Climate Action Revenue Incentive (CARIP) Public Report for 2017

Local Government:



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The District of Oak Bay has completed the 2017 Climate Action Revenue Incentive Program (CARIP) Public Report as required by the Province of BC. The CARIP report summarizes actions taken in 2017 and proposed for 2018 to reduce corporate and community-wide energy consumption and greenhouse gas emissions (GHG) and reports on progress towards achieving carbon neutrality.

2017 BROAD PLANNING ACTIONS

Broad Planning Actions

Broad Planning refers to high level planning that sets the stage for GHG emissions reductions, including plans such as Official Community Plans, Integrated Community Sustainability Plans, Climate Action Plans or Community Energy Emissions Plans. Land use planning that focuses on Smart Growth principles (compact, complete, connected, centred) plays an especially important role in energy and GHG reduction.

Community-Wide Actions Taken in 2017		
	Worked towards goals and targets contained in the Oak Bay Climate Change Task Force: Final	
	Report https://www.oakbay.ca/sites/default/files/municipal-	
	hall/Reports/CCTF%20Final%20Report.pdf	
	Worked toward goals identified in Oak Bay Urban Forest Management Strategy.	
	https://www.oakbay.ca/municipal-hall/plans-reports/sustainability	
	Worked towards the recommended policies and actions that are contained within the Climate	
	Change and Energy sections of the Official Community Plan (OCP)	
	https://www.oakbay.ca/sites/default/files/ocp/2014/OakBay-OCP-Final-Website-dec0414.pdf	
Со	mmunity-Wide Actions Proposed for 2018	
	Oak Bay will continue to work towards the recommended goals and targets that are outlined in the	
	documents listed above.	

Corporate Actions Taken in 2017		
	Worked to capture conservation savings identified in the Strategic Energy Management Plan (SEMP). Projects undertaken in 2017 helped to put Oak Bay ahead of conservation goals. <u>https://www.oakbay.ca/sites/default/files/municipal-hall/staff-reports/SEMP%20signed%202.pdf</u>	
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CO	porate Actions Proposed for 2018	
	Update Strategic Energy Management Plan for 2018/19.	
	Work with energy manager to achieve conservation and energy reduction targets.	
	New storm management system strategy including covenant.	

Broad Planning		
What is (are) your current GHG reduction target(s)?	33% reduction over 2007 levels by 2020	
Are you familiar with your community's community energy and emissions inventory (e.g. CEEI or another inventory)?		Yes
What plans, policies or guidelines community?	govern the implementation of climate mitigation in your	
• Commur	nity Energy and Emissions (CEE) Plan	No
Commur	nity- Wide Climate Action Plan	No
• Integrate	ed Community Sustainability Plan	No
Official C	Community Plan (OCP)	Yes
Regional	Growth Strategy (RGS) Tied in to CRD plan	No
•	ave a plan	Yes
• Other:	Strategic Energy Management Plan (SEMP)	Yes
Does your local government have a corporate GHG reduction plan?		Yes

2017 BUILDING AND LIGHTING ACTIONS

Building and Lighting Actions

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

Community-Wide Actions Taken in 2017			
	Worked towards incorporating the recommendations within the Official Community Plan (OCP).		
	Encouraged the use of low flow showers for apartment buildings.		
	New developments encouraged to follow green building practices.		
Cor	Community-Wide Actions Proposed for 2018		
	Continue working towards incorporating the recommendations within the OCP.		
	New developments will continue to be encouraged to follow green building practices.		
	Continue to encourage the use of low flow showers for apartment buildings.		

Сог	Corporate Actions Taken in 2017		
	LED Street lights - Implementation of phase two of our three phase plan was completed in March		
	2017.		
	Continuous optimization Program at the Recreation Centre.		
	LED lighting upgrade for Monterey Centre Gary Oak Room and underground parking lot.		
	LED lighting upgrade for Henderson and Monterey front parking lot.		
Сог	Corporate Actions Proposed for 2018		
	LED lighting upgrade for both tennis bubbles was completed in Jan 2018.		
	LED lighting upgrade for swimming pool was completed in Jan 2018.		
	LED street lighting, the final phase of converting Oak Bay to all LED street lights will be delayed until		
	2019.		
	Several small projects planned for 2018.		

Building and Lighting	
The Province has committed to taking incremental steps to increase energy-efficiency requirements in	
the BC Building Code to make buildings net-zero energy ready by 2032. The BC Energy Step Code—a part	
of the BC Building Code—supports that effort	
Is your local government aware of the BC Energy Step Cost? Yes	
Is your local government implementing the BC Energy Step Code?	No

2017 ENERGY GENERATION ACTIONS

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.

Со	Community-Wide Actions Taken in 2017		

Со	Community-Wide Actions Proposed for 2018		

Со	Corporate Actions Taken in 2017		
	Continue to operate and maintain 144 panel solar thermal system at the Oak Bay Recreation		
	Centre.		
	Continue to operate and maintain energy recovery water heating system at Recreation Centre.		
Со	rporate Actions Proposed for 2018		
	Heat reclaim / Energy loop will be installed at the Recreation Centre this year, this will dramatically		
	reduce natural gas consumption and GHG for the Recreation Centre and tennis bubbles.		
	Feasibility study to be completed at Recreation Centre for solar PV system.		

Energy Generation		
Is your local governme	ent developing, or constructing:	
•	A district energy system	No
•	A renewable energy system	Yes
Is your local governme	ent operating:	
•	A district energy system	No
•	A renewable energy system	Yes
Is your local governme energy provider?	ent connected to a district energy system that is operated by another	No
Are you aware of the Toolkit?	Integrated Resource Recovery guidance page on the <u>BC Climate Action</u>	Yes
Are you familiar with First Nations and Loca	the 2017 "List of Funding Opportunities for Clean Energy Projects Led by al Governments?"	Yes

2017 GREENSPACE/NATURAL RESOURCE PROTECTION ACTIONS

Greenspace Actions

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

Со	Community-Wide Actions Taken in 2017		
	Worked toward goal in the new Urban Forest Strategy. Example move from 33% canopy coverage		
	to 40% over the next 15 years.		
	Invasive species removal with the help of three year grant.		
	Worked with various citizen groups on park initiatives.		
	Held over 100 public events with citizen groups related to park initiatives.		
	Restoration project for Uplands Park.		
Сог	mmunity-Wide Actions Proposed for 2018		
	Oak Bay will continue to work towards goals in the new Urban Forest Strategy.		
	Invasive species removal will continue, this is the last year for the HSP grant.		
	More public events with citizen groups to advance park indicatives.		
	Restoration project for Uplands park, last year of grant.		

Cor	Corporate Actions Taken in 2017		
	Continued with upgrades to boulevard sprinkler network to water saving and more efficient		
	sprinkler heads.		
Cor	porate Actions Proposed for 2018		
	Sprinkler heads change out will continue in 2018.		

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

2017 SOLID WASTE ACTIONS

Solid Waste Actions

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

Cor	mmunity-Wide Actions Taken in 2017
Cor	mmunity-Wide Actions Proposed for 2018

Cor	porate Actions Taken in 2017
	Operate community recycling facility.
Cor	porate Actions Proposed for 2018
	Continue to operate community recycling facility.

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

2017 TRANSPORTATION ACTIONS

Transportation Actions

Transportation actions that increase transportation system efficiency, emphasize the movement of people and goods, and give priority to more efficient modes, e.g. walking, cycling, ridesharing, and public transit, can contribute to reductions in greenhouse gas emissions and more livable communities.

Сог	mmunity -Wide Actions Taken in 2017
Сог	mmunity-Wide Actions Proposed for 2018

Cor	rporate Actions Taken in 2017
	Two bicycle repair stations were built.
	New crosswalk was added at Foul Bay and Brighton.
	Sidewalk widening continued where possible.
	New sidewalk at Foul Bay and Brighton.
	Solar powered crosswalks installed throughout Oak Bay.
Cor	porate Actions Proposed for 2018
	Wheelchair drops in sidewalks will continue to be installed.
	Sidewalk widening will continue where possible.

Transportation	1	
Does your loca	l government have policies, plans or programs to support:	
•	Walking	Yes
•	Cycling	Yes
•	Transit Use	Yes
•	Electric Vehicle Use	Yes
•	Other (please specify)	No

Does your local government have a transportation demand management (TDM) strategy (e.g.	No
to reduce single-vehicle occupancy trips, increase travel options, provide incentives to	
encourage individuals to modify travel behavior)?	
Does your local government integrate its transportation and land use planning?	Yes

2017 WATER AND WASTEWATER ACTIONS

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

Cor	mmunity-Wide Actions Taken in 2017
Cor	mmunity-Wide Actions Proposed for 2018
	Encourage rain gardens where feasible.

Cor	porate Actions Taken in 2017
	Enforced separation of combined systems.
	Encourage use of engineered waste and storm water systems.
	Promote and enable storm water management systems when no storm main available.
	Uplands combined sewer separation project design stage.
	Interception and Infiltration program with CRD.
Cor	porate Actions Proposed for 2018
	Continue with enforcement for the separation of combined systems.
	Encourage use of engineered waste and storm water systems.
	Promote and enable storm water management systems when no storm main available.
	Continue involvement with CRD on Interception and Infiltration program.
	Ongoing requirement to separate waste and storm water systems with renovations.

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

2017 CLIMATE CHANGE ADAPTATION ACTIONS

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

Warmer winter temperatures reducing snowpack	
Changes to temperature and precipitation causing seasonal drought	
Heatwaves impacting population health	
Increased temperatures increasing wildfire activity	
Increased temperatures affecting air quality	
Changing temperatures influencing species migration and ecosystem shifts	v
Extreme weather events contributing to urban and overland flooding	V
Sea level rise and storms causing coastal flooding and/or erosion	v

In 2017 has your local government addressed the impacts of a changing climate using any of the	
following?	
Risk and Vulnerability Assessments	No
Risk Reduction Strategies	No
Emergency response planning	No
Asset management	Yes
Natural/Eco asset management strategies	No
Infrastructure upgrades (e.g. storm water system upgrades)	Yes
Beach Nourishment projects	No
Economic diversification initiatives	No
Strategic and financial planning	No
Cross-department working groups	Yes
OCP policy changes	Yes
Changes to zoning and other bylaws and regulations	Yes
Incentives for property owner (e.g. reducing storm water run-off)	Yes
Public education and awareness	Yes
Research	No
Mapping	No
Partnerships	No
Other:	1

Clir	nate Change Adaptation Actions Taken in 2017		
Ple	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.		
	Official Community Plan (OCP) <u>https://www.oakbay.ca/sites/default/files/ocp/2014/OakBay-OCP-</u>		
	Final-Website-dec0414.pdf		
	Oak Bay Climate Change Task Force: Final Report		
	https://www.oakbay.ca/sites/default/files/municipal-hall/Reports/CCTF%20Final%20Report.pdf		
Clir	Climate Change Adaptation Actions Proposed for 2018		
	Continue to work towards goals and target identified in OCP and the Climate Change Task Force:		
	Final Report		
For	For more information please contact:		

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, 2016	Haven't Used
<u>Plan2Adapt</u>	Useful
Climate Projections for Metro Vancouver	Haven't Used
Climate Projections for the Capital Region	Useful
Climate Projections for the Cowichan Valley Regional District	Haven't Used
Province of BC's BC Adapts Video Series	Haven't Used
Preparing for Climate Change: An Implementation Guide for Local Governments	Useful
The Public Infrastructure and Engineering Vulnerability Committee's (PIEVC) protocol	Useful
Sea Level Rise Primer	Haven't Used
BC Regional Adaptation Collaborative Webinars	Haven't Used
www.ReTooling.ca	Useful
Water Balance Model	Haven't Used
The Water Conservation Calculator	Haven't Used
Funding:	
National Disaster Mitigation Program (NDMP)	Haven't Used
Community Emergency Preparedness Fund (CEPF)	Haven't Used
Municipalities for Climate Innovation Program (MCIP)	Haven't Used
Climate Adaptation Partner Grants (FCM)	Haven't Used
Infrastructure Planning Grants (MAH)	Haven't Used
Federal Gas Tax Fund	Useful
Other:	

2017 OTHER CLIMATE ACTIONS

Other Climate Actions

This section provides local governments the opportunity to report other climate actions that are not captured in the categories above.

Со	Community-Wide Actions Taken in 2017	
Со	mmunity-Wide Actions Proposed for 2017	

Со	Corporate Actions Taken in 2017		
	Oak Bay is now promoting 100% compostable events. Example Oak Bay Tea Party.		
Сог	rporate Actions Proposed for 2017		
	100% compostable events will continue in 2018.		

Other	
Are you familiar with the <u>Community Lifecycle Infrastructure Costing Tool (CLIC)</u> ?	No
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 and/or climate change adaptation activity that your local government has undertaken and that has had, or has the potential to have, a significant impact. You are welcome to repeat an action that has already been listed.

Projects included here may be featured as success stories on the B.C. Climate Action Toolkit and/or shared with other local governments to inspire further climate action. Please add links to additional information where possible.

Communities that have conducted innovative initiatives may want to consider raising their profile through applications to <u>CEA's Climate and Energy Action Awards</u>, <u>UBCM Climate and Energy Action</u> <u>Award</u>, <u>FCM Sustainable Communities Awards</u> or through submissions to <u>FCM's National Measures</u> <u>Report</u>.

Community-Wide Action

For more information contact:

Corporate Action

Oak Bay's new REALice ice making system is a technology that allows arena ice to be made and maintained, using cold water and a warmer ice slab temperature. The savings on both natural gas and electricity are impressive and are now saving more than 40 tonnes of GHG per year.

The Energy recovery loop to be installed at the Oak Bay Rec Centre in 2018 will capture waste heat from the ice making plant and repurpose it for other heating proposes in the complex. This will greatly reduce natural gas consumption and the GHG that is associated with its use.

No dig/pipe relining allows underground pipes to be revitalized without the need to dig them up. This saves the need for heavy equipment be deployed for this purpose and saves an enormous amount of fuel and other GHG from being released.

For more information on REALice and Energy Loop, contact: Ken Olson <u>kolson.emc@gmail.com</u> or <u>jpearson@oakbay.ca</u> for REALice and energy recovery projects. For no dig info, contact: Grace Espedido <u>gespedido@oakbay.ca</u>.

Programs, Partnerships and Funding Opportunities

Local governments often rely on programs, partnerships and funding opportunities to achieve their climate action goals. Please share the names of programs and organizations that have supported your local government's climate actions by listing each entry in the box below.

Mitigation

Programs and Funding

Re-Green Grant – BC Hydro. BC Hydro Incentive Program. Federal Gas Tax Fund. Clean Water and Waste grant. Habitat Stewardship Program (HSP).

Adaptation

Programs and Funding

2017 CARBON NEUTRAL REPORTING

Local governments are required to report on their progress in achieving their carbon neutral goal under the Climate Action Charter. Working with B.C. local governments, the joint Provincial-UBCM Green Communities Committee (GCC) has established a common approach to determining carbon neutrality for the purposes of the Climate Action Charter, including a Carbon Neutral Framework and supporting guidance for local governments on how to become carbon neutral.

Prior to completing this portion of the survey, please ensure that you are familiar with guidance available on the B.C. Climate Action Toolkit website, especially the <u>Becoming Carbon Neutral: A Guide</u> <u>for Local Governments in British Columbia.</u>

Please note: As a result of the BC Recycling Regulation, local governments are no longer required to account for greenhouse gas (GHG) emissions from vehicles, equipment and machinery required for the collection, transportation and diversion of packaging and printed paper, in their annual Climate Action Revenue Incentive Program (CARIP) reports.

Reporting Emissions

Did you measure your local government's corporate GHG emissions in 2017?	Yes
If your local government measured 2017 corporate GHG emissions, please report	1059.6
the number of corporate GHG emissions (in tonnes of carbon dioxide equivalent)	
from services delivered <u>directly</u> by your local government:	
If your local government measured 2017 corporate GHG emissions, please report	90.5
the number of corporate GHG emissions (in tonnes of carbon dioxide equivalent)	
from <u>contracted</u> services:	
TOTAL A: CORPORATE GHG EMISSIONS FOR 2017	1150.1
	tCO2e

Reporting Reductions and Offsets

To be carbon neutral, a local government must balance their TOTAL corporate GHG emissions generated in 2017 by one or a combination of the following actions:

- undertake GCC-supported Option 1 Project(s)
- undertake GCC-supported Option 2 Project(s)
- purchase carbon offsets from a credible offset provider

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

OPTION 1 PROJECTS	REDUCTIONS
Energy Efficient Retrofits	
Solar Thermal	
Household Organic Waste Composting	-284.1
Yard waste diversion and composting	-772.1
Organic Waste Diversion Project Profile from the Industrial – Commercial	-108.2
TOTAL B: REDUCTIONS FROM OPTION 1 PROJECTS FOR 2017	-1164.4 tCO2e

If applicable, please report the names and 2017 GHG emissions reductions (in tonnes of carbon dioxide equivalent (tCO2e)) being claimed from Option 2 GHG Reduction Projects:

OPTION 2 PROJECT NAME	REDUCTIONS
TOTAL C: REDUCTIONS FROM OPTION 2 PROJECTS FOR 2017	tCO2e

If applicable, please report the name of the offset provider, type of project and number of offsets purchased (in tonnes of carbon dioxide equivalent (tCO2e)) from an offset provider for the 2017 reporting year:

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

OFFSET PROVIDER NAME	OFFSETS
TOTAL D: OFFSETS PURCHASED FOR 2017	tCO2e

TOTAL REDUCTIONS AND OFFSETS FOR 2017 (Total B+C+D) = -1164.4 tCO2e

Corporate GHG Emissions Balance for 2017

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

CORPORATE GHG EMISSIONS BALANCE FOR 2017 = (A – (B+C+D)) = -14.3 tCO2e

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

If applicable, please record any emissions reductions you will be carrying over for future years and the source of the emissions reductions, including the year they were earned (E.g., Organics diversion, 2016 100 tCO2e).

SOURCE OF CARRY OVER EMISSION REDUCTIONS (and year earned)	REDUCTIONS
Organics diversion 2016 = 165.77 tCO2e	165.77
Organics diversion 2017 = 14.3 tCO2e	14.3
BALANCE OF REDUCTIONS ELIGIBLE FOR CARRY OVER TO NEXT YEAR	180.07 tCO2e

Carbon Neutral Reporting	
Does your local government have a climate reserve fund or something similar?	Yes

GCC CLIMATE ACTION RECOGNITION PROGRAM

Green Communities Committee (GCC) Climate Action Recognition Program

The joint Provincial-UBCM Green Communities Committee (GCC) is pleased to be continuing the Climate Action Recognition Program again this year. This multi-level program provides the GCC with an opportunity to review and publicly recognize the progress and achievements of each Climate Action Charter (Charter) signatory.

Recognition is provided on an annual basis to local governments who demonstrate progress on their Charter commitments, according to the following:

Level 1 – Demonstrating Progress on Charter Commitments: for local governments who demonstrate progress on fulfilling one or more of their Charter commitments

Level 2 – Measuring GHG Emissions: for local governments that achieve level 1, and who have measured their Corporate GHG Emissions for the reporting year and demonstrate that they are familiar with their community's energy and emissions inventory (i.e. CEEI)

Level 3 – Accelerating Progress on Charter Commitments: for those local governments who have achieved level 1 and 2 and have demonstrated undertaking significant action (corporately or community wide) to reduce GHG emissions in the reporting year (i.e: through undertaking a GHG reduction project, purchasing offsets, establishing a reserve fund).

Level 4 - Achievement of Carbon Neutrality: for local governments who achieve carbon neutrality in the reporting year.

For purposes of Level 3 recognition, if applicable, please identify any new or ongoing corporate or community wide GHG reduction projects (other than an Option 1 or Option 2 project) undertaken by your local government that reflects a significant investment of time or financial resources and is intended to result in significant GHG reductions:

PROJECT NAME:

Based on your local government's 2017 CARIP Climate Action/Carbon Neutral Progress Survey, please check the GCC Climate Action Recognition Program level that best applies:

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	✓
Not Sure	