2021 PUBLIC SECTOR ORGANIZATION (PSO) CLIMATE CHANGE ACCOUNTABILITY REPORT (CCAR)

- INSTRUCTIONS & TEMPLATE FOR PUBLIC SECTOR ORGANIZATIONS -

This document provides guidance to provincial public sector organizations (PSOs) in preparing their 2021 Climate Change Accountability Report (CCAR) in accordance with BC's *Climate Change Accountability Act* (section 8.1) and the Carbon Neutral Government (CNG) Regulation. Information provided through this reporting process also supports continued work to advance climate leadership in B.C.'s public sector.

2021 REPORTING YEAR TIMELINES

April 30, 2022	✓ **Clean Government Reporting Tool (CGRT) Data Entry** must be completed for the 2021 reporting year. ✓ **Self-Certification Checklist** questionnaire must be completed in CGRT.
Mid-May 2022	✓ PSOs receive an invoice with the amount of offsets to be purchased for the 2021 reporting year.
May 31, 2022	✓ **PSO CCAR** must be signed and submitted by email to: Carbon.Neutral@gov.bc.ca. ✓ **CCAR Survey** must be completed and submitted online. ✓ See notes below regarding streamlined requirements for Small Emitters*.
June 30, 2022	✓ Ministry of Environment and Climate Change Strategy must: o Post all PSO CCARs on the BC Government's CNG website; and o Retire sufficient carbon offsets on behalf of PSOs to achieve public sector carbon neutrality for the 2021 reporting year. ✓ PSOs must complete payment on their offset invoice and provide confirmation of payment by email to Carbon.Neutral@gov.bc.ca. ✓ PSOs are encouraged to post their CCAR to their own website.

***Small Emitters:** PSOs that emitted less than 600 tonnes CO_2e during the 2020 reporting year received a confirmation email from Carbon.Neutral@gov.bc.ca by January 31, 2022, confirming their status as a Small Emitter for the 2021 reporting year. Small Emitters are required to follow the same timelines and reporting process as all PSOs, but have the option of completing simplified versions of the PSO CCAR template and Survey as follows:

- PSO CCAR: Part 1 and the Executive Signature section
- Survey: Sub-set of questions as identified in the survey

INSTRUCTIONS FOR COMPLETING THE PSO CCAR

The PSO CCAR template below sets out the required content to:

1) Achieve legislated CNG requirements; and
2) Support public sector climate leadership.

Your report should be written with a public audience in mind. You have full ownership over the look and formatting of your PSO CCAR, as well as any additional information you wish to include. We encourage organizations to include a cover page, photos, graphics, etc. although this is optional.

The PSO CCAR must include the following minimum components as set out in the PSO CCAR template:

i. Title
ii. Organization name
iii. Declaration Statement
iv. Actions taken to minimize emissions
v. Plans to continue reducing emissions
vi. Emissions and Offsets Summary Table
vii. Retirement of Offsets Statement
viii. Signature by a senior official such as CEO, COO or Superintendent

Small Emitters are only required to complete the following sections of the PSO CCAR template, but are encouraged to complete other sections as appropriate:

- Part 1 Legislative Reporting Requirements
- Executive Sign-off

The final, signed version of your PSO CCAR must be submitted by May 31, 2022 by email to: Carbon.Neutral@gov.bc.ca.

The Clean Government team will post PSO CCARs to the BC Government's CNG website by June 30, 2022 to meet legislative requirements. PSOs are encouraged to post their CCAR to their own website by the same date.

Questions?
Any questions related to PSO CCARs should be emailed to Carbon.Neutral@gov.bc.ca. Please use the subject line: "*CCAR – [PSO name] – [nature of question]"*

2021 Reporting Year

Title: 2021 PSO Climate Change Accountability Report

Organization: *Innovate BC*

PART 1. Legislative Reporting Requirements

[Information provided in this section will complete PSOs' legislative reporting requirements under the Climate Change Accountability Act (section 8.1) and the Carbon Neutral Government (CNG) Regulation. ***Part 1 must be completed in full by all PSOs, including Small Emitters****.]*

Declaration statement: This PSO Climate Change Accountability Report for the period January 1, 2021 to December 31, 2021 summarizes our greenhouse gas (GHG) emissions profile, the total offsets to reach net-zero emissions, the actions we have taken in 2021 to reduce our GHG emissions, and our plans to continue reducing emissions in 2022 and beyond.

Emission Reductions: Actions & Plans

A. Stationary Sources (e.g. buildings, power generation)

N/A. Leased offices.

B. Mobile Sources (e.g. fleet vehicles, off-road/portable equipment)

N/A. Innovate BC has no fleet vehicles or off-road portable equipment.

C. Paper Consumption

Innovate BC encourages a paperless office environment. 90% of documents are shared digitally and meeting material is always digital. For Board meetings, iPads are available upon request with meeting material uploaded.

Innovate BC will continue to purchase recycled paper and try to increase the percentage of recycled content of purchased paper into 2022/2023

Alternative paper sources will be explored for 2022/2023

2021 GHG Emissions and Offsets Summary Table:

***Innovate BC* 2021 GHG Emissions and Offsets Summary**	
GHG Emissions created in Calendar Year 2021	
Total Emissions (tCO_2e)	*0.065361753335 + 15.815021598003*
Total $BioCO_2$	*0+0*
Total Offsets (tCO_2e)	*15.880383351338*
Adjustments to Offset Required GHG Emissions Reported in Prior Years	
Total Offsets Adjustment (tCO_2e)	*-6*
Grand Total Offsets for the 2021 Reporting Year	
Grand Total Offsets (tCO_2e) to be Retired for 2021 Reporting Year	*15.9 + -6*
Offset Investment ($25 per tCO_2e) *[Grand Total Offsets to be Retired x $25/$tCO_2e$]*	*248*

i. [Note, $BioCO_2$ is included 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 $BioCO_2$ 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 to be Retired" to a whole number (no decimal places) before multiplying by $25 (e.g., 43.2 = 43, 43.5 = 44).]

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 2021 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 within 30 days, 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.

PART 2. Public Sector Leadership

2A. Climate Risk Management

Foresight Venture Acceleration Program

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 2021-22, Innovate BC invested $500,000 to fund three programs that benefitted 86 companies across the province, adding 327 jobs to the economy in the province. Overall impact of Foresight Cleantech Accelerator in BC:

229 active BC cleantech companies supported by the programs
6,838 BC cleantech jobs have been directly supported, including contractors hired by our companies.
$76,000 average salary. Based on the last time we asked on a survey.
$1.05 b in cleantech deals raised by Foresight companies.

2B. Other Sustainability Initiatives

N/A

2C. Success Stories

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 $10.8M to 42 innovative projects. Of those awards, $6.6M has been contributed to 25 projects that are classified as clean technologies or as having 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.

Clean Tech Example Ignite Projects

> Project Title: Development and Demonstration Engine Technology for Class 8 Heavy Duty Trucks Fueled by Waste Hydrogen
> Project Partners: Hydra Energy and Dr. Steven Rogak (UBC Professor)
> Award Amount: $300,000 Awarded in 2017
> Project Status: Project Recently Completed
> Project Description: Hydra Energy is working with UBC's Dr. Steven Rogak to bring their low-cost, efficient method of utilizing waste hydrogen in an engine to market. This Hydrogen Internal Combustion Engine (HICE) reduces carbon emissions, preserves vehicle performances, and improves fuel efficiency – all at a low operating cost compared to conventional fuel technologies.
> Project Outcomes: The Ignite program was used to help Hydra bring its HICE technology from prototype to commercial-ready for use in diesel semi-trucks. Hydra's ability to drive commercial adoption of its HICE technology helped them land a $15M Series A round last May. Later that year, they secured their first

paying customer in Prince George's Lodgewood Enterprises, who agreed to convert 12 of their trucks to Hydra's hydrogen-diesel dual-combustion powertrain. The deal with Lodgewood came after 200,000 kilometers of testing and is expected to slash emissions by 40%.

Project Title: Fresh Seafood Sustainable Packaging
Project Partners: Browns Bay Packing Company Ltd. and Dr. Hossein Kazemian (UNBC Professor)
Award Amount: $300,000 Awarded in 2021 (Note: Not Yet Announced Publically)
Project Status: Project Just Awarded
Project Description: Browns Bay Packing Company Ltd. is working with UNBC's Dr. Hossein Kazemian on a project to formulate and design a renewable and fully biodegradable hybrid packaging solution that is applicable in food –packaging and has the potential to be applied in a variety of packaging sectors. This transition is possible by providing a plant-based bioplastic foam that is cost competitive to oil-based Styrofoam with thermal insulation properties and water resistance. Starch is a biodegradable polysaccharide, produced in large-scale at low cost, which exhibits thermoplastic properties after processing and plasticization. In addition, chemical inertness, food safety as well as its excellent foam-forming capabilities make it one of the most promising candidates as an alternative material to replace traditional plastics in various market segments such as the food packaging industry.
Project Outcomes: Project just awarded in 2021, results due in three years' time.

BC Fast Pilot Program

In 2019, Innovate BC partnered with the federal agency 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 2021-22, Innovate BC invested $1M in funding to 14 pilot projects (combined with an additional $1M from our project partner IRAP). Of those 14 projects, 9 were identified as a innovator firm and pilot project with a focus on clean tech or GHG emission reductions.

Some of these clean tech projects are:
• Oxygen 8 Solutions – Pilot Project For: HVAC Retrofit to Reduce GHG Emissions and Improve Health and Safety
• Performance BioFilaments – Pilot Project For: Use of Nanofibrillated Cellulose to Prevent Erosion and Dust Release from Mine Tailings
• Poseidon Ocean Systems – Pilot Project For: Oxypressor in Aquaculture Pilot Project
• Hydron Energy – Pilot Project For: H&E Waste to Energy Project

An example of the impacts from such innovations: Poseidon Ocean Systems piloted their Flowpresser technology at two farm sites operated by Cermaq Canada. The pilot, which wrapped up late last year, was a resounding success and led to Cermaq cutting over 76,000kg of CO_2 emissions from their operations in 2021.

Executive Sign-off:

[All PSOs, including Small Emitters, must have their final report signed by a senior official, such as CEO, COO or Superintendent]

Signature	May 31st, 2022
	Date
Raghwa Gopal	President + CEO
Name (please print)	Title

APPENDIX 1

Below are instructions to populate your organization's CCAR *2021 GHG Emissions and Offsets Summary* table in the PSO CCAR template 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:

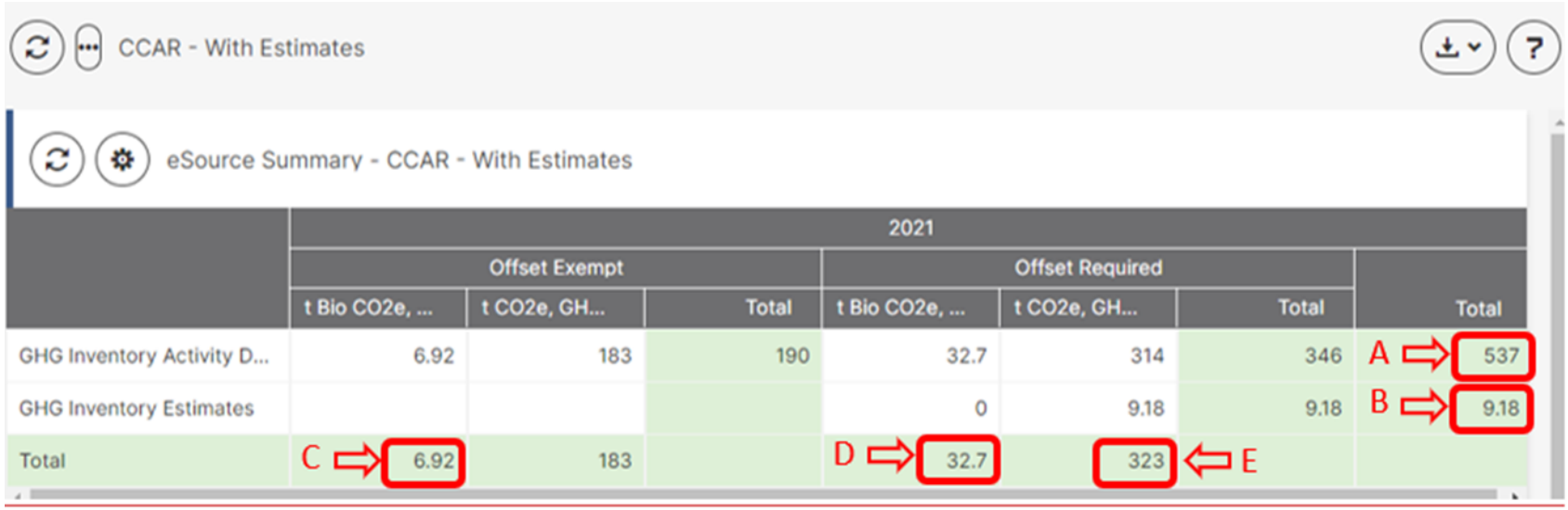
1		Click on the 'Analytics' menu tab and select 'Intelligence Center' from the drop-down menu.
2		Within the Intelligence Center search for, then **click on,** the report titled "CCAR – With Estimates". Note: This report will have an orange Published tag applied.
3		Click the circle icon containing three 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 **Figure 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: • 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. Locate the "2021 PYA Calculation" spreadsheet, available on the CGRT welcome page, under the Files section (on the right-hand side).

d. Using the results of the "CCAR – With Estimates" report and the "2021 PYA Calculation" spreadsheet, populate your *2021 GHG Emissions and Offsets Summary* table by referring to the cells identified in Figures 1 and 2 below.
   a. Cells A through E are identified through the "CCAR – With Estimates" report;
   b. Cell F is identified through the "2021 PYA Calculation" spreadsheet; please follow the instructions within that spreadsheet to generate Cell F.

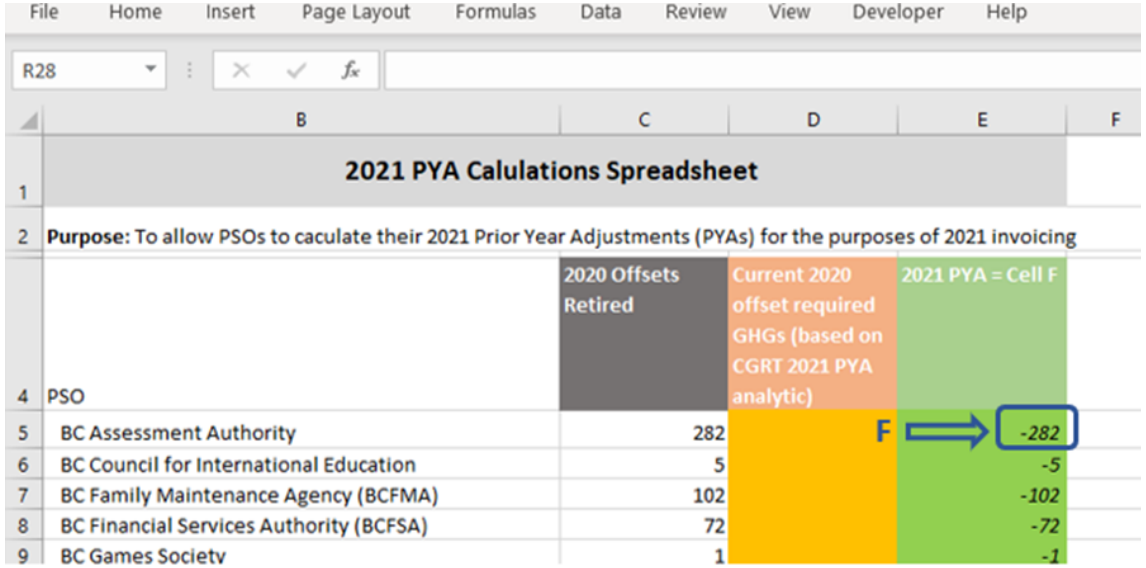
e. Lastly, make sure to complete the Offset Investment ($25 per tCO2e) section by manually multiplying Grand Total Offsets (tCO2e) by $25. You **must** round "Grand Total Offsets to be Retired" to a whole number (i.e. no decimal places) **before** multiplying by $25 (e.g., 43.2 = 43, 43.5 = 44).

FIGURE 1. eSource Summary – CCAR – With Estimates



	2021						
	Offset Exempt			Offset Required			
	t Bio CO2e, ...	t CO2e, GH...	Total	t Bio CO2e, ...	t CO2e, GH...	Total	Total
GHG Inventory Activity D...	6.92	183	190	32.7	314	346	A → 537
GHG Inventory Estimates				0	9.18	9.18	B → 9.18
Total	C → 6.92	183		D → 32.7	323 ← E		

FIGURE 2. 2021 PYA Calculations Spreadsheet (manual population of orange column in this spreadsheet required; see instructions within Excel file)



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	B	C	D	E	F
1	**2021 PYA Calulations Spreadsheet**				
2	**Purpose:** To allow PSOs to caculate their 2021 Prior Year Adjustments (PYAs) for the purposes of 2021 invoicing				
4	PSO	2020 Offsets Retired	Current 2020 offset required GHGs (based on CGRT 2021 PYA analytic)	2021 PYA = Cell F	
5	BC Assessment Authority	282	F →	-282	
6	BC Council for International Education	5		-5	
7	BC Family Maintenance Agency (BCFMA)	102		-102	
8	BC Financial Services Authority (BCFSA)	72		-72	
9	BC Games Society	1		-1	