

Climate Action Revenue Incentive (CARIP) Public Report for 2018

Local Government: Township of Esquimalt

Report Submitted by:

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Township of
ESQUIMALT

Date: May 13, 2019

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

2018 BROAD PLANNING ACTIONS

Broad Planning 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.

Q 6 + Q 7 Community-Wide Broad Planning Actions Taken in 2018 + Additional Actions	
	The new Official Community Plan was adopted which includes a community wide development permit area for “Energy Conservation and Greenhouse Gas Reduction”.
	The new Official Community Plan contains many policies related to densification.
	The new Official Community Plan contains a target to reduce community greenhouse gas emission by at least 38% by 2030, compared to 2007 levels.
	The new Official Community Plan contains a target to strive for carbon neutrality by realizing zero net community Greenhouse Gas emissions by 2050.
	The new Official Community Plan contains policies related to “Building Energy Efficiency”; “Low Carbon Transportation”; “Ferries”; “Passenger Vehicle Alternatives”; and “Advocacy and Partnerships”.
Q 8 Community-Wide Broad Planning Actions Proposed for 2019	
	Prepare a climate action plan for the community.
	Complete the climate adaptation plan in conjunction with ICLEI Canada.
	Issue a updated “Green Building Checklist”.
	Advocate for “Transportation Demand Management” initiatives in all residential rezonings.
	Promote design that includes electric car plug in stations.
Q 9 + Q 10 Corporate Broad Planning Actions Taken in 2018 + Additional Actions	
	Design new library to include energy efficient features.
Q 11 Corporate Broad Planning Actions Proposed for 2019	
	Prepare the sale of a parcel of land for medium density energy efficient housing.
	Incorporate energy efficient features in the new library.

Broad Planning	
Q 12 What is (are) your current GHG reduction target(s)?	(Please provide details here) Carbon neutrality by 2050, 38% reduction by 2030
Q 13 Are you familiar with your local government's community energy and emissions inventory (e.g. CEEI or another inventory)?	Yes
Q 14 What plans, policies or guidelines govern the implementation of climate mitigation in your community?	Yes Yes No Yes Yes
Q 15 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.

Q 16 + Q 17 Community-Wide Building and Lighting Actions Taken in 2018 + Additional Actions	
	Completed oil tank rebate program.
	Continued with LED light conversion program in the Sports Centre and Recreation Centre.
Q 18 Community-Wide Building and Lighting Actions Proposed for 2019	
	The Township has joined with 10 other municipalities and regional districts, the Home Performance Stakeholder Council and City Green Solutions in a project aimed at doubling the number of home energy retrofits in our jurisdictions. The project is funded over two years by the FCM through Transition 2050.

Q 19 + Q 20 Corporate Building and Lighting Actions Taken in 2018 + Additional Actions	
	Replacement of the Sports Centre refrigeration equipment has reduced the run time of compressors and reduced the ammonia charge from 1700 to 400 lbs.
Q 21 Corporate Building and Lighting Actions Proposed for 2019	
	An energy audit of all corporate buildings is planned for 2019.
	Replacement of the HVAC system for the municipal hall is planned in 2019.

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	
Q 22 Is your local government aware of the BC Energy Step Code?	Yes
Q 23 Is your local government implementing the BC Energy Step Code?	No

P5 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.

Q 24 + Q 25 Community-Wide Energy Generation Actions Taken in 2018 + Additional Actions	
Q 26 Community-Wide Energy Generation Actions Proposed for 2019	

Q 27 + Q 28 Corporate Energy Generation Actions Taken in 2018 + Additional Actions	
Q 29 Corporate Energy Generation Actions Proposed for 2019	

Energy Generation	
Q 30 Is your local government developing, or constructing a <ul style="list-style-type: none"> • district energy system • renewable energy system • none of the above 	No No
Q 31 Is your local government operating a <ul style="list-style-type: none"> • district energy system • renewable energy system • none of the above 	No Yes
Q 32 Is your local government connected to a district energy system that is operated by another energy provider?	No
Q 33 Are you familiar with the 2018 List of Funding Opportunities for Clean Energy Projects Led by First Nations and Local Governments?	Yes

2018 GREENSPACE/NATURAL RESOURCE PROTECTION ACTIONS

Greenspace Actions

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

Q 34 + Q 36 Community-Wide Greenspace Actions Taken in 2018 + Additional Actions (Q 35 below Q 41)	
	Hosted 'branch-out events in Highrock Park, Gorge Park, Saxe Point Park and Macaulay Park with over 140 volunteers assisting in the removal of invasive plants and the planting of 40-50 native trees and shrubs in each park. www.esquimalt.ca/parks-recreation/parks/branch-out-events-educational-materials
	Hosted the 6 th 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 plating, and 7 goats that fed on the invasive plants.
	Supported eco-champs program during the summer in Esquimalt Parks. Eco-education for ages 3-6.
	Planted 114 full-sized new boulevard and park trees.
	Removal of 1431 m2 of invasive species in Macaulay Point Park in order to protect three endangered plant species (for DND)
Q 37 Community-Wide Greenspace Actions Proposed for 2019	
	Continued public engagement process for amenity funds provided by the McLouglin Point Wastewater Treatment Plant.
	Support Anderson Community Garden with the addition of 15 new plots.
	Continued implementation of policies to protect native ecosystems and shorelines through the new Development Permit Areas in the OCP.

Q 38 + Q 39 Corporate Greenspace Actions Taken in 2018 + Additional Actions	
Q 40 Corporate Greenspace Actions Proposed for 2019	

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Greenspace	
Q 41 Does your local government have urban forest policies, plans or programs?	Yes
Q 35. Does your local government have policies, plans or programs to support local food production?	Yes

2018 SOLID WASTE ACTIONS

Solid Waste Actions

Reducing, reusing, recycling, recovering and managing the disposal of the residual solid waste minimizes environmental impacts and supports sustainable environmental management, greenhouse gas reductions, and improved air and water quality.

Q 42 + Q 43 Community-Wide Solid Waste Actions Taken in 2018 + Additional Actions	
	Diversion of 556 t of kitchen scraps from the landfill.
	Esquimalt portion of ICI organics collection for the CRD was 188 t.
Q 44 Community-Wide Solid Waste Actions Proposed for 2019	
	Bylaw to prohibit the use of plastic checkout bags has had first reading and will come back to Council before the end of 2019 for approval.

Q 45 + Q 46 Corporate Solid Waste Actions Taken in 2018 + Additional Actions	
Q 47 Corporate Solid Waste Actions Proposed for 2019	

Solid Waste	
Q 48 Does your local government have construction and demolition waste reduction policies, plans or programs?	No
Q 49 Does your local government have organics reduction/diversion policies, plans or programs?	Yes

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.

Q 50 + Q 51 Community-Wide Transportation Actions Taken in 2018 + Additional Actions	
	Constructed sidewalk on Kinver St. from Wychbury to Greenwood
	New crosswalk with solar beacon constructed on Esquimalt Rd. at Memorial Park.
	Negotiated car share coop cars and/or memberships on at least two private developments approved in 2018.
	Signed agreement with UBike to allow bike sharing in Esquimalt for one year period.
Q 52 Community-Wide Transportation Actions Proposed for 2019	
	Completion of 35 m new sidewalk on Admirals Rd at Bewdley.
	Continuing with negotiation of TDM on new developments on case by case basis.

Q 53 + Q 54 Corporate Transportation Actions Taken in 2018 + Additional Actions	
Q 55 Corporate Transportation - Actions Proposed for 2019	

Transportation	
Q 56 Does your local government have policies, plans or programs to support: <ul style="list-style-type: none"> • Walking • Cycling • Transit Use • Electric Vehicle Use • Other (please specify) 	Yes Yes Yes Yes
Q 57 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
Q 58 Does your local government integrate its transportation and land use planning?	Yes

2018 WATER AND WASTEWATER ACTIONS

Water and Wastewater Actions

Managing and reducing water consumption and wastewater is an important aspect of developing a sustainable built environment that supports healthy communities, protects ecological integrity, and reduces GHG emissions.

Q 59 + Q 60 Community-Wide Water and Wastewater Actions Taken in 2018 + Additional Actions	
	Working with CRD on development and implementation of common design guidelines for storm water management.
	Completed inflow and infiltration initial modelling for stormwater system.
	Submitted funding request for three Oil Water Grit separators for 3 marine stormwater outfalls.
Q 61 Community-Wide Water and Wastewater Actions Proposed for 2019	
	Develop cost-sharing program with community for repairs to cross connections.
	Support fix-a-leak week to reduce water loss from private homes.

Q 62 + Q 63 Corporate Water and Wastewater Actions Taken in 2018 + Additional Actions	

Q 64 Corporate Water and Wastewater Actions Proposed for 2019	

Water Conservation	
Q 65 Does your local government have water conservation policies, plans or programs?	No

2018 CLIMATE CHANGE ADAPTATION ACTIONS

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

Q 66 Please identify the THREE climate impacts that are most relevant to your Local Government.	
<ul style="list-style-type: none"> Changes to temperature and precipitation causing seasonal drought Extreme weather events contributing to urban and overland flooding Sea level rise and storms causing coastal flooding and/or erosion 	

Other (please specify):

Q 67 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	No
Emergency Response Planning	Yes
Asset Management	Yes
Natural/Eco Asset Management Strategies	No
Infrastructure Upgrades (e.g. stormwater system upgrades)	Yes
Beach Nourishment Projects	No
Economic Diversification Initiatives	No
Strategic and Financial Planning	No
Cross-Department Working Groups	No
Official Community Plan Policy Changes	Yes
Changes to Zoning and other Bylaws and Regulations	No
Incentives for Property Owners (e.g. reducing storm water run-off)	No
Public Education and Awareness	No
Research	No
Mapping	No

Partnerships	Yes
Other (please specify):	

Q 68 Climate Change Adaptation Actions Taken in 2018	
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 2018 the Township started the development of a Climate Adaptation Plan in partnership with ICLEI Canada. The first workshop was held in October of 2018, which identified xx risks to the municipality from climate change.
Q 69 Climate Change Adaptation Actions Proposed for 2019	
	In 2019, there will be a vulnerability assessment of the identified risks, followed by a process to develop actions to address these risks.
Q 70 For more information please contact	
	Tricia deMacedo, Policy Planner

Q 71. 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?	
Indicators of Climate Change for British Columbia Plan2Adapt Climate Projections for Metro Vancouver Climate Projections for the Capital Region Climate Projections for the Cowichan Valley Regional District Province of BC's BC Adapts Video Series Preparing for Climate Change: Implementation Guide for Local Governments Public Infrastructure and Engineering Vulnerability Committee's (PIEVC) Sea Level Rise Adaptation Primer BC Regional Adaptation Collaborative Webinars Retooling for Climate Change Water Balance Model Water Conservation Calculator Funding: National Disaster Mitigation Program (NDMP) Community Emergency Preparedness Fund (CEPF) Municipalities for Climate Innovation Program (MCIP) Climate Adaptation Partner Grants (FCM) Infrastructure Planning Grants (MAH) Federal Gas Tax Fund	Useful Useful N/A Useful Useful Useful Useful Useful Useful Useful Useful Useful Useful Useful Useful Useful
Other (please specify)	

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.

Q 72 Community-Wide Other Actions Taken in 2018	
Q 73 Corporate Other Actions Taken in 2018	

Other	
Q 74 Are you familiar with the Community Lifecycle Infrastructure Costing Tool (CLIC) ?	Yes
Q 75 Is your local government using the CLIC 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](#).

Q 76 Community-Wide Innovation Action
Q 77 Corporate Innovation Action
Q 78 For more information on actions described above 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 separated by a forward slash (e.g. program1/program2).

Mitigation

Q 79 Mitigation Programs, Partnerships and Funding

Adaptation

Q 80 Adaptation Programs, Partnerships and Funding

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

Q 81 Did your local government measure corporate GHG emissions for 2018?	Yes
Q 82 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)	1187 tCO₂e
Q 83 If your local government measured 2018 corporate GHG emissions, please report the number of corporate GHG emissions from contracted services (in	6.55 tCO₂e

tonnes of carbon dioxide equivalent)	
Q 84 TOTAL A: CORPORATE GHG EMISSIONS FOR 2018 (Direct GHGs + Contracted GHGs)	1193.55 tCO₂e

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 (tCO₂e)) being claimed from any of the following Option 1 GHG Reduction Projects:

OPTION 1 PROJECTS	REDUCTIONS
Q 85 Energy Efficient Retrofits (in tonnes of carbon dioxide equivalent (tCO₂e))	
Q 86 Solar Thermal (in tonnes of carbon dioxide equivalent (tCO₂e))	
Q 87 Household Organic Waste Composting (in tonnes of carbon dioxide equivalent (tCO₂e)) 188.3 (Kitchen scraps)	188.3
Q 88 Low Emission Vehicles (in tonnes of carbon dioxide equivalent (tCO₂e))	
Q 89 Avoided Forest Conversion (in tonnes of carbon dioxide equivalent (tCO₂e))	
Q 90 TOTAL B: REDUCTIONS FROM ALL OPTION 1 PROJECTS FOR 2018	188.3 tCO₂e

Q 91 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:

Option 2 Project Name	REDUCTIONS
Option 2 GHGs Reduced (tCO₂e)	

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

Offsets

Q 93 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.

Offset Provider Name	OFFSETS
Offsets (tCO₂e)	
Offset Provider Name	
Offsets (tCO₂e)	
Q 94 TOTAL D: OFFSETS PURCHASED FOR 2018	tCO₂e

Q 95 TOTAL REDUCTIONS AND OFFSETS FOR 2018 (Total B+C+D) = 188.3 tCO₂e

Corporate GHG Emissions Balance for 2018

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

Q 96 CORPORATE GHG EMISSIONS BALANCE FOR 2018 = (A – (B+C+D)) = 1005.25 tCO₂e

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

Q 97 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 tCO₂e)

SOURCE OF CARRY OVER EMISSION REDUCTIONS (and year earned)	REDUCTIONS
Q 98 BALANCE OF REDUCTIONS ELIGIBLE FOR CARRY OVER TO NEXT YEAR	tCO₂e

Carbon Neutral Reporting	
Q 99 Does your local government set aside funds in a climate reserve fund or similar?	Yes

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.

Q 100 Based on your local government's 2018 CARIP Climate Action/Carbon Neutral Progress Survey, please check the GCC Climate Action Recognition Program level that best applies:

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

Q 101 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:

PROJECT NAME:

Capital Regional District: Local Government Operations Energy and GHG Spreadsheet

About this Spreadsheet

This spreadsheet has been developed for the Capital Regional District (CRD) to assist member local governments to meet their reporting requirements under the Climate Action Charter. Under the Charter, communities are free to use any tool they desire to compile their energy and GHG inventory.

This spreadsheet has been developed to align with the Provincial requirements for reporting communities.

For more information on the Climate Action Charter, and the reporting requirements for local governments, please see the BC Government 'Toolkit' website at: www.toolkit.bc.ca/taking-action/Operations

Overview:

Data entry is executed by the user to input energy consumption data. The spreadsheet then calculates the associated GHG emissions, based on emissions factors appropriate for that fuel and that year. The spreadsheet also generates a summary page based on the Provincially required submission template.

Data Input:



Data entry is executed by the user to input energy consumption data. Each Tab that requires data has 'text box' instructions to the user. Each tab provides some example data entry. Where data fields are required, they are indicated, otherwise data fields are optional. The Tabs are locked - only cells appropriate for data entry can be edited.

Tab Name:	Content:
Provincial Summary	Contact information for the municipal representative.
Categories	Users can define up to six categories of operations. The each building utility bill can be assigned to a specific category. This is an optional feature and breaking out consumption is not required.
Electricity	Building energy consumption from utility records. Note that utilities can provide a consolidated electricity summary by account.
Imported Steam or District Heat	Imported steam or district heat calculation worksheet provided by the BC Climate Action Secretariat.
Natural Gas	Natural gas and/renewable natural gas utility consumption.
Propane	Propane consumption used for buildings (typically only applies to remote buildings).
Heating Oil	Heating oil consumption for buildings (if any).
Fleet	Fleet consumption data including gasoline, ethanol blends, diesel, biodiesel blends, and propane used for vehicles and equipment (e.g. Zamboni).
Refrigerant - Fleet A/C	Number of vehicles with air conditioning (A/C) systems.
Refrigerant - Buildings	Refrigerant use and disposal at buildings.

Acknowledgements:

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Contact Information:

Capital Regional District: Amanda Broad (250) 360-3048	 Making a difference...together
Stantec (Project Management): Dan Hegg (250) 217-9729 Stantec (Content and Spreadsheet Development): Dan Hegg (250) 217-9729	

Local Government Name:	Township of Esquimalt
Year:	2018
Contact Information:	
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Position:	Policy Planner
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Email address:	tricia.demacedo@esquimalt.ca

Stationary Energy GHG Emission Sources:				
Fuel	End Use	Unit of Measure	Quantity	Emissions (tCO₂e)
Electricity	Engineering and Public Works	kWh	127,760	1.4
Electricity	Fire	kWh	339,360	3.6
Electricity	Parks and Recreation	kWh	3,130,055	33.4
Electricity	Municipal Hall	kWh	291,936	3.1
Electricity	Infrastructure	kWh	1,115,866	11.9
Electricity	Archives	kWh	14,986	0.2
Natural Gas	Engineering and Public Works	GJ	250	12.4
Natural Gas	Fire	GJ	-	-
Natural Gas	Parks and Recreation	GJ	16,088	802.3
Natural Gas	Municipal Hall	GJ	197	9.8
Natural Gas	Infrastructure	GJ	-	-
Natural Gas	Archives	GJ	11	0.6
Propane	Engineering and Public Works	Litres	1,014	1.6
Propane	Fire	Litres	-	-
Propane	Parks and Recreation	Litres	4,792	7.4
Propane	Municipal Hall	Litres	-	-
Propane	Infrastructure	Litres	-	-
Propane	Archives	Litres	-	-
Heating Oil	Engineering and Public Works	Litres	-	-
Heating Oil	Fire	Litres	-	-
Heating Oil	Parks and Recreation	Litres	-	-
Heating Oil	Municipal Hall	Litres	-	-
Heating Oil	Infrastructure	Litres	-	-
Heating Oil	Archives	Litres	-	-
Stationary Energy GHG Emissions (all fuel types)				887.7
Stationary Energy Refrigerant GHG Emissions				-
Imported Steam or District Heat GHG Emissions				
Tier	Unit of Measure	Quantity	Emissions (tCO₂e)	
	MWh	-	-	
Imported Steam or District Heat GHG Emissions				-
Mobile GHG Emission Sources:				
Vehicle Class	Vehicle Fuel	Unit of Measure	Quantity	Emissions (tCO₂e)
Light Duty Vehicle	Gasoline	Litres	3,355	7.9
Light Duty Truck	Gasoline	Litres	37,050	88.1
Heavy Duty Truck	Gasoline	Litres	13,395	30.3
Off Road Vehicle	Gasoline	Litres	1,229	2.7
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	4,365	12.7
Light Duty Vehicle	B5	Litres	-	-
Light Duty Truck	B5	Litres	43	0.1
Heavy Duty Truck	B5	Litres	49,286	123.9
Off Road Vehicle	B5	Litres	12,056	33.6
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	-	-
Light Duty Truck	Propane	Litres	-	-
Heavy Duty Truck	Propane	Litres	-	-
Off Road Vehicle	Propane	Litres	-	-
Mobile GHG Emissions (all fuel / vehicle combinations)			120,779	299.3
Fleet A/C Refrigerant GHG Emissions				-
Total GHG Emissions (all Sources)				1,187.0