

DATE: May 8, 2018

FILE: 5280-02

TO: Chair and Directors
Committee of the Whole

FROM: Russell Dyson
Chief Administrative Officer

Supported by Russell Dyson
Chief Administrative Officer

R. Dyson

RE: Carbon Neutral Progress Update

Purpose

To present the results of the 2018 Comox Valley Regional District (CVRD) corporate emissions inventory, and to seek approval on a strategy to achieve our carbon neutral commitment for 2018.

Recommendations from the Chief Administrative Officer:

1. THAT the Comox Valley Regional District achieve carbon neutrality for 2018 with the purchase of 2,171 metric tonnes of verified carbon offsets from the Spartanburg County Landfill Gas Project, SC at a cost of \$2.25 USD/MT, totalling approximately \$6,600 CAD;
AND FURTHER THAT the remaining 2018 carbon offset funds (~\$38,250) be allocated as follows:
 - \$6,000 for Cool It! Climate Leadership Training for eight workshops in School District 71 in 2020, delivered by British Columbia Sustainable Energy Association;
 - \$32,250 for a pilot project focussed on improving the energy efficiency in homes in the woodsmoke hotspot areas.
2. THAT, for the 2019 carbon neutral strategy, to be completed in 2020, staff be directed to again purchase inexpensive international verified carbon offsets and to develop a community granting program for the remainder of the carbon offset budgeted funds.

Executive Summary

- The CVRD has been carbon neutral in its operations since 2012. This is achieved through a combination of energy efficiency improvements and purchase of verified carbon offsets. (2018 emissions equal 2,171 tonnes)
- The 2018 proposal is to:
 - Purchase 2,171 tonnes of verified carbon offsets from a landfill gas project in South Carolina, at an approximate cost of \$6,600 CAD;
 - Allocate remaining 2018 carbon offset funds (approximately \$38,250) to:
 - \$6,000 for Cool It! Climate Leadership Training for eight workshops in SD71 in 2020, delivered by British Columbia Sustainable Energy Association (BCSEA);
 - \$32,250 for a pilot project focussed on improving the energy efficiency in approximately 50 homes in the woodsmoke hotspot areas.
- In order to better support actions related to climate change and Green House Gas (GHG) reductions in the community, CVRD staff will explore working with community partners to develop a community climate action granting program for next year.

Prepared by:

J. Meilleur

 Jenn Meilleur
 Project Coordinator –
 Transit and Sustainability

Concurrence:

M. Zbarsky

 Michael Zbarsky, B.Sc. ASCT
 Manager of Transit and
 Sustainability

Concurrence:

D. DeMarzo

 Doug DeMarzo
 Acting General Manager of
 Community Services

Background/Current Situation

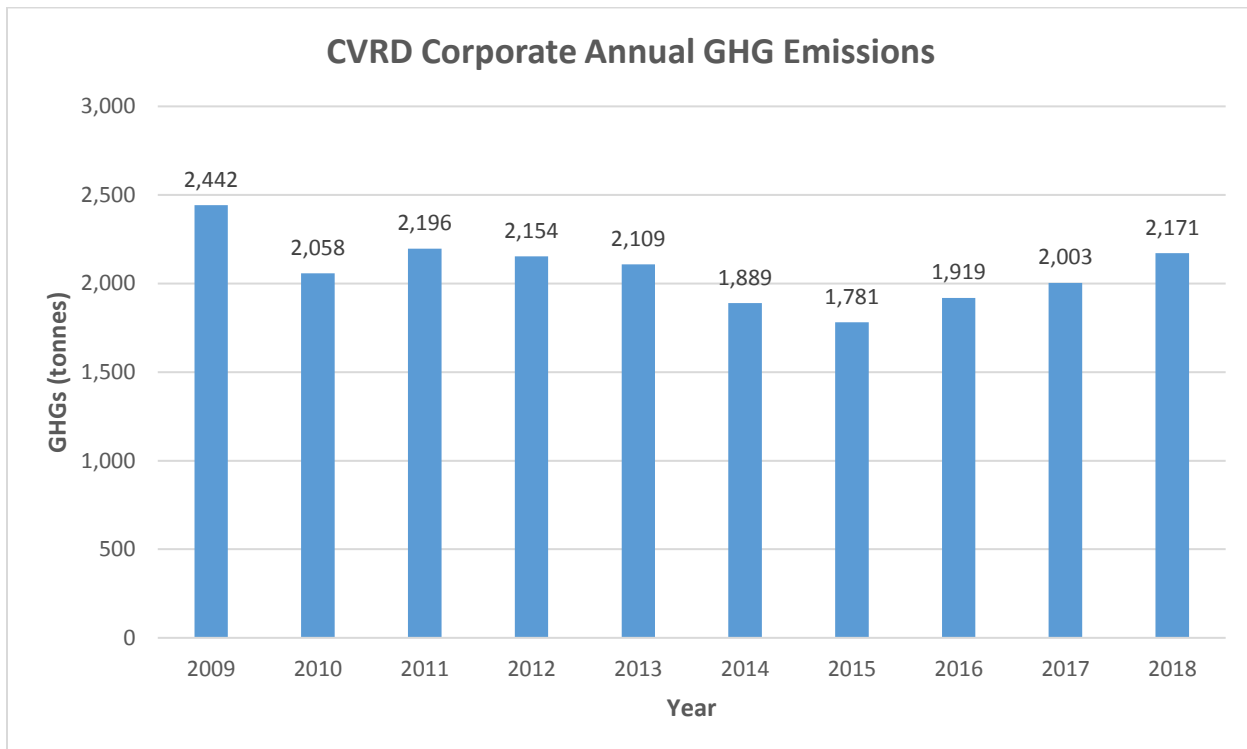
As a signatory to the British Columbia Climate Action Charter (Charter), and through a combination of energy improvements to operations and purchasing carbon offsets (offsets), the CVRD has been carbon-neutral in its operations since 2012. As a signatory to the Charter, we participate in the Climate Action Revenue Incentive Program (CARIP), and there are three different components of this program:

1. The CARIP conditional grant program
2. The annual inventory of GHG emissions created during delivery of CVRD services
3. Completion of the CARIP Climate Action / Carbon Neutral Progress Survey

CARIP is a conditional grant program that provides signatories to the Charter with funding equivalent to one hundred per cent of the carbon taxes that they pay directly. In order to receive a CARIP grant, local governments are required to publicly share their CARIP Climate Action/Carbon Neutral Progress Survey. The CARIP survey summarizes actions taken in the previous year and proposed for the following year to reduce corporate and community-wide energy consumption and GHG emissions. Details of the CVRD's progress towards achieving carbon neutrality and carbon offset purchase must be included as part of the CARIP Carbon Neutral Progress Survey. The purchase of offsets must be completed and the survey made public by June 1, 2019. [You can view previous CARIP Climate Action Surveys on our website](#) under the heading, "CARIP Climate Action Surveys."

Measuring CVRD Corporate Energy Use Corporate Energy Plan

In 2011, the board approved the [CVRD Corporate Energy Plan](#) and adopted a target of reducing GHG emissions by 10 per cent below 2009 levels by 2015. This plan also established a 2009 corporate baseline of 2,442 tonnes GHG emissions and included an eight-part action plan to achieve targeted corporate GHG emission reductions. That reduction target was achieved, with actual 2015 emissions 27 per cent below the 2009 emissions baseline. The CVRD has since adopted a new corporate GHG emissions reduction target of 20 per cent below 2015 levels by 2020. Unfortunately, GHG emissions have been on the rise since 2015 primarily due to additional new energy intensive facilities being brought on line (e.g. Leachate treatment plant), new services (e.g. Sandwich Water), colder winters (e.g. 2017 coldest on record since energy inventory began) and increased fleet use activity associated with CVRD projects and programs. The table and graph below outlines the history of CVRD corporate emissions since the CVRD corporate energy plan was completed.



In 2017, \$20,000 was allocated to an update of the CVRD’s Corporate Energy Plan. This update will examine the actions taken since the plan was completed in 2011, assess operational changes and associated increased GHG emissions, and identify further opportunities for energy efficiency improvements in CVRD operations. Staff are scheduling this update as part of the work plan for 2019.

Community Emissions

Carbon offset purchase options

While staff continue to look for ways to reduce corporate energy usage, the CVRD needs to purchase carbon offsets in order to attain its carbon neutral status. Staff have reviewed a variety of carbon offset options currently available in the marketplace, as listed below. All are verified to the applicable standards as recommended by the “Becoming Carbon Neutral: Guidebook for BC Local Governments”.

Cost / MT	Description
\$20 CAD	Quadra Island Forestland Conservation Project / Great Bear Forest Carbon Project / Indian Solar Power / Zambezi Wildlife Conservation
\$12 USD	Garcia River Forestry Project, California
\$6 USD	The Breathing Space Improved Cooking Stoves Programme, India
\$2.25 USD	Spartanburg County Landfill Gas Project, South Carolina

The CVRD has budgeted \$44,854 (based on \$25 per tonne) for carbon offsets, and staff are recommending the purchase of the lowest-cost option at \$2.25 (USD) per tonne from the Spartanburg County Landfill Gas Project, South Carolina. This option carries a total offset purchase cost of approximately \$6,600, dependent on CAD-USD exchange rate. By purchasing these low cost verified offsets, the remaining funds previously allocated for carbon offsets become available to invest in GHG reduction projects locally within the Comox Valley. Staff recommend allocating the remaining 2018 carbon offset funds (\$38,250) towards:

- \$6,000 for Cool It! Climate Leadership Training for eight workshops in School District 71 (SD71) in 2020, delivered by BCSEA;
- \$32,250 for a pilot project focussed on improving the energy efficiency for homes in the woodsmoke hotspot areas.

Supporting GHG Reductions in the Community

Cool It! Climate Leadership Training

BCSEAs Cool It! Climate Leadership Training is an interactive environmental workshop and contest for students in grades 4 to 7. This interactive program introduces students to the effects of climate change and encourages them to take part in measurable energy efficiency and conservation solutions. In 2018, the CVRD commitment of \$2,700 enabled the BCSEA to deliver the Cool It! workshops and connect teachers to high quality educational resources to explore climate change actions further.

During the program challenge, students committed to several energy saving actions over a four week period. According to the BCSEA’s final report, students’ energy conserving and emissions saving actions at home resulted in the projected savings of a total of 82.535 tonnes of carbon dioxide (CO2e), if they continue their actions for one year. Students and their families committed to taking a combined total of 1,820 actions – such as replacing old lightbulbs with new LEDs, taking short showers, having meat-free meals, doing cold water laundry washes, and making car-free journeys.

This sponsorship support enabled students and their families to reduce their emissions at a cost of \$32.71 per tonne. Staff recommend allocating \$6,000 towards funding the Cool It program in 2019, allowing BCSEA to provide eight workshops in SD71.

Woodsmoke Reduction - Home energy efficiency program

Energy efficient homes produce fewer greenhouse gasses, use less energy, and cost less to operate. With this in mind, the CVRD has participated in provincial home energy incentive programs by providing top-ups on energuide evaluations and retrofits such heat pump installations.

Recognizing the strong link between home energy efficiency and wood heating, staff are recommending that \$32,000 of the CVRD’s carbon offset funds be allocated to improving the energy efficiency of people’s homes in the woodsmoke hotspot areas in 2019. Staff would like to work with residents and a Home Energy Advisor to identify the easiest, lowest cost home improvements aimed at reducing home heating requirements (e.g. additional insulation and air sealing). The new program would also provide support for residents to access home energy rebates via efficiencyBC and the Woodstove Exchange Program, and make recommendations for future home energy savings. Homes with improved energy efficiency will require less energy to heat and will cost less to heat – ultimately reducing the amount of wood required by those continuing to use wood stoves as their primary heat source and reducing overall GHGs for all participating homes.

A summary of the past CVRD GHG emissions and carbon offset expenditures is provided below.

CVRD corporate GHG emissions and GHG reduction expenditures

Year	GHGs (tonnes)	Comments/GHG reduction expenditures
2009	2,442	Emissions baseline as established by 2011 corporate energy plan
2010	2,058	Emissions inventory procedure piloted
2011	2,196	Emissions inventory completed to establish procedure for carbon neutral reporting in 2012
2012	2,154	\$4,246 – carbon offsets purchased (Someshwara Hydropower, India)

		\$12,000 – Comox Valley community carbon marketplace (CCM) launch \$10,000 – Project Watershed blue carbon initiative \$25,214 – sports/aquatic centres energy retrofits
2013	2,109	\$4,218 – carbon offsets purchased (Someshwara Hydropower, India) \$20,000 – CCM GHG reduction assessments and biodiesel study \$27,242 – sports centre energy retrofit
2014	1,889	\$3,542 – carbon offsets purchased (Granger South Jordan Utah LFG) \$18,683 – allocated to CCM GHG reduction projects \$25,000 – sports centre energy retrofit
2015	1,781	\$4,000 – carbon offsets purchased (Granger South Jordan Utah LFG) \$10,000 – Biodiesel facility investigation \$25,720 – Biodiesel facility future reserve fund \$6,500 – Local ScrapIt program implementation \$6,500 – wood stove to heat pump conversion pilot program
2016	1,919	\$4,000 – carbon offsets purchased (Dempsey Ridge Wind Farm) \$22,000 – Home energy efficiency rebate programs (Oil to Heat Pump, EnerGuide) \$20,000 – Corporate energy plan update \$25,720 – re-allocation of 2015 funds to solar PV project
2017	2,003	\$4,500 – carbon offsets purchased (East Central Landfill Gas)) \$43,000 – Solar Photovoltaic installation at CVRD water services facility
2018	2,171	Calculated emissions for 2018

Community Climate Action Granting Program

In order to better support actions related to climate change and GHG reductions in the community, CVRD staff would like to explore the viability of creating a Climate Action Granting Program for non-profits in the community. Working with community partners, staff would create a granting framework and decision criteria matrix. The grant itself would ideally be administered by a community partner under the guidance of staff. With the right partners in place, a Climate Action Granting program could catalyze and accelerate purposeful climate action in the Comox Valley.

Policy Analysis

In 2007, the CVRD became a signatory to the British Columbia climate action charter which includes commitments for signatories to be carbon neutral by 2012. On March 1, 2011 the board approved the CVRD corporate energy plan and adopted a target of reducing GHG emissions by 10 per cent below 2009 levels by 2015. The CVRD has since adopted a new corporate GHG emissions reduction target of 20 per cent below 2015 levels by 2020, and has allocated funds to update the CVRD's Corporate Energy Plan.

Options

1. Achieve carbon neutrality for 2018 with the purchase of 2,171 metric tonnes of verified offsets from the Spartanburg County Landfill Gas Project, South Carolina at a cost of \$2.25 USD/MT, totalling approximately \$6,600 CAD. Remaining 2018 carbon offset funds will be allocated to:
 - \$6,000 for Cool It! Climate Leadership Training for 8 workshops in SD71 in 2020, delivered by BCSEA;
 - \$32,250 for a pilot project focussed on improving the energy efficiency for homes in the woodsmoke hotspot areas.
2. Direct staff to purchase one or more of the other offset options listed above.
3. Direct staff to purchase an offset option and reserve the remainder of the money until a community climate action granting program can be established.

Staff recommend proceeding with option 1 as this will allow additional investment locally in climate related projects and will enable CVRD to meet 2018 carbon neutral deadlines established by the province.

Financial Factors

Beginning in 2012, the CVRD included in its financial planning process budget line items to meet its carbon neutral objectives, such that carbon emissions not reduced through the corporate energy plan are offset through the purchase of verified carbon offsets. A cost of \$25/tonne CO₂e of estimated emissions is included in budgets for CVRD functions.

For 2018 emissions, confirmed at 2,171 tonnes, \$44,854 is available to purchase offsets. This amount of funding is based on prior estimates of 2018 emissions, which are lower than actuals.

Measuring corporate energy use with the aim of reducing GHG emissions has additional benefits, including improved efficiency of corporate operations, which results in reduced utility costs.

Legal Factors

The British Columbia Climate Action Charter is not legally binding, but in being a signatory, the CVRD has the ability to access the CARIP. As noted above, CARIP is a conditional grant that provides funding to signatories equivalent to one hundred per cent of the carbon taxes they pay directly. For 2018 operations, the CVRD's CARIP grant is approximately \$62,968.26. At the request of a previous motion from the Board, Staff are currently exploring the feasibility of creating a Reserve Fund so that in the future, the CARIP grant can be used to support corporate projects related to climate action.

Regional Growth Strategy Implications

The Comox Valley regional growth strategy (RGS) Goal 8: Climate Change: Minimize regional GHG emissions and plan for adaptation.

The long-term target is 80 per cent reduction of regional GHG emissions from 2007 levels by 2050, with a mid-term target of 50 per cent reduction by 2030.

The activities proposed in this report would work towards the following objectives of the RGS:

Objective 8A-5: Local governments should develop GHG reduction strategies for the operation, maintenance and construction of their buildings in the Comox Valley.

Objective 8-A: Reduce GHG emissions created by the building sector

Intergovernmental Factors

All three member municipalities in the Comox Valley have signed the British Columbia climate action charter to become a carbon neutral local government.

Interdepartmental Involvement

All CVRD functions are responsible for working toward reduced GHG emissions and carbon neutrality. Staff from the community services branch led the energy inventory with assistance from financial services.

Citizen/Public Relations

The public is consistently concerned about climate change and it is important that the CVRD show leadership and seek opportunities to reduce energy usage and related costs. As part of the CARIP requirements, a public report on the CVRD's climate action is prepared annually and posted on the [CVRD Climate Action web page](#).