

Climate Action Revenue Incentive (CARIP) Public Report for 2016

Local Government: District of Saanich

Report Submitted by:

Name: Rebecca Newlove

Role: Manager of Sustainability

Email: Rebecca.newlove@saanich.ca

Phone: 250-475-7118



Date: May 25, 2017

The District of Saanich has completed the 2016 Climate Action Revenue Incentive Program (CARIP) Public Report as required by the Province of BC. The CARIP report summarizes actions taken in 2016 and proposed for 2017 to reduce corporate and community-wide energy consumption and greenhouse gas emissions (GHG) and reports on progress towards achieving carbon neutrality.

Contents

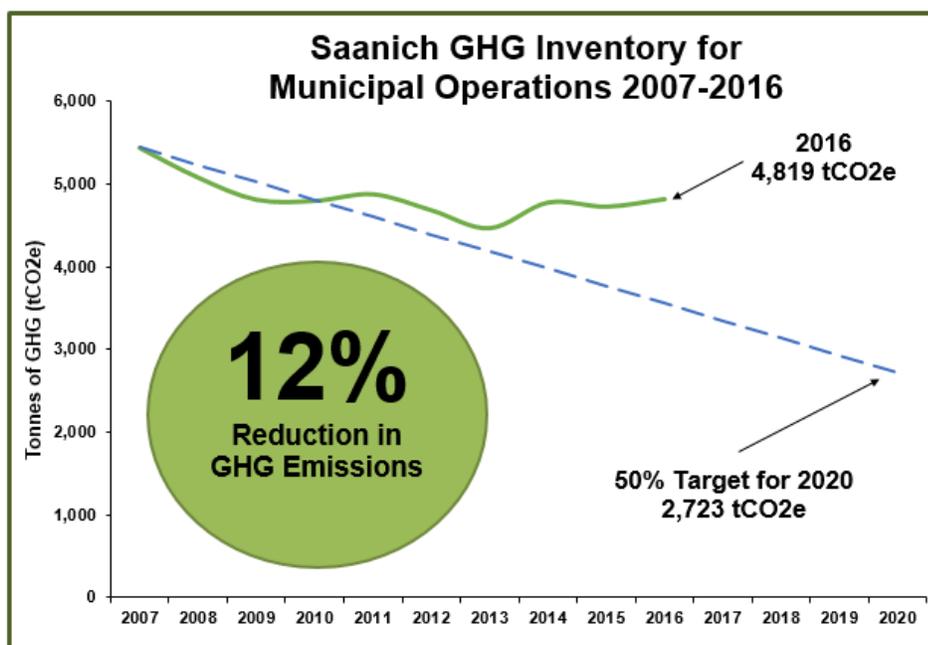
| | |
|--|----|
| 2016 DISTRICT OF SAANICH CORPORATE GHG INVENTORY | 3 |
| Broad Planning Actions | 4 |
| Building and Lighting Actions | 6 |
| Energy Generation Actions | 8 |
| Greenspace Actions | 9 |
| Solid Waste Actions | 10 |
| Transportation Actions | 11 |
| Water and Wastewater Actions..... | 13 |
| Climate Change Adaptation Actions | 14 |
| Other Climate Actions..... | 16 |
| Innovation | 17 |
| Programs, Partnerships and Funding Opportunities | 17 |
| Reporting Emissions..... | 18 |
| District of Saanich Carbon Tax Calculation Form 2016 | 22 |

2016 DISTRICT OF SAANICH CORPORATE GHG INVENTORY

In 2010, the District of Saanich approved the Climate Action Plan which committed to a GHG reduction target for corporate emissions of 50% by 2020 from 2007 levels. Figure 1 provides the progress made towards the 2020 corporate GHG emissions reduction target from the 2007 baseline. This shows that our corporate GHG emissions reductions are currently at 4,819 tonnes of Carbon equivalent (tCO₂e), which is 12% below 2007 levels (5,446 tCO₂e).

It should be noted that several changes were made in the 2016 Corporate GHG Inventory calculation due to changes in the reporting platform and which represent an increase of approximately 87 tonnes CO₂e that would not have been reported using the past methodology. This provides a more comprehensive inventory of Saanich Corporate GHG emissions, consistent with provincial reporting and aligned with the new reporting platform but does represent an increase from the 2015 GHG inventory.

Figure 1: District of Saanich Corporate GHG Inventory 2007-2016



Several projects funded and completed in 2016 and 2017 are expected to result in considerable carbon reductions that should assist Saanich in moving further towards the 2020 GHG emission reductions target. The Gordon Head Recreation Centre Air Source Heat Pump was commissioned in early 2017 and is expected to result in an additional 10% reduction to the corporate inventory through 2017 and 2018. Following this, the municipal hall lighting and boiler upgrades due for implementation in 2017 are expected to contribute an additional 2% reduction. Saanich Commonwealth Place contributes over 860 tonnes CO₂e emissions annually, which equates to approximately 18% of our total GHG inventory and presents an opportunity to become a showcase 100% Renewable Energy facility. This, alongside upgrades to the heating system at Pearkes Recreation Centre, implementation of the LED street lighting program, further electrification of fleet and fleet fuel reductions will be instrumental in both the achievement of our 2020 targets and commitment to 100% Renewable Energy by 2050.

2016 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 2016 | |
|---|--|
| | Completed Phase 1 and Phase 2 and initiated Phase 3 of the Uptown Douglas Corridor Plan. This integrated land use and transportation plan has progressed through the vision and option exploration stage with considerable public and stakeholder engagement through 2016. The study area represents a critical regional hub that is expected to experience significant growth and change in the near future. This plan forms part of the multi-year program to update the 12 Local Area Plans in line with the Official Community Plan (OSP); the principal legislative tool for guiding future growth and change in Saanich. |
| | Shelbourne Valley Action Plan – 2016 saw the final phase of this long-range land use plan for a key corridor in the District and region. Mobility improvement options were developed, analysed and reviewed during 2016 with considerable public and stakeholder engagement, leading to a final plan option and Council approval in early 2017. The primary focus of the Action Plan is to deliver land use and mobility enhancements that seek to fundamentally change the character of the Valley to create vibrant and liveable Centres and Villages and a balanced mobility network where walking, cycling and public transit are inviting options for all ages and abilities. |
| | WWF Earth Hour City Challenge Finalist – in 2016 the World Wildlife Fund announced that the District of Saanich was selected as one of three Canadian finalists for the Earth Hour City Challenge. |
| Community-Wide Actions Proposed for 2017 | |
| | In early 2017, Council passed a motion to support moving both as a corporation and community towards 100% renewable energy and directed staff to provide a Terms of Reference for a 100% Renewable Energy Strategy. Given this, staff aim to initiate an update to the Climate Action and Climate Adaptation Plans in 2017 that outlines strategies and actions to achieve a 100% Renewable Energy target by 2050. |
| | Saanich is looking to develop a more detailed and current community emissions inventory and calculator tool to assist with our annual reporting on Community GHG emissions and to support an update of the Climate Action and Adaptation Plans. |
| | The Uptown Douglas Corridor Plan will be drafted in late 2017 for public engagement and anticipated presentation to council in early 2018. The feasibility of district energy and associated policies and guidelines will be incorporated into the plan development. |
| | It is expected that work on 2 additional local area plans will commence in 2017. |
| | A review of the annual Community Sustainability Grants Application and Allocation process will be initiated in 2017. This program was introduced in 2013 and provides a matching grant of up to \$10,000 to support community-led sustainability projects (funded by 50% of the Climate Action Rebate Incentive Program). The review will identify opportunities for improvements and alignment with Saanich Climate Action goals. |

| Corporate Actions Taken in 2016 | |
|---|--|
| | Implementation of a web-based data system (“SoFi”) for tracking corporate GHG emissions. This tool will help to simplify annual corporate GHG reporting, improve analysis capabilities and minimize staff time required in future years. |
| Corporate Actions Proposed for 2017 | |
| | Two permanent staff members will be hired in 2017 to fill two vacant and previously temporary posts within the Sustainability division, providing additional support for sustainability and climate action projects. |
| | Review of the District of Saanich Carbon Fund to ensure its longevity as the corporate Carbon footprint decreases. Departments contribute to the fund based upon their annual carbon footprint and can then apply for support from the fund for climate mitigation or adaptation projects. |
| Broad Planning | |
| What is (are) your current GHG reduction target(s)? | 33% reduction in Community GHG emissions by 2020 (from 2007 levels) 50% reduction in Corporate GHG emissions by 2020 (from 2007 levels) |
| Has your local government used the Community Energy and Emissions Inventory (CEEI) to measure progress? | Yes |
| What plans, policies or guidelines govern the implementation of climate mitigation in your community? <ul style="list-style-type: none"> • Community Energy and Emissions (CEE) Plan • Climate Action Plan • Integrated Community Sustainability Plan • Official Community Plan (OCP) • Regional Growth Strategy (RGS) • Do not have a plan • Other: Climate Adaptation Plan (2011) and the Saanich Strategic Plan (2015-2018 currently being updated) | No Yes No Yes Yes N/A Yes |
| Does your local government have a corporate GHG reduction plan? | Yes |
| Does your local government have a climate reserve fund or something similar? | Yes |

2016 BUILDINGS AND LIGHTING ACTIONS

Building and Lighting Actions

Low-carbon buildings use the minimum amount of energy needed to provide comfort and safety for their inhabitants and tap into renewable energy sources for heating, cooling and power. These buildings can save money, especially when calculated over the long term. This category also includes reductions realized from energy efficient street lights and lights in parks or other public spaces.

| Community-Wide Actions Taken in 2016 | |
|---|--|
| | Saanich provided top-up rebates as part of the Home Renovation Rebate Program's Municipal Partner Offer in partnership with BC Hydro and FortisBC. 168 Saanich residents registered for the "top-up rebate" in 2016 for home energy improvements ranging from attic and wall insulation to draft-proofing and air source heat pumps. |
| | In 2016, considerable research was undertaken on a Home Energy Retrofit Strategy and municipal funding opportunities. |
| Community-Wide Actions Proposed for 2017 | |
| | 2017 will see the implementation of the Home Energy Retrofit Strategy and development of the municipal funding pilot with a focus on oil to heat pump conversions and associated efficiency improvements to directly benefit Saanich home owners looking to improve the comfort and value of their home. |
| | Saanich will undertake a Residential Infill Study in 2017 to review Saanich's single detached building standards to explore infill concepts. This will include potential bylaw changes that meet the needs of current and future generations of the Saanich community. |

| Corporate Actions Taken in 2016 | |
|--|---|
| | In 2016, Saanich led a significant carbon reduction project at the Gordon Head Recreation Centre by replacing an existing inefficient heating system with a new high-efficiency air source heat pump and condensing boiler system. The installation included upgrades to the building envelope to improve the energy efficiency of the building. The new system, commissioned in early 2017, received grant funding from the Federation of Canadian Municipalities Green Municipal Fund (GMF) for the significant energy efficiency improvement and carbon savings that will be realized. |
| | In 2016, Saanich began a 5-year program to convert their 9,000 street lights from High Pressure Sodium (HPS) lamps to energy efficient Light Emitting Diodes (LEDs). The program will result in a 30% reduction in overall electricity use and an annual savings of \$240,000 and 26 tCO ₂ e once fully complete. The LED fixtures also have a longer life span than HPS fixtures reducing the need for maintenance. |
| | In 2016 Municipal Hall lighting upgrades were reviewed with the Saanich Heritage Foundation to incorporate heritage design considerations. This included a trial of different LED housing designs to agree on a final design ready for implementation in 2017. |
| | In 2016 Saanich purchased a REALice® System for the Gold rink at Pearkes Arena with support from Fortis BC. This is a water treatment device for ice arenas to remove micro-air bubbles from water that is used when laying and resurfacing the ice. It makes it possible to flood the ice with unheated water to create hard & resilient ice in comparison to the previous approach of using heated water. Reclaimed heat is already used at the Pearkes facility for showers and as supplementary hot water for the arena's resurfacing machines. The installation of the REALice® System further reduced the Arena's energy requirement and is anticipated to save 900GJ of energy use per year. |

| Corporate Actions Proposed for 2017 | |
|--|--|
| | The Saanich Municipal Hall will receive lighting upgrades in 2017 which are anticipated to reduce energy use by approximately 99,500 kWh per year. The design of the Hall heating upgrades will also be undertaken in 2017. |
| | The development of a Corporate Building Operations Management System and a set of guidelines to standardize the mechanical and electrical installations commonly practiced throughout the various facilities are expected in 2017. |
| | Design work will be completed in 2017 for heating and energy upgrades and mechanical replacement for Saanich Commonwealth Place recreation centre to improve energy efficiency, reduce emissions and provide redundancy to the building systems. |
| | The Nellie McClung Library will receive lighting upgrades in 2017 resulting in energy reductions of approximately 85,900 kWh annually. Cedar Hill Recreation centre will receive energy upgrades for the gym lighting in 2017, equating to approximately 43,700 kWh of savings annually. |
| | 2017 will see Phase 2 of the LED street lighting project implemented (approximately 1000 units). |

2016 ENERGY GENERATION ACTIONS

Energy Generation Actions

A transition to renewable or low-emission energy sources for heating, cooling and power supports large, long-term GHG emissions reductions. Renewable energy including waste heat recovery (e.g. from biogas and biomass), geo-exchange, micro hydroelectric, solar thermal and solar photovoltaic, heat pumps, tidal, wave, and wind energy can be implemented at different scales, e.g. in individual homes, or integrated across neighbourhoods through district energy or co-generation systems.

| Community-Wide Actions Taken in 2016 | |
|---|---|
| | Saanich and the CRD continued to support the provincial Oil to Heat Pump program, which resulted in Saanich receiving the highest number of program participants in BC. 2016 saw 90 homes registered for Saanich top-up rebates to convert heating oil tanks to Air Source Heat Pumps, providing potential emissions reductions of 720 tonnes CO ₂ e per year (up to 8 tonnes per property). |
| Community-Wide Actions Proposed for 2017 | |
| | Following the Council motion to support moving both as a corporation and community towards 100% renewable energy, it is expected that public and stakeholder engagement will commence on the update of the Climate Action and Adaptation Plans with a vision for 100% Renewable Energy by 2050. |
| | Saanich will continue to support the provincial Oil to Heat Pump program with top-up rebates through 2017. |

| Corporate Actions Taken in 2016 | |
|--|--|
| | In 2016, Saanich led a significant carbon reduction project at the Gordon Head Recreation Centre by replacing an existing inefficient heating system with a new high-efficiency air source heat pump and condensing boiler system. The heat pump was commissioned at the beginning of 2017 and is expected to achieve significant energy savings, helping to reduce the Corporate GHG emissions by approximately 7%, a savings of 400 tonnes CO ₂ e annually. |
| Corporate Actions Proposed for 2017 | |
| | A study to incorporate District Energy with consideration given to 100% Renewable Energy will be initiated to support the development of the land-use plan, policy and guidelines in the Uptown-Douglas Corridor Plan. Saanich Municipal Hall and key buildings and facilities form part of the corridor plan and present a key opportunity for connection to District Energy or as a site for generation. |

| Energy Generation | |
|---|-----------|
| Is your local government developing, or constructing: <ul style="list-style-type: none"> • A district energy system • A renewable energy system | No Yes |
| Is your local government operating: <ul style="list-style-type: none"> • A district energy system • A renewable energy system | 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 BC Climate Action Toolkit ? | Yes |

2016 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 2016 | |
|--|---|
| | In 2016 Saanich completed Phase 1 and Phase 2 of the Agriculture and Food Security Plan, which included the developed themes and draft actions based on public engagement input in 2016. |
| | In 2016, Saanich supported the Communities in Harvest workshop series. This is a residential food-growing program, jointly delivered by the District of Saanich and Lifecycles Project Society that educates, supports and engages residents in backyard food growing with the goal of creating a culture that fosters local food production in our region. |
| | 2016 saw a volunteer program coordinated by Parks & Recreation to remove invasive species and restore disturbed natural areas covering 42 parks with over 200 volunteers. |
| | Design and installation of way finding and interpretive signs in Gorge Waterway, Cadboro Gyro, Cuthbert Holmes, Feltham, McMinn parks and Tod Flats. |
| | Ongoing restoration of Douglas Creek in partnership with the Friends of Mount Douglas. |
| Community-Wide Actions Proposed for 2017 | |
| | In 2017 the Agriculture and Food Security Plan will be completed ready for council approval. |
| | 2017 will see the continued delivery of the Communities in Harvest workshop series. |
| | The Streamside Development Permit Area Guidelines and the Pesticide Bylaw will be updated in 2017 in response to the 2014 Ombudsperson of British Columbia Report and new amendments to Provincial regulations. |
| | 2017 will see the implementation of Cuthbert Holmes Management Plan as well as plans developed for the management and use of Cedar Hill Park and Haro Woods. |
| | Implementation of the Invasive Species Management Strategy and Urban Forestry Strategy including education for residents, development of best management practices, treatment of invasive species and strengthening of the tree planting program. |

| Corporate Actions Taken in 2016 | |
|-------------------------------------|--|
| | Acquisition of Kardum Park, which together with Saanich lands has created a natural area park of approximately 3 hectares. |
| Corporate Actions Proposed for 2017 | |
| | |

| Greenspace | |
|---|------------|
| Does your local government have urban forest policies, plans or programs? | Yes |

2016 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 2016 | |
|--|--|
| | 2016 was the third year of the Greener Garbage kitchen scraps program, which started in April 2014. 9,151 tonnes of compostable kitchen scraps, yard and garden waste were collected in 2016, resulting in approximately 3,647 tonnes of GHG emissions reduced in the community. |
| Community-Wide Actions Proposed for 2017 | |
| | |

| Corporate Actions Taken in 2016 | |
|-------------------------------------|---|
| | Redistribution of refuse collection routes to maximize efficiencies and improve service levels. |
| Corporate Actions Proposed for 2017 | |
| | Roll-out of an improved waste management system across all corporate facilities, including recreation centres and public libraries. |

| 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 |

2016 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 2016 | |
|---|---|
| | Moving Saanich Forward – our Active Transportation Plan, was initiated in 2016 and the first consultation phase and option development were completed. The plan will provide a vision to guide the development, promotion and implementation of safe, attractive and convenient Active Transportation choices in Saanich to the year 2038. |
| | The EV (electric vehicle) fast charging station at Uptown had approximately 2,200 individual charging sessions in 2016. With sessions averaging 15-25 min, this equates to approximately 31 full days of non-stop use throughout the year and saves approximately 10 tonnes CO ₂ e per year from the energy used at this charging station alone. |
| | Implementation of bus rapid transit and dedicated bus lanes on Douglas Street through collaboration with BC Transit. |
| | Cycling Facilities - Lansdowne Bicycle facilities were implemented from Foul Bay to the City of Victoria municipal boundary and construction of the missing gap on the regional Lochside Trail on Borden and Cedar Hill Road is underway with completion estimated for spring 2017. |
| | The Wilkinson Road bridge replacement combined with the Colquitz River Trail project is well underway with anticipated completion in the first quarter of 2017. |
| Community-Wide Actions Proposed for 2017 | |
| | The Active Transportation Plan: Moving Saanich Forward will be drafted in 2017 with further public consultation and refinement prior to being finalized for Council in 2018. |
| | Collaboration with BC Transit on the transit exchange design at Uptown Centre, transit priority measures and implementation of bus rapid transit on Douglas Street will continue in 2017. |
| | Provision of new cycling facilities and bike lanes on Tillicum Street from Highway 1 to Burnside and provision of sidewalks and cycling facilities on West Saanich Road will occur in 2017. |
| | The PlugIn BC program to support the installation of EV Charging Infrastructure at Multi-Unit Residential Buildings will be promoted by Saanich in 2017. |
| | Sinclair Road and Glanford Avenue projects will commence in 2017 pending outcomes of the Shelbourne Valley Action Plan short-term mobility initiatives in alignment with the complete streets design philosophy. |
| Corporate Actions Taken in 2016 | |
| | A pilot project was undertaken with Warm Mix Asphalt as part of the Pavement Overlay program to assist with GHG reductions in 2016. |
| | A review of the corporate EV pool fleet was undertaken in late 2016 and early 2017 to identify successes from the pilot that originated in 2014 and identify any opportunities for enhancement. |
| Corporate Actions Proposed for 2017 | |
| | The development of an online booking system for the corporate EV pool fleet program will be explored in 2017. This was a key finding of the program review. |
| | An E3 Fleet Program submission and evaluation/rating will be undertaken in 2017. |

| | |
|--|--|
| | Planning for further corporate fleet replacement with EVs will continue in 2017 with four EVs expected in 2018 and six EVs expected in 2019. |
| | Review of EV charging stations at Saanich facilities will be initiated in 2017. |

| Transportation | |
|--|------------------------------------|
| 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 Yes/No |
| Does your local government have a transportation demand management (TDM) strategy (e.g. to reduce single-vehicle occupancy trips, increase travel options, provide incentives to encourage individuals to modify travel behavior)? | No |
| Does your local government have policies, plans or programs to support local food production (thus reducing transportation emissions)? | Yes |

2016 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 2016 | |
|---|---|
| | 2016 saw a successful partnership with the Department of National Defense (DND) to make drainage improvements and rehabilitation to a portion of Tod Creek. |
| Community-Wide Actions Proposed for 2017 | |
| | A Drainage Master Plan to improve the storm drain network and reduce the risk of flooding will be initiated in 2017. |
| | Technical support and involvement in the Capital Regional District (CRD) sewage treatment plant development, design and construction will continue in 2017. |

| Corporate Actions Taken in 2016 | |
|---|--|
| | In 2016 the instrumentation and controls at the new Rithet Reservoir and Austin Sewer lift station were successfully commissioned. |
| | The Austin pump station and Gorge Road sewer replacement project were completed in 2016. |
| Corporate Actions Proposed for 2017 | |
| | The Water Master Plan will be completed in 2017 and the recommendations will be incorporated into the 5-year capital plan in addition to the recommendations from the Sewer Master Plan. |
| Water Conservation | |
| Does your local government have water conservation policies, plans or programs? | Yes |

2016 CLIMATE CHANGE ADAPTATION ACTIONS

Climate Change Adaptation Actions

For local governments, adaptation to a changing climate can take the form of changes in policy, management, technology and behaviour that minimize negative impacts or exploit opportunities. It can involve both “hard” and “soft” solutions, including: changes in infrastructure engineering, planning, zoning, bylaws, and public education.

| Climate Change Adaptation Actions Taken in 2016 | |
|--|--|
| | Communities in Harvest workshops returned for a fourth year in 2016. The workshop series educates, supports and engages residents in backyard food growing with the goal of enhancing food security in our community. |
| | The Department Operational Centre (DOC) for Public Works was completed in 2016 with a practical drill/exercise. |
| | The GIS drainage layer for the urban area was completed in 2016, which is a significant milestone as all of the underground utilities are mapped and ready to be used for modelling studies and asset management and provides a considerable resource for climate adaptation planning. |
| | 2016 saw the replacement of 5,000 m of water mains, replacement of 3,040 m of sanitary sewers, 860 m of substandard storm drains, and 1,325 m of wood stave storm drains. These upgrades improve the community’s resiliency and ability to adapt to climate changes as they relate to rainfall, flooding and major storm events. |
| | Saanich and the CRD continued to support the provincial Oil to Heat Pump program. Given the cooling capabilities of Air Source Heat Pumps and the projected summer temperature increases in our community, this program plays a key role in climate adaptation in addition to mitigation. 2016 saw 90 homes registered for Saanich top-up rebates to convert heating oil tanks to Air Source Heat Pumps. |
| Climate Change Adaptation Actions Proposed for 2017 | |
| | In 2017 Saanich will complete a twenty year Strategic Facilities Master Plan to understand the comprehensive state of our facilities and prioritize future improvements that ensure we continue to provide dependable, high quality services effectively. The plan integrates both the sustainable performance of the facilities but also considers our resiliency to climate change and emergency preparedness. |
| | In 2017 Saanich will complete a Drainage Master Plan to improve the storm drain network and reduce the risk of flooding. The first step will be to model all drainage basins, starting with the Blenkinsop/Swan Creek watershed – these models will consider the impact of climate change, identify deficiencies and solutions and evaluate the impact of storm water management improvements. |
| | Saanich will continue to support the provincial Oil to Heat Pump program with top-up rebates through 2017. |

Resources you have used to support climate change adaptation (e.g. [Plan2Adapt](#), [Preparing for Climate Change: Implementation Guide](#))

| | |
|--|--|
| | Capital Regional District (CRD) research on coastal sea-level rise and climate projections |
| | |

| In 2016 did you consider climate change impacts in any of the following areas? (check if yes) | |
|--|-----|
| Risk reduction strategies | No |
| Risk and Vulnerability assessment | No |
| Asset management | Yes |
| Infrastructure upgrades (e.g. storm water system upgrades) | Yes |
| Cross-department working groups | No |
| Emergency response planning | Yes |
| Land-use policy changes (e.g. OCP, DPA) | Yes |
| Economic diversification initiatives | No |
| Ecosystem-based approaches (incl. shorelines) | No |
| Incentives (e.g. property owner reducing storm water run-off) | Yes |
| Public education and awareness | Yes |
| Research (e.g. mapping, participation in studies) | Yes |
| Other (Please Identify): | |

2016 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 2016 | |
|--|--|
| | |
| Community-Wide Actions Proposed for 2017 | |
| | |

| Corporate Actions Taken in 2016 | |
|-------------------------------------|--|
| | |
| Corporate Actions Proposed for 2017 | |
| | |

| Other | |
|--|------------|
| Are you familiar with the Community Lifecycle Infrastructure Costing Tool (CLIC) ? | Yes |
| Have you used CLIC? | No |

INNOVATION AND PEER-TO-PEER LEARNING

Innovation

This section provides the opportunity to showcase an innovative Corporate and/or Community-Wide GHG reduction or climate change adaptation activity that your local government has undertaken and that has had or has the potential to have a significant impact. 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.

| Community-Wide Innovative Action |
|--|
| <p>Saanich is one of five municipalities participating in the development of an EcoCity Footprint tool by Dr. Jennie Moore at BCIT. This tool addresses a new consumption-based inventory methodology, including emissions released to produce the goods and services consumed within a region, regardless of where they are produced. This will help encourage emissions-reduction strategies that maximize global, not just local, reductions and address the impacts of outsourcing the production of goods that we consume to other regions.</p> |
| Corporate Innovative Action |
| Empty box for Corporate Innovative Action |

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.

| Programs and Funding |
|---|
| <p>Saanich is a core member of the Urban Sustainability Directors Network and works closely with ICLEI, Quest Canada and FCM</p> <p>Saanich Carbon Fund</p> <p>FCM Green Municipal Fund</p> <p>Municipal Finance Authority of BC</p> <p>BC Hydro Sustainable Communities Program</p> <ul style="list-style-type: none"> - Corporate Energy Manager - Community Energy Manager - Grants <p>Provincial</p> <ul style="list-style-type: none"> - CEV program - LED Streetlight incentive program <p>Fortis BC</p> <ul style="list-style-type: none"> - Energy Specialist Program - Grants |

2016 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 survey, please ensure that you are familiar with guidance available on the B.C. Climate Action Toolkit website, especially *Becoming Carbon Neutral: A Guide for Local Governments in British Columbia*.

Reporting Emissions

| | |
|--|-------------------------------|
| Did you measure your local government's corporate GHG emissions in 2016? | Yes |
| If your local government measured 2016 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: | 4,819 tCO ₂ e |
| If your local government measured 2016 corporate GHG emissions, please report the number of corporate GHG emissions (in tonnes of carbon dioxide equivalent) from <u>contracted</u> services: | n/a |
| TOTAL A: CORPORATE GHG EMISSIONS FOR 2016 | 4,819 tCO₂e |

Reporting Reductions and Offsets

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

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

If applicable, please report the 2016 GHG emissions reductions (in tonnes of carbon dioxide equivalent (tCO₂e)) being claimed from Option 1 GHG Reduction Projects:

| OPTION 1 PROJECTS | REDUCTIONS |
|--|---------------------------|
| Energy Efficient Retrofits | |
| Solar Thermal | |
| Household Organic Waste Composting | |
| Low Emission Vehicles | |
| Avoided Forest Conversion | |
| TOTAL B: REDUCTIONS FROM OPTION 1 PROJECTS FOR 2016 | 0 tCO₂e |

If applicable, please report the names and 2016 GHG emissions reductions (in tonnes of carbon dioxide equivalent (tCO₂e)) being claimed from Option 2 GHG Reduction Projects:

| OPTION 2 PROJECT NAME | REDUCTIONS |
|--|---------------------------|
| N/A | |
| TOTAL C: REDUCTIONS FROM OPTION 2 PROJECTS FOR 2016 | 0 tCO₂e |

If applicable, please report the number of offsets purchased (in tonnes of carbon dioxide equivalent (tCO₂e)) from an offset provider for the 2016 reporting year:

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

| OFFSET PROVIDER NAME | OFFSETS |
|--|---------------------------|
| N/A | |
| TOTAL D: OFFSETS PURCHASED FOR 2016 | 0 tCO₂e |

TOTAL REDUCTIONS AND OFFSETS FOR 2016 (Total B+C+D) =

Corporate GHG Emissions Balance for 2016

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 2016 = (A – (B+C+D)) = 4,819 tCO₂e

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

CONGRATULATIONS!

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.

This year a new recognition level has been added – **Level 3: Accelerating Progress on Charter Commitments**–. 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 the Community Energy and Emissions Inventory (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:

| PROJECT NAME: |
|--|
| <p>There are multiple corporate projects listed within this CARIP report that address GHG reductions. These include building retrofits with an emphasis on efficiency, major boiler upgrades with renewables (most recently to Air Source Heat Pump) and electrification of our fleet. These result in a reduction of our measured GHG emissions that are reported annually. Continued investments in such projects aim to significantly reduce the District of Saanich GHG emissions inventory and move us towards becoming Carbon Neutral.</p> <p>From a community perspective, there are multiple projects listed within this CARIP report addressing the key sectors of our GHG emissions inventory; buildings, transportation, waste and food. An example of such a project is our Greener Garbage Collection program which collected 9,151 tonnes of compostable kitchen scraps, yard and garden waste in 2016, resulting in approximately 3,647 tonnes of GHG emissions reduced in the community (not declared as an Option 1 project). Such projects result in a reduction of our community GHG emissions measured through the provincial Community Energy Emissions Inventory (CEEI). As such, the focus is on a reduction of our corporate and community GHG emissions, whilst consideration may be given to exploring potential carbon offset programs for corporate emissions.</p> |

Based on your local government's 2016 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 | x |
| <input type="checkbox"/> | Level 4 - Achievement of Carbon Neutrality | |
| <input type="checkbox"/> | Not Sure | |

Appendix A: District of Saanich Carbon Tax Calculation Form 2016

Carbon Tax Calculation Form Under the Climate Action Revenue Incentive Program

| Local Government Name: | The Corporation of the District of Saanich | | | |
|---|--|-----------|---|-------------------|
| Contact Information: | | | | |
| Name: | Karen Coates | | | |
| Position: | Accountant | | | |
| Telephone Number: | 250-475-5494 Ext. 3561 | | | |
| Email address: | karen.coates@saanich.ca | | | |
| Calculation of carbon tax paid directly by the local government for fuel purchased between January 1 and December 31, 2016 | | | | |
| Fuel Type | Unit measure | Units | Tax Rate per unit, January 1, 2016 to December 31, 2016 | Carbon Tax paid |
| Most common fuels in a local government context: | | | | |
| Gasoline | Litre | 387446.96 | 0.0667 | 25,842.71 |
| Diesel | Litre | 615652.06 | 0.0767 | 47,220.51 |
| Bio-Diesel ² | Litre | 32402.74 | 0.0767 | 2,485.29 |
| Natural Gas | Gigajoule ³ | 40788 | 1.4898 | 60,765.96 |
| Natural Gas | m ³ ³ | | 0.057 | - |
| Propane | Litre | 18242.37 | 0.0462 | 842.80 |
| Other fuels which are taxed: | | | | |
| Heating Oil | Litre | 5196.7 | 0.0767 | 398.59 |
| Locomotive Fuel | Litre | | 0.0767 | 0 |
| Heavy Fuel Oil | Litre | | 0.0945 | 0 |
| Aviation Fuel | Litre | | 0.0738 | 0 |
| Jet Fuel | Litre | | 0.0783 | 0 |
| Kerosene | Litre | | 0.0783 | 0 |
| Naphtha | Litre | | 0.0765 | 0 |
| Methanol | Litre | | 0.0327 | 0 |
| Butane | Litre | | 0.0528 | 0 |
| Ethane | Litre | | 0.0294 | 0 |
| Refinery Gas | m ³ | | 0.0528 | 0 |
| Coke Oven Gas | m ³ | | 0.0483 | 0 |
| Coal -- Low Heat Value ⁴ | Tonne | | 53.31 | 0 |
| Coal -- High Heat Value ⁴ | Tonne | | 62.31 | 0 |
| Coke | Tonne | | 74.61 | 0 |
| Petroleum Coke | Litre | | 0.1101 | 0 |
| Tires -- shredded ⁵ | Tonne | | 71.73 | 0 |
| Tires -- whole ⁵ | Tonne | | 62.4 | 0 |
| Peat | Tonne | | 30.66 | 0 |
| Total Carbon Tax Paid: | | | | 137,555.86 |
| <p>1. Only list fuels that were purchased for the local government's own use, on which carbon tax was paid, and where that carbon tax was not refunded or recovered from another party (e.g., through a lease arrangement). Also do not include any fuels that were exempted from carbon tax (for more information</p> <p>2. Bio-diesel blends must be prorated in order to claim the diesel and bio-diesel portions on the appropriate line. The proportion of the blend (B5, B10, B15 etc) that is conventional hydrocarbon-based diesel is included on the diesel line; consequently, the bio-diesel pro-rated amount must be entered on the bio-diesel line. For example, a 10,000 litre purchase of B10, which is 10% bio-diesel and 90% hydrocarbon-based diesel, would be recorded as 9,000 litres hydrocarbon-based diesel (90% of 10,000</p> <p>3. Marketable Natural Gas may be recorded at either Gigajoules or m³</p> <p>4. Low Heat Value Coal includes Sub-Bituminous Coal; High Heat Value Coal includes Bituminous Coal</p> <p>5. Only include tires if they are combusted</p> | | | | |
| <p>I declare that the information contained in this Carbon Tax Calculation Form is true and correct and based on actual accounting records and not estimates. I am also aware of the requirement to report publicly by June 1st.</p> <p style="text-align: right;"><i>Jana Finney,</i> Signature of Financial Officer</p> <p style="text-align: right;">Director of Finance May 24, 2017</p> | | | | |

Appendix B: District of Saanich Public Report Attestation Form 2016



2016 CARIP Climate Action/Carbon Neutral Progress Survey Public Report Attestation

As per the CARIP guidance, the Financial Officer is required to submit this attestation form to attest that:

- On or before **June 1, 2017**, the information reported in the 2016 CARIP Climate Action/Carbon Neutral Progress Survey submitted online to the Province has been made public.

The Financial Officer must complete and sign this attestation form by the applicable deadline and email a scanned copy to the Province at infra@gov.bc.ca.

2016 CARIP Climate Action/Carbon Neutral Progress Survey Public Report Attestation Form — DUE on or before June 1, 2017

I declare that the information contained in the 2016 CARIP Climate Action/Carbon Neutral Progress Survey submitted online to the Province on 25th May 2016 for the District of Saanich was made public on 26th May 2016.

Name, Title (print) CFO VALLA TINNEY **Director of Finance**

Signature: Valla Tinney

Date: May 26/17