



Climate Action Revenue Incentive (CARIP) Public Report 2019



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

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Narrative Focus

Local government signatories to the B.C. Climate Action Charter have committed to taking climate action by:

- Working towards achieving corporate carbon neutrality;
- Measuring and reporting on their community-wide GHG emissions; and
- Creating complete, compact, energy-efficient communities.

A key part of the 2019 CARIP survey is to highlight and celebrate successful climate actions undertaken by local governments in British Columbia.

In 2019, what actions has your local government taken to support the creation of compact, complete, and energy efficient communities?

BC Energy Step Code - an optional performance-based compliance path in the BCBC (BC Building Code). The path leads to net-zero-energy ready buildings through a series of increasingly stringent requirements for energy use, thermal energy demand, and airtightness. A phased Step Code was adopted 2019-OCT-21, by amendment to the Nanaimo Building Bylaw. Phasing of the steps of the Step Code is designed to give builders time to familiarize themselves with the new requirements, while working towards improving energy performance in their construction techniques

Woodstove Change Out Program – Rebates are offered for the purchase of newer high efficiency woodstoves, conversions to natural gas, certified pellet stoves, or electric heat pumps that replace woodstoves that do not meet CSA B415.1 standard.

Home Energy Assessment Rebate Program – Continued from 2018. Program provides homeowners \$150 to cover costs for an initial home energy assessment and an additional \$10 per for every 5 gigajoule/year reduction in the homes annual energy use, up to a max of \$200.

Active Transportation - The Transportation Department has focused on providing infrastructure for active transportation: bicycles, pedestrians, other wheeled users, and transit support. The intent of this focus is to create a city with reduced dependence on the automobile and a healthier population overall. The result is also reduced GHG emissions. Example projects include construction of sidewalks, multiuse paths, improved pedestrian crossings, and retiming of traffic signals for pedestrians of all ages and abilities. Additionally, a traffic signal progression was implemented on a major corridor. This was shown to reduce stoppages for vehicles which also assists with reduced GHG emissions. Lastly, there is on-going conversion of street lighting from HPS to LED fixtures.

2019 CORPORATE CLIMATE ACTION:

Corporate climate actions refer to actions that reduce the GHG emissions produced as a result of a local government's delivery of "traditional services", including fire protection, solid waste management, recreational/cultural services, road and traffic operations, water and wastewater management, and local government administration.

In 2019, when it comes to corporate climate action, did your local government undertake any of the following (PLEASE SELECT ALL THAT APPLY):

- Building and Lighting Actions
- Energy Generation Actions
- Greenspace Actions
- Planning Actions
- Solid Waste Actions
- Transportation Actions
- Water and Wastewater Actions
- Other Climate Actions (PLEASE SPECIFY)
- Don't know

Please specify 'Other Climate Actions'

When it comes to corporate Building and Lighting Actions, did your local government undertake any of the following in 2019 (PLEASE SELECT ALL THAT APPLY):

- New or upgraded energy-efficient lighting systems
- New or upgraded energy-efficient heating systems
- New or upgraded building envelope initiatives
- Upgrades to amenities in recreation facilities
- Studies related to building and/or lighting energy efficiency
- Other (PLEASE SPECIFY)

Don't know

Please specify 'Other'

When it comes to corporate Energy Generation Actions, did your local government undertake any of the following in 2019 (PLEASE SELECT ALL THAT APPLY):

- Solar power projects
- Heat recovery or heat reclamation projects
- Biomass or bio-gas projects
- Geo-exchange or geothermal projects
- Studies related to energy generation
- Other (PLEASE SPECIFY)
- Don't know

Please specify 'Other'

When it comes to corporate Greenspace Actions, did your local government undertake any of the following in 2019 (PLEASE SELECT ALL THAT APPLY):

- Tree planting
- Greenspace acquisition
- New or upgraded amenities in parks
- Invasive species management
- Plans or strategies related to greenspace
- Other (PLEASE SPECIFY)
- Don't know

Please specify 'Other'

When it comes to corporate Planning Actions, did your local government undertake any of the following in 2019 (PLEASE SELECT ALL THAT APPLY):

Energy/Emissions Management Plan (New or Updated)

Asset Management Plan (New or Updated)

Corporate Climate Action Plan (New or Updated)

Strategic Plan (New or Updated)

Other (PLEASE SPECIFY)

Don't know

Please specify 'Other'

When it comes to corporate Solid Waste Actions, did your local government undertake any of the following in 2019 (PLEASE SELECT ALL THAT APPLY):

Introduction, expansion or improvement of recycling initiatives at corporate facilities

Introduction, expansion or improvement of composting initiatives at corporate facilities

Communication or education for staff related to corporate solid waste initiatives

Studies or research related to corporate solid waste initiatives

Plans or strategies related to corporate solid waste initiatives

Other (PLEASE SPECIFY)

Don't know

Please specify 'Other'

When it comes to corporate Transportation Actions, did your local government undertake any of the following in 2019 (PLEASE SELECT ALL THAT APPLY):

- Fleet replacement or upgrades
- New or improved electric vehicle initiatives
- New or improved active transportation infrastructure for staff
- Communication or outreach for staff related to corporate transportation initiatives
- New or improved public transportation initiatives for staff
- Other (PLEASE SPECIFY)
- Don't know

Please specify 'Other'

When it comes to corporate Water and Wastewater Actions, did your local government undertake any of the following in 2019 (PLEASE SELECT ALL THAT APPLY):

- New or improved water or wastewater infrastructure
- Studies or research related to water conservation
- Plans or strategies related to water or wastewater
- Water reduction initiative(s)
- Other (PLEASE SPECIFY)
- Don't know

Please specify 'Other'

As mentioned, a key part of the 2019 CARIP Survey is to highlight and celebrate successful climate actions undertaken by local governments in British Columbia. This question provides local governments the opportunity to demonstrate leadership and innovative approaches to reduce corporate GHG emissions.

When it comes to the corporate climate action, please highlight up to three significant actions focused on reducing GHG emissions that your local government undertook in 2019:

Corporate Action #1

Implementation of Cold Water Ice Re-surfacing Technology at 2 ice rinks, reducing use of natural gas heated water from 65 C down to 20 C. Savings of up to 79% in GHGs possible.

Corporate Action #2

Installation of new variable-speed drives on main air-handling units of aquatic facility, aimed at optimizing heat, ventilation and air-conditioning operations and energy efficiency.

Corporate Action #3

Study examining feasibility of converting 2 air-source heat pumps to water-source heat pumps at Convention Centre, which can capture hot water waste and reduce energy use.

2019 COMMUNITY-WIDE CLIMATE ACTION:

Community-wide actions refer to actions that reduce GHG emissions across the community (i.e. actions not related to “traditional services” in corporate operations).

When it comes to community-wide climate action in 2019, did your local government undertake any of the following (PLEASE SELECT ALL THAT APPLY):

- Building and Lighting Actions
- Energy Generation Actions
- Greenspace Actions
- Planning Actions
- Solid Waste Actions
- Transportation Actions
- Water and Wastewater Actions
- Other Climate Actions (PLEASE SPECIFY)
- Don't know

Please specify 'Other Climate Actions'

Signatory to Global Covenant of Mayors “Showcase Cities” Program

When it comes to community-wide Building and Lighting Actions, did your local government undertake any of the following in 2019 (PLEASE SELECT ALL THAT APPLY):

- New or upgraded energy-efficient lighting systems
- New or upgraded energy-efficient heating systems
- BC Energy Step Code related projects
- Incentives/rebate programs related to energy-efficient building or lighting
- Outreach, education or communication related to energy-efficient building or lighting
- Other (PLEASE SPECIFY)
- Don't know

Please specify 'Other'

FortisBC Rental Apartment Efficiency Program

When it comes to community-wide Energy Generation Actions, did your local government undertake any of the following in 2019 (PLEASE SELECT ALL THAT APPLY):

- Solar power projects
- Heat recovery or heat reclamation projects
- Landfill gas capture/utilization projects
- Micro-hydro projects
- Studies or research related to energy generation
- Other (PLEASE SPECIFY)
- Don't know

Please specify 'Other'

When it comes to community-wide Greenspace Actions, did your local government undertake any of the following in 2019 (PLEASE SELECT ALL THAT APPLY):

- Tree planting
- Greenspace restoration or maintenance
- Greenspace acquisition
- Invasive species management
- Plans or strategies related to greenspace
- Other (PLEASE SPECIFY)
- Don't know

Please specify 'Other'

When it comes to community-wide Planning Actions, did your local government undertake any of the following in 2019 (PLEASE SELECT ALL THAT APPLY):

- Official Community Plan (New or Updated)
- Climate Action Plan (New or Updated)
- Regional Growth Strategy (New or Updated)
- New or updated bylaw(s) or zoning addressing climate issues
- Other (PLEASE SPECIFY)
- Don't know

Please specify 'Other'

When it comes to community-wide Solid Waste Actions, did your local government undertake any of the following in 2019 (PLEASE SELECT ALL THAT APPLY):

- Introduction, expansion or improvement of recycling initiatives
- Introduction, expansion or improvement of composting initiatives
- Community clean-up initiatives
- General waste reduction initiative (including landfill diversion strategies)
- Outreach, education or communication related to solid waste
- Other (PLEASE SPECIFY)
- Don't know

Please specify 'Other'

When it comes to community-wide Transportation Actions, did your local government undertake any of the following in 2019 (PLEASE SELECT ALL THAT APPLY):

- New or improved active transportation infrastructure
- New or improved public transportation initiatives

- New or improved electric vehicle initiatives
- Outreach, education or communication related to transportation
- Plans or strategies related to transportation
- Other (PLEASE SPECIFY)
- Don't know

Please specify 'Other'

New City engineering guidelines and standards focusing on active transportation as the priority. On-going conversion of high pressure sodium street lighting to LED.

When it comes to community-wide Water and Wastewater Actions, did your local government undertake any of the following in 2019 (PLEASE SELECT ALL THAT APPLY):

- Water restrictions
- Incentives/rebate programs related to water or wastewater
- Outreach, education or communication related to water or wastewater
- Studies or research related to water or wastewater
- Plans or strategies related to water or wastewater
- Other (PLEASE SPECIFY)
- Don't know

Please specify 'Other'

As mentioned, a key part of the 2019 CARIP survey is to highlight and celebrate successful climate actions undertaken by local governments in British Columbia. This question provides local governments the opportunity to demonstrate leadership and innovative approaches to reduce community-wide GHG emissions.

When it comes to the community-wide climate action, please highlight up to three significant actions focused on reducing GHG emissions that your local government undertook in 2019:

Community-Wide Action #1

Energy Step Code Implementation: To help improve the energy performance of all new buildings, the City now requires that the Step Code is followed. The Step Code is an incremental, performance based target to achieve more energy efficient buildings that go beyond the requirements of the BC Building Code. Ultimately, the Step Code will require all new construction to be “net-energy zero ready” by 2032. Council endorsed Building Amendment Bylaw 2019 No. 7224.02, requiring up to Step three compliance for Part 9 Buildings by 2022. In addition, an amendment to Schedule D of Zoning Bylaw 2011 No.4500 provided a density bonus incentive for developers who choose to meet Step three and higher. Council also directed staff to develop a building energy efficiency rezoning Council policy to set higher energy efficiency requirements, beyond the current Energy Step Code requirements, found in in the Building Bylaw.

Community-Wide Action #2

Partners in Parks Stewardship Program: Ongoing partnership with community volunteers to restore and maintain 13 park restoration sites throughout the City. Over 4000 trees have been planted under this program. The Chase River Riparian Restoration Project was completed in 2019. This project involved City staff working with instructors and students from John Barsby Secondary School to restore a 450 m riparian strip of the Chase River. City staff attended two classes to introduce the project and helped provide follow-up support for students who helped remove invasive plant species and plant over 1000 trees within riparian ecosystem. The work focused on a section of the Chase River within Harewood Centennial Park and John Barsby Secondary School.

Community-Wide Action #3

Beaufort Park Food Forest Project: completed in 2019. A neighbourhood food forest designed and established with volunteer help from community groups and residents of the Hospital area neighbourhood. The food forest consists of 23 varieties of fruit and nut trees, including Apples, Cherries, Pears and Plums. Walnuts and Almonds.

2019 CLIMATE PREPAREDNESS AND ADAPTATION ACTION:

This section of the 2019 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 climate impacts that are most relevant to your local government (PLEASE SELECT ALL THAT APPLY):

- Increased temperatures increasing wildfire activity
- Extreme weather events contributing to urban and overland flooding
- Changes to temperature and precipitation causing seasonal drought
- Warmer winter temperatures reducing snowpack
- Sea level rise and storms causing coastal flooding and/or erosion
- Other (PLEASE SPECIFY)
- Don't know

Please specify 'Other'

In 2019, did your local government take any of the following actions in an effort to consider or address the impacts of climate change? (PLEASE SELECT ALL THAT APPLY)

- Emergency response planning
- Asset management
- Infrastructure upgrades
- Public education and awareness
- Strategic and financial planning
- Risk and vulnerability assessments
- Risk reduction strategies

Official Community Plan policy changes

Other (PLEASE SPECIFY)

Don't know

Please specify 'Other'

City of Nanaimo Climate Resiliency Strategy

In 2019, did your local government partner with any of the following organizations to prepare for, and adapt to, a changing climate? (PLEASE SELECT ALL THAT APPLY)

Adaptation to Climate Change Team (SFU)

Columbia Basin Trust

Community Emergency Preparedness Fund (UBCM)

Federation of Canadian Municipalities

Fraser Basin Council

Pacific Institute for Climate Solutions (UVIC)

Other (PLEASE SPECIFY)

Don't know

Please specify 'Other'

As mentioned, a key part of the 2019 CARIP survey is to highlight and celebrate successful climate actions undertaken by local governments in British Columbia. This question provides local governments the opportunity to demonstrate leadership and innovative approaches to adapting to a changing climate.

When it comes to climate preparedness and adaptation actions, please highlight up to three significant actions/initiatives that your local government undertook in 2019:

Adaptation Action #1

The Climate Resiliency Strategy identifies anticipated climate impacts in the City and prioritizes actions to respond to the expected impacts. A sea rise level study was completed as part of this project. The study looked into current modeling data to define a future marine Flood Construction Level for 2050 and 2100. A comprehensive resiliency strategy process included a risk and vulnerability assessment for potential climate impacts to the City. The impacts were prioritized and a set of resiliency actions were prepared that focused on water supply, flooding and drainage, environment and parks, land use and buildings, and public well-being and preparedness.

Adaptation Action #2

Adaptation Action #3

Section 3: 2019 Carbon Neutral Reporting

Local governments are required to report on their progress in achieving their corporate carbon neutral goal under the B.C. Climate Action Charter. Working with B.C. local governments, the joint Provincial-UBCM Green Communities Committee has established a common approach to determining corporate carbon neutrality for the purposes of the 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, specifically the Workbook (WILL BE UPDATED) and Becoming Carbon Neutral: A Guide for Local Governments in British Columbia (WILL BE UPDATED).

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 CARIP reports.

2019 CARBON EMISSIONS

Did your local government measure corporate GHG emissions for 2019?

- Yes
- No
- Don't Know

If your local government measured 2019 corporate GHG emissions, please report the number of corporate GHG emissions (in tonnes of carbon dioxide equivalent (tCO₂e)) from:

Service Delivery Type	2019 Corporate GHG Emissions
Services Delivered Directly by your Local Government	4,698
Contracted Services	674

TOTAL A - CORPORATE GHG EMISSIONS (DIRECT + CONTRACTED) FOR 2019:

5,372 tCO₂e

2019 CARBON REDUCTIONS

To be carbon neutral, a local government must balance their TOTAL corporate GHG emissions generated in 2019 by one or a combination of the following actions:

- Undertake Green Communities Committee-supported Option 1 Project(s)
- Undertake Green Communities Committee-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 2019 GHG emissions reductions (in tonnes of carbon dioxide equivalent (tCO₂e)) being claimed from any of the following Option 1 GHG Reduction Projects:

Option 1 GHG Reduction Projects	2019 GHG Emissions Reductions
1A Energy Efficiency Retrofits	
1B Solar Thermal	
1C Household Organic Waste	3,514
1D Low Emission Vehicles	
1E Avoided Forest Conversion	
1F Trenchless Technology	

TOTAL B - REDUCTIONS FROM ALL OPTION 1 PROJECTS FOR 2019:

3,514 tCO ₂ e

If applicable, please report the names and 2019 GHG emissions reductions (in tonnes of carbon dioxide equivalent (tCO₂e)) being claimed from Option 2 GHG Reduction Projects:

Names of Option 2 GHG Reduction Projects	2019 GHG Emissions Reductions
1.	
2.	

TOTAL C - REDUCTIONS FROM ALL OPTION 2 PROJECTS FOR 2019:

0 tCO ₂ e

2019 CARBON OFFSETS

If applicable, please report the name of the offset provider, type of project and number of offsets purchased (in tonnes of carbon dioxide equivalent (tCO₂e)) from an offset provider for the 2019 reporting year:

	Name of Offset Provider	Name of Project	2019 GHG Emissions Reductions
1.			
2.			

TOTAL D - OFFSETS PURCHASED FOR 2019:

0 tCO ₂ e

TOTAL REDUCTIONS AND OFFSETS FOR 2019 (Total B+C+D):

3,514 tCO ₂ e

Corporate GHG Emissions Balance for 2019

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 Green Communities Committee Option 1 and Option 2 projects and/or the purchase of offsets.

CORPORATE GHG EMISSIONS BALANCE FOR 2019 = (Total A – (B+C+D))

1,858 tCO ₂ e

If your corporate GHG emissions balance is negative or zero, your local government is carbon neutral. CONGRATULATIONS!

If your local government was carbon neutral in 2019, 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, 2019 100 tCO₂e):

	Source of Carryover Emission Reduction	Year Earned	GHG Emissions Reductions
1.			
2.			

TOTAL E - BALANCE OF REDUCTIONS ELIGIBLE FOR CARRY OVER TO NEXT YEAR

0

GREEN COMMUNITIES COMMITTEE CLIMATE ACTION RECOGNITION PROGRAM:

The joint Provincial-UBCM Green Communities Committee is pleased to be continuing the Climate Action Recognition Program again this year. This multi-level program provides the Green Communities Committee 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, who measure 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 demonstrate significant action (corporately or community-wide) in reducing 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 corporate carbon neutrality in the reporting year.

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

- Level 1 – Demonstrating Progress on Charter Commitments
- Level 2 – Measuring GHG Emissions
- Level 3 – Accelerating Progress on Charter Commitments
- Level 4 - Achievement of Carbon Neutrality
- Don't know

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:

Does your local government set aside funds in a climate reserve fund or similar?

Yes

No

Don't know