



Climate Action Revenue Incentive (CARIP) Public Report for 2016

The Town of Golden 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. There is also an opportunity to report on climate adaptation 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 | |
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| Community-Wide Actions Proposed for 2017 | |
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| Corporate Actions Taken in 2016 | |
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| Corporate Actions Proposed for 2017 | |
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| Broad Planning | |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| What is (are) your current GHG reduction target(s)? | To reduce greenhouse gas emissions from Town operations by 20% from 2009 to 2020, and to reduce greenhouse gas emissions from community-wide specified sectors by 33% from 2007-2020 |
| Has your local government used the Community Energy and Emissions Inventory (CEEI) to measure progress? | No |
| What plans, policies or guidelines govern the implementation of climate mitigation in your community? <ul style="list-style-type: none"> • Official Community Plan (OCP) • Other: Columbia Basin Trust Climate Action Charter | Yes 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.

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| Community-Wide Actions Taken in 2016 | |
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| Community-Wide Actions Proposed for 2017 | |
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|--------------------------------------------|------------------------------------------------------------------|
| Corporate Actions Taken in 2016 | |
| | Solar Lamp Standard for Community Pathways System |
| Corporate Actions Proposed for 2017 | |
| | Second Solar Lamp Standard for Community Pathways System |
| | Upgrade Municipal Pool facility lighting from T-12 to T-8 lights |

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.

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|-------------------------------------------------|--|
| Community-Wide Actions Taken in 2016 | |
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| Community-Wide Actions Proposed for 2017 | |
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|--------------------------------------------|--|
| Corporate Actions Taken in 2016 | |
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| Corporate Actions Proposed for 2017 | |
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| Energy Generation | |
|--------------------------------------------------------------------------------------------------------------------|----|
| Is your local government developing, or constructing: | |
| • A district energy system | No |
| • A renewable energy system | No |
| Is your local government operating: | |
| • A district energy system | No |
| • A renewable energy system | No |
| 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 ? | No |

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 | |
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| Community-Wide Actions Proposed for 2017 | |
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| Corporate Actions Taken in 2016 | |
|--------------------------------------------|--|
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| Corporate Actions Proposed for 2017 | |
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| 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 | |
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| Community-Wide Actions Proposed for 2017 | |
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| Corporate Actions Taken in 2016 | |
|-------------------------------------|--------------------------------------------------------------------------------------------------------------------|
| | Curbside yard waste collection program to divert yard waste to a designated location separate from household waste |
| | Curbside recycling program |
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| Corporate Actions Proposed for 2017 | |
| | Continuation and growth of the curbside yard waste collection program |
| | Continuation and growth of curbside recycling program |
| | |

| 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? | No |

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 | |
|------------------------------------------|--|
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| Community-Wide Actions Proposed for 2017 | |
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| Corporate Actions Taken in 2016 | |
|-------------------------------------|--------------------------------------------------------------------------------------------------------------------------|
| | Addition of pathways along the Trans-Canada Highway to increase active transportation linkage (pedestrian and cyclists). |
| | |
| Corporate Actions Proposed for 2017 | |
| | Walking/biking trails enhancements – Rotary Trail to KKMP/Selkirk Community |
| | Ongoing improvement to Active Transportation Map |

| Transportation | |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|
| Does your local government have policies, plans or programs to support: | |
| • Walking | Yes |
| • Cycling | Yes |
| • Transit Use | No |
| • Electric Vehicle Use | No |
| • Other (please specify) | N/A |
| 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 | |
|------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | Water Smart partnership with Columbia Basin Trust - Grant funding used to retrofit several Industrial/Commercial/Institutional meters for increased accuracy and better consumption tracking |
| | Lawn & garden watering regulations |
| Community-Wide Actions Proposed for 2017 | |
| | Lawn & Garden Water Conservation - Intensive communication plan |
| | |

| Corporate Actions Taken in 2016 | |
|---------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | Line two sewer lagoons to eliminate groundwater influence, replace aerations systems to improve effluent treatment/reduce odorous emissions |
| | Install flow meters in sewer collection system to measure/trend 100% of effluent inflow into treatment plant |
| | Flood protect one sanitary sewer lift station to eliminate recurring seasonal groundwater runoff infiltration into plant and thereby eliminate required pumping through 3 lift stations and requirement for treatment |
| | |
| | |
| Corporate Actions Proposed for 2017 | |
| | Line two additional sewer lagoons to eliminate groundwater influence, replace aerations systems to improve effluent treatment/reduce odorous emissions |
| | Lagoons Blower Replacement |
| | Sanitary Main CIPP Lining |
| | Lawn & Garden Water Conservation - Intensive communication 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 | |
|-----------------------------------------------------|--------------------------------------|
| <input type="checkbox"/> | Fire Interface Mitigation |
| <input type="checkbox"/> | Facilities Asset Management Planning |
| Climate Change Adaptation Actions Proposed for 2017 | |
| <input type="checkbox"/> | Fire Interface Mitigation |
| <input type="checkbox"/> | Facilities Asset Management Planning |

| Resources you have used to support climate change adaptation (e.g. Plan2Adapt , Preparing for Climate Change: Implementation Guide) |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <input type="checkbox"/> |

| 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. stormwater system upgrades) | Yes |
| Cross-department working groups | No |
| Emergency response planning | No |
| Land-use policy changes (eg. OCP, DPA) | No |
| Economic diversification initiatives | No |
| Ecosystem-based approaches (incl. shorelines) | No |
| Incentives (e.g. property owner reducing stormwater run-off) | No |
| Public education and awareness | Yes |
| Research (e.g. mapping, participation in studies) | No |
| Other (Please Identify): | N/A |

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.

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| Community-Wide Actions Taken in 2016 | |
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| Community-Wide Actions Proposed for 2017 | |
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|--------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------|
| Corporate Actions Taken in 2016 | |
| | Fleet - Replacement of an older plow truck and a loader with new current standards emissions plow truck and loader in 2016. |
| Corporate Actions Proposed for 2017 | |
| | Fleet - Replacement of an older Tractor with a Tier 4 compliant diesel engine |
| | Fleet - Refitting a plow truck to a water truck (recycling/reuse initiative) |

| | |
|---------------------------------------------------------------------------------------------------|-----------|
| Other | |
| Are you familiar with the Community Lifecycle Infrastructure Costing Tool (CLIC)? | 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 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 | |
| | |
| 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 |
|------------------------------------------------------------------------------------------------------------------|
| Columbia Basin Trust/Western Financial Group/Ministry of Transportation/ICBC/Canada 150/New Building Canada Fund |

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: | 350 |
| 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: | 3 |
| TOTAL A: CORPORATE GHG EMISSIONS FOR 2016 | 353 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 | 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 |
|------------------------------------------------------------|-------------------------|
| | |
| | |
| | |
| TOTAL C: REDUCTIONS FROM OPTION 2 PROJECTS FOR 2016 | 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 |
|--------------------------------------------|-------------------------|
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| | |
| | |
| | |
| TOTAL D: OFFSETS PURCHASED FOR 2016 | tCO₂e |

TOTAL REDUCTIONS AND OFFSETS FOR 2016 (Total B+C+D) = tCO₂e

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)) = 353 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 (ie: 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 2016 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 | x |
| Level 3 – Accelerating Progress on Charter Commitments | |
| Level 4 - Achievement of Carbon Neutrality | |
| Not Sure | |