



2020 PSO CLIMATE CHANGE ACCOUNTABILITY REPORT (CCAR)

- INSTRUCTIONS & TEMPLATE FOR SMALL EMITTERS -

Version dated April 20, 2021

Updates include:

- Adjusted “2020 GHG Emissions and Offsets” table (pg. 2) and instructions for completing the table (pg. 5)
- Updated Figures 1 and 2 in Appendix 1 (pg. 6)

IMPORTANT! Please ensure your “2020 GHG Emissions and Offsets” table is completed using these updated instructions. A system error relating to Prior Year Adjustments has been identified. If you have already completed your “2020 GHG Emissions and Offsets” table, please check the accuracy of your results by following the instructions on pages 2 and 5 and update your table accordingly.

This document provides guidance for provincial public sector organizations (PSOs) whose GHG emissions were less than 600 tonnes CO₂e during the previous reporting year (2019) to help them prepare their 2020 Carbon Neutral Action Report (CNAR) in accordance with BC’s *Climate Change Accountability Act* and the *Carbon Neutral Government Regulation*.

PSOs that emitted less than 600 tonnes CO₂e during the 2019 reporting year will receive a confirmation email from Carbon.Neutral@gov.bc.ca. The CCAR Survey is optional for Small Emitter PSOs.

PSO Deadlines for Small Emitters – 2020 Reporting year

April 30, 2021	✓ Clean Government Reporting Tool (CGRT) Data Entry must be completed for the 2020 reporting year.
May 14, 2021	✓ Self-Certification Checklist must be completed, signed and submitted by email to: Carbon.Neutral@gov.bc.ca . ✓ PSOs receive an offset invoice with the amount of offsets to be purchased for the 2020 reporting year.
May 31, 2021	✓ The final, signed version of the Small Emitters Form must be submitted by email to: Carbon.Neutral@gov.bc.ca . ✓ Deadline for the optional CCAR Survey to be completed and submitted online.

June 30, 2021	<ul style="list-style-type: none"> ✓ Ministry of Environment and Climate Change Strategy must post a final Small Emitters Form for each organization on the BC Government's CNG website and each PSO is encouraged to post their form on their website. ✓ All offset invoice payments must be submitted to CAS.
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SMALL EMITTERS FORM

A. Please fill in the required information below

Organization Name:

Innovate BC

Contact name & title:

Michelle Foster, Operations Manager

Innovate BC 2020 GHG Emissions and Offsets	
GHG Emissions created in Calendar Year 2020	
<i>[See the Appendix for instructions on how to access your 2020 emissions data from the Clean Government Reporting Tool (CGRT).]</i>	
Total Emissions (tCO ₂ e)	0.200488 + 1.63
Total BioCO ₂	0 + 0
Total Offsets (tCO ₂ e)	1.84
Adjustments to Offset Required GHG Emissions Reported in Prior Years	
Total Offsets (tCO ₂ e)	0
Grand Total Offsets for the 2020 Reporting Year	
Grand Total Offsets (tCO ₂ e) to be retired for 2020 Reporting Year	2.17 + 0
Offset Investment (\$25 per tCO ₂ e) <i>[Grand Total Offsets x \$25/tCO₂e]</i>	2 X \$25 = \$50

- i. *[Note, BioCO₂ is reported in Total Emissions but not Total Offsets. For K-12 and Post-Secondary organizations, and BC Transit, Total Offsets will not equal Total Emissions minus Total BioCO₂ because offset exempt emissions for buses are included within Total Emissions.]*



- ii. Emissions and offset investment amounts will be validated by CAS prior to distributing invoices.
- iii. You must round Grand Total Offsets, if decimals are included, before multiplying by \$25 (e.g., 43.2 = 43, 43.5 = 44).]

B. To enable comparison across B.C. public sector organizations, please provide the following data for your organization:

1. How many Full Time Equivalent (FTE) employees were part of your organization as of December 31, 2020? 16
2. What was your organizations total amount of floorspace (including occupied and unoccupied space, owned or leased) as of December 31, 2020? 7400 (m²)
3. What was the primary use of that space (office, education, warehousing, health services, lodging, arts and recreation, other)? Office
4. How many motor vehicles did your organization own or lease as of December 31, 2020? 0

C. Briefly describe the top three actions taken by your organization in 2020 to reduce GHG emissions and/or improve sustainability from its operations:

Action
<p>1. <u>Clean Tech Innovation Showcase</u></p> <p>Date/Details: On Feb 2 and 3, 2021, the BC Climate Action Secretariat’s Industrial Reporting and Control Team and the CleanBC Industry Fund Team hosted their CleanBC Industry Workshop. As part of this event, Innovate BC provided a 1-hour workshop to showcase BC solutions that can reduce GHG emissions at large industrial operations. The workshop was jointly delivered by Innovate BC and the Provincial Government. Applications to participate were received from BC Innovators, and ten innovators were selected to pitch/present.</p> <p>Innovation Presenter Details: BC technology providers or innovators were invited to present an introduction to large BC industrial operations on their technology/ services that have the potential to reduce GHG emissions at these operations. Important considerations:</p> <ul style="list-style-type: none">• Technologies had to include the potential to reduce emissions at a BC operation, or multiple operations.• Technologies that could significantly reduce emissions across a variety of sectors in BC were given priority.• Proposed technology solutions had to include the potential to be piloted or implemented through one of the CIF funding streams in the next year. <p>Industry Attendee Details: BC heaving industry sectors include oil & gas, cement, agriculture, pulp & paper, wood products, manufacturing, electricity, waste, lime, and mining.</p>

Showcase Goals:

- Connect BC innovative cleantech solutions with BC industry
- Raise industry awareness about BC cleantech solution providers.
- Familiarize BC cleantech firms with domestic GHG reduction business opportunities.

Event Outcomes: The following companies pitched to an audience of over 100 BC heavy industry attendees:

- Rotoliptic Technologies
- Sterling PBES Energy Solutions
- Saltworks Technologies
- Svante
- Aurora Industrial Machines
- Sacre-Davey Engineering
- NORAM Engineering
- Hydrogen Technology and Energy Corporation
- Aurel Systems

Metrics:

- Number of post-session B2B connections (e.g., a question in the post-session survey).
- Number of applications to the CleanBC Industry Fund using BC cleantech firms.
- Outcomes will be reported/available in 2021/22 fiscal year.

2. Ignite Program

The Innovate BC Ignite Program is designed to provide funding for collaborative, industry-academic partnerships working on research and development projects leading to commercialized innovations in the natural resources, applied sciences, and engineering in BC. The Ignite program launched in 2016, and to date has awarded \$8.5+M to 34 innovative projects. Of those awards, \$5.2M has been contributed to 20 projects that are classified as clean technologies or have clean tech elements (defined as technologies will that improve operational performance, productivity, or efficiency while reducing costs, inputs, energy consumption, waste, or environmental pollution). With the support of Innovate BC Ignite, these clean technology projects will commercialize and move their innovations to market within a three-year timeframe or less.

New Ignite projects awarded in 2020-21 that are clean tech in nature (beyond other projects awarded, and those projects from prior years already in progress) include:

1. TOWARDS HIGH-POWER DENSITY FUEL CELLS FOR HEAVY DUTY ZERO EMISSION VEHICLES - \$300,000 Award

Dr. Bahrami of SFU and industry partner Ballard Power Systems are collaborating on a project aimed at developing the next generation of cost-effective, high-power density Membrane Electrode Assembly (MEAs) designed for heavy duty zero emission vehicles (ZEVs). The project aims to develop sophisticated apparatus and advanced modeling tools which will enable Ballard scientists and engineers to improve the existing designs to significantly reduce the cost and increase power density of proton exchange membrane fuel cells, also enabling the commercializing of heavy-duty fuel cell trucks. Project funding will support development of models and the tools needed for characterization of the MEA transport mechanisms, which are key steps in building the next generation MEAs needed to advance commercialization and proliferation of heavy-duty fuel cell trucks.

2. TRANSCRITICAL CO₂ ROCK PULVERIZATION - \$300,000 Award

Dr. Klein of UBC and industry partner Rockburst Technologies Inc. are collaborating with Chrysalix Venture Capital Fund to develop a rock comminution processing system that deploys a first-of-a-kind approach and uses supercritical carbon dioxide (sCO₂) as the primary working fluid to reduce rock size through fluid permeation and subsequent rapid expansion within the pores of the rock. It aims to improve efficiency, GHG reductions, achieve operational simplicity and minimize environmental impact. By implementing Transcritical CO₂ Rock Pulverization (tCO₂) technology, mining operators have the potential to reduce the net costs of comminution by up to 62%. Ignite funding will support a plan to design, develop, commission, test and study a viable commercial application, expanding on bench scale tests.

3 BC Fast Pilot Program

In 2019, Innovate BC partnered with NRC IRAP to launch the B.C. Fast Pilot Program to provides up to \$200,000 for regional SMEs to design, build and operate a capital-intensive pilot plant or small demonstration of their technology in real-world/industry conditions. The program allows B.C. technology companies to demonstrate the impact of their product, measure the value of their solution, and encourage customer adoption.

In 2020-21, Innovate BC invested \$1M in funding to 22 pilot projects. All of those 22 projects identified as a clean-innovator firm, pilot project with a focus on clean tech, or pilot project with a focus on GHG emission reductions. Examples of some of these clean tech projects include:

- Aqua Intelligent Systems – Product Pilot For = Water treatment system for indigenous communities.
- Cascadia Scientific – Product Pilot For = Mining fuel efficiency.
- CryoLogistics Refrigeration Technologies – Product Pilot For = Cleantech transport refrigeration system.
- Lambda Science – Product Pilot For = Building energy simulation software.
- Portable Electric – Product Pilot For = Solar kits for the entertainment and sports industry

4 Foresight Venture Acceleration Program Update

Our Foresight Cleantech Accelerator, a member of our BC Acceleration network, continues to be one of the leading accelerators in the province, supporting the development and advancement of cleantech companies in the province, that are generating efficiencies through clean/green innovations while mitigating the impacts of various industries. In 2020-21, Innovate BC invested \$730,000 to fund three programs that benefitted 90 companies across the province, adding 217 jobs to the economy in the Province. Overall impact of Foresight Cleantech Accelerator in BC:

- 290+ active BC cleantech companies in the program
- 22,000 BC cleantech jobs supported
- \$78,000 average salary
- \$3.4b in cleantech deals

D. Briefly describe plans your organization has for continuing to reduce your GHG emissions in future years:

Innovate BC will continue to promote, support and sponsor initiatives to help increase sustainability awareness and reduce GHG emissions both internally and externally throughout our community.



E. Describe any actions your organization took during 2020 to strengthen its ability to manage the likely effects of climate change in the coming years and decades (e.g., have assessed whether increased frequency of extreme weather events and/or long-term changes in climate will affect your organization’s infrastructure, its employees and/or its clients.)

Innovate BC will continue to promote and support cleantech companies and in BC by growing and furthering their work so that they can mitigate environmental impacts from industry.

Retirement of Offsets:

In accordance with the requirements of the *Climate Change Accountability Act* and Carbon Neutral Government Regulation, **[Innovate BC] (the Organization)** is responsible for arranging for the retirement of the offsets obligation reported above for the 2020 calendar year, together with any adjustments reported for past calendar years (if applicable). The Organization hereby agrees that, in exchange for the Ministry of Environment and Climate Change Strategy **(the Ministry)** ensuring that these offsets are retired on the Organization’s behalf, the Organization will pay the associated invoice to be issued by the Ministry in an amount equal to \$25 per tonne of offsets retired on its behalf plus GST.

Executive Sign-off *[To be signed by a senior official, such as CEO, COO or Superintendent].*

May 28th, 2021

Signature

Date

Raghwa Gopal

CEO

Name (please print)

Title

Please scan and email the completed form to Carbon.Neutral@gov.bc.ca

Appendix 1

Outlined below are instructions to populate your organization’s CCAR 2020 GHG Emissions and Offsets table, on page 5 above:

- a. Access the Clean Government Reporting Tool (CGRT) at <https://gov-bc.mythinkstep.com/login>. **Note, you must be a registered Site Administrator or Data Collector for your organization to access CGRT.**

Contact the Clean Government team at Carbon.Neutral@gov.bc.ca if you require assistance.

- b. Once successfully logged into the CGRT homepage, follow these steps to access the “CCAR – With Estimates” Report:

1		Click on the ‘Analytics’ menu tab and select ‘Intelligence Center’ from the drop-down menu.
2		Within the Intelligence Center search for, then click on , the report titled “CCAR – With Estimates”. Note: This report will have an orange Published tag applied.
3		Click the circle icon containing three horizontal dots to expand the selections.
4		Click the computer monitor icon to view the report. The report will open in a new window.
5		Click the icon containing two circular arrows at the very top left of the window to “refresh” the report. The report will generate a key analytic (see Figures 1 below). Note: If an analytic is large, it may take some time to complete; it will process in the background and appear in the job tray.
6		To export the report to Excel: <ul style="list-style-type: none"> • Click the download button at the top right of the report and save the report to excel at any time (e.g. you can save to Excel while the analytics are calculating). • Once a blue banner appears at top of window you may close the window and the report will appear in the job tray. Note: if you log out of CGRT before the report is complete it will be emailed to you directly.

- c. Using the analytic generated in CGRT, the 2020 PYA Calculations spreadsheet available on the CGRT welcome page and referring to the cells identified in Figures 1 and 2 below, populate your 2020 GHG Emissions and Offsets table.
- d. Lastly, make sure to complete the Offset Investment (\$25 per tCO₂e) section by manually multiplying Grand Total Offsets (tCO₂e) x \$25. You **must** round “Grand Total Offsets to be Retired” to a whole number (i.e. no decimal places) **before** multiplying by \$25 (e.g., 43.2 = 43, 43.5 = 44).

Figure 1. eSource Summary – CCAR – With Estimates

2020							
	Offset Exempt			Offset Required			Total
	t Bio CO2e, ...	t CO2e, GH...	Total	t Bio CO2e, ...	t CO2e, GH...	Total	
GHG Inventory Activity D...	0.1209	44.4	44.5		216	216	A → 261
GHG Inventory Estimates				0	56.2	56.2	B → 56.2
Total	C → 0.1209	44.4		D → 0	272 ← E		

Figure 2. 2020 PYA Calculations spreadsheet (manual population of columns D and E in this spreadsheet required; see instructions within Excel file)

A	B	C	D	E	F
2020 PYA Calculations Spreadsheet					
Purpose: To allow PSOs to calculate their 2020 Prior Year Adjustments (PYAs) for the purposes of 2020 invoicing					
		2019 Offset Required as at May 2020 (based on 2018 CGRT offset required GHGs at that time)	Current 2018 offset required GHGs (based on CGRT 2020 PYA analytic)	Current 2019 offset required GHGs (based on CGRT 2020 PYA analytic)	2020 PYA = Cell F
PSO					
	BC Assessment Authority	393			-785 ← F
	BC Council for International Education	6.26			-13
	BC Games Society	0.767616			-2
	BC Housing Management Commission	22,496			-44,992

