draft bylaw for inflow and infiltration control for discussion, which will include a cost sharing program for cross connections and service line condition.

Corporate Actions Taken in 2017	
EPW	Participation on Esquimalt Liaison Committee to review concerns and activities associated with the Waste Water Treatment Plant project.
Corporate Actions Proposed for 2018	

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

## 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.

Please identify the THREE climate impacts that are most relevant to your Local Government.	
<ul style="list-style-type: none"> <li>• Changes to temperature and precipitation causing seasonal drought</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>	
Other:	

In 2017 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	No
Natural/Eco asset management strategies	No
Infrastructure upgrades (e.g. storm water system upgrades)	No
Beach Nourishment projects	No
Economic diversification initiatives	No
Strategic and financial planning	No
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)	Yes
Public education and awareness	Yes
Research	Yes
Mapping	Yes
Partnerships	Yes
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.	
DS	Drafted OCP policies related to heating and cooling in private buildings.
	Regional wastewater treatment plant designed to be adaptive to climate change.
<b>Climate Change Adaptation Actions Proposed for 2018</b>	
DS	Participation in ICLEI Canada’s proposed ‘Adapting Together’ project. Specifically Esquimalt proposes to identify and bring together local stakeholders in a community wide planning effort, use climate change modelling data to identify local vulnerabilities, assess and prioritize climate risks and develop an implementation-ready adaptation plan.
<b>For more information please contact:</b>	

<p><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></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            Useful            Not Useful            Haven't Used            Useful            Useful            Useful            Haven't Used            Useful            Not Useful            Haven't Used             Haven't Used            Haven't Used            Useful            Useful            Useful            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.

Community-Wide Actions Taken in 2017	
<input type="checkbox"/>	Not applicable
Community-Wide Actions Proposed for 2017	
<input type="checkbox"/>	Not applicable

Corporate Actions Taken in 2017	
<input type="checkbox"/>	Not applicable
Corporate Actions Proposed for 2017	
<input type="checkbox"/>	Not applicable

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

## 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](#).

#### Community-Wide Action

In the fall of 2017, the Cool It! program reached 109 students in the Township of Esquimalt, through 5 workshops at 2 schools. During the program challenge, students committed to several energy saving actions over a 4-week period. Students' energy conserving and emissions saving actions at home resulted in the projected savings of a total of 58.723 tonnes of carbon dioxide (CO<sub>2</sub>e), if they continue their actions for one year.

For more information contact: [Tricia.demacedo@esquimalt.ca](mailto:Tricia.demacedo@esquimalt.ca)

#### Corporate Action

For more information contact:

## 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
CRD Climate Action Program-Cool It!, Oil to Heat Pump Program

### 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?	<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:	1307.3
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:	
<b>TOTAL A: CORPORATE GHG EMISSIONS FOR 2017</b>	<b>1307.3</b> <b>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 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 (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 (CRD+Esquimalt composting)	105.6+99.3=204.9
Low Emission Vehicles	
Avoided Forest Conversion	
<b>TOTAL B: REDUCTIONS FROM OPTION 1 PROJECTS FOR 2017</b>	<b>204.9 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>tCO<sub>2</sub>e</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 (tCO<sub>2</sub>e)) 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
<b>TOTAL D: OFFSETS PURCHASED FOR 2017</b>	<b>tCO2e</b>

**TOTAL REDUCTIONS AND OFFSETS FOR 2017 (Total B+C+D) = 204.9 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 = 1307.3 - 204.9 = 1102.4 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	
Does your local government have a climate reserve fund or something similar?	Yes

## 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>
Sustainability Reserve Fund: The CARIP grant is deposited in the Sustainability Reserve Fund to be used for funding sustainability initiatives that reduce GHG emissions and move the Township forward to achieving its Climate Action Charter goals.

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 checked="" type="checkbox"/>	Level 3 – Accelerating Progress on Charter Commitments	<b>x</b>
<input type="checkbox"/>	Level 4 - Achievement of Carbon Neutrality	
<input type="checkbox"/>	Not Sure	



# Appendix: 2017 Corporate Energy and Emissions Inventory

Local Government Name:	Township of Esquimalt
Year:	2017
<b>Contact Information:</b>	
Name:	Tricia deMacedo
Position:	Planner 2
Telephone Number:	250-414-7114
Email address:	tricia.demacedo@esquimalt.ca

## Stationary Energy GHG Emission Sources:

Fuel	End Use	Unit of Measure	Quantity	Emissions (tCO <sub>2</sub> e)
Electricity	Engineering & Public Works	kWh	121,051	1.3
Electricity	Fire	kWh	346,560	3.7
Electricity	Municipal Hall	kWh	295,074	3.1
Electricity	Parks & Recreation	kWh	3,407,522	36.4
Electricity	Infrastructure (sewer/traffic/lighting)	kWh	841,288	9.0
Electricity		kWh	0	-
Natural Gas	Engineering & Public Works	GJ	269	13.4
Natural Gas	Fire	GJ	-	-
Natural Gas	Municipal Hall	GJ	262	13.1
Natural Gas	Parks & Recreation	GJ	18,119	903.6
Natural Gas	Infrastructure (sewer/traffic/lighting)	GJ	-	-
Natural Gas		GJ	0	-
Propane	Engineering & Public Works	Litres	-	-
Propane	Fire	Litres	-	-
Propane	Municipal Hall	Litres	-	-
Propane	Parks & Recreation	Litres	-	-
Propane	Infrastructure (sewer/traffic/lighting)	Litres	-	-
Propane		Litres	0	-
Heating Oil	Engineering & Public Works	Litres	-	-
Heating Oil	Fire	Litres	-	-
Heating Oil	Municipal Hall	Litres	-	-
Heating Oil	Parks & Recreation	Litres	-	-
Heating Oil	Infrastructure (sewer/traffic/lighting)	Litres	-	-
Heating Oil		Litres	0	-

**Stationary Energy GHG Emissions (all fuel types)** **983.5**

**Stationary Energy Refrigerant GHG Emissions** **-**

## Imported Steam or District Heat GHG Emissions

Tier	Unit of Measure	Quantity	Emissions (tCO <sub>2</sub> e)
	MWh	-	-

**Imported Steam or District Heat GHG Emissions** **-**

## Mobile GHG Emission Sources:

Vehicle Class	Vehicle Fuel	Unit of Measure	Quantity	Emissions (tCO <sub>2</sub> e)
Light Duty Vehicle	Gasoline	Litres	1,877	4.4
Light Duty Truck	Gasoline	Litres	36,029	85.7
Heavy Duty Truck	Gasoline	Litres	12,105	27.4
Off Road Vehicle	Gasoline	Litres	2,027	4.5
Light Duty Vehicle	E10	Litres	-	-
Light Duty Truck	E10	Litres	-	-
Heavy Duty Truck	E10	Litres	-	-
Off Road Vehicle	E10	Litres	-	-
Light Duty Vehicle	E15	Litres	-	-
Light Duty Truck	E15	Litres	-	-
Heavy Duty Truck	E15	Litres	-	-
Off Road Vehicle	E15	Litres	-	-
Light Duty Vehicle	Diesel	Litres	-	-
Light Duty Truck	Diesel	Litres	-	-
Heavy Duty Truck	Diesel	Litres	-	-
Off Road Vehicle	Diesel	Litres	3,623	10.6
Light Duty Vehicle	B5	Litres	-	-
Light Duty Truck	B5	Litres	-	-
Heavy Duty Truck	B5	Litres	52,052	130.9
Off Road Vehicle	B5	Litres	10,740	29.9
Light Duty Vehicle	B10	Litres	-	-
Light Duty Truck	B10	Litres	-	-
Heavy Duty Truck	B10	Litres	-	-
Off Road Vehicle	B10	Litres	-	-
Light Duty Vehicle	B20	Litres	-	-
Light Duty Truck	B20	Litres	-	-
Heavy Duty Truck	B20	Litres	-	-
Off Road Vehicle	B20	Litres	-	-
Light Duty Vehicle	Natural Gas	kg	-	-
Light Duty Truck	Natural Gas	kg	-	-
Heavy Duty Truck	Natural Gas	kg	-	-
Off Road Vehicle	Natural Gas	kg	-	-
Light Duty Vehicle	Propane	Litres	4,603	7.1
Light Duty Truck	Propane	Litres	3,494	5.4
Heavy Duty Truck	Propane	Litres	-	-
Off Road Vehicle	Propane	Litres	-	-

**Mobile GHG Emissions (all fuel / vehicle combinations)** **126,549** **305.8**

**Fleet A/C Refrigerant GHG Emissions** **18.0**

**Total GHG Emissions (all Sources)** **1,307.3**