

## 2019 Carbon Neutral Action Report

*This Carbon Neutral Action Report for the period January 1st, 2019 to December 31st, 2019 summarizes our emissions profile, the total offsets to reach net-zero emissions, the actions we have taken in 2019 to reduce our greenhouse gas emissions and our plans to continue reducing emissions in 2020 and beyond.*

*By June 30, 2019, BC Emergency Health Services' final Carbon Neutral Action Report will be posted to our website at [www.bcehs.ca](http://www.bcehs.ca).*

### **PHSA Environmental Sustainability Policy**

*PHSA will act as a leader with respect to environmental stewardship while engaging the healthcare community in a collaborative approach towards sustainability. This will occur through sustainable operations, sustainable facilities and sustainable partnerships.*

### **2019 Actions to Reduce GHG Emissions**

#### **Mobile Fleet**

- *Electric Ambulance Evaluation project was completed by 4<sup>th</sup> year engineering student from the University of Victoria. The project analysed actual ambulance operational data and provided some initial discussion on electric drivetrain and battery size requirements.*
- *9 ambulance received in fiscal year 2019/20 is equipped with an aftermarket hybrid electric drive system. This will increase the number hybrid units in the system to 10 allowing for better analysis of performance.*
- *68 new Crestline Coach Ltd. ambulances received in fiscal year 2019/20 are equipped with ACETECH's ECO-Run module for idle-management. These gasoline powered units replace end of life diesel powered units.*

#### **Facilities:**

- *Planning commenced for combined Fire and Ambulance station in Creston BC began to be build to LEEDs standards, replacing the existing stand-alone station.*

#### **Paper usage:**

- *BCEHS continues to purchase only 100% recycled paper for office use.*
- *The transition to Electronic Patient Care records province wide was completed. The electronic system eliminating the paper-based patient record form previously used.*

***Our Plans to Continue Reducing Emissions in 2020 and Beyond*****Mobile Fleet:**

*BCEHS Fleet Operations strives to ensure the efficiency of the ambulance fleet. Initiatives designed to improve fuel economy include the trial of an aftermarket hybrid electric drive system. An additional 9 hybrid ambulances will be put in service in 2020. These additional units will improve on the trail aim to determine if aftermarket hybrid electric systems provide a reliable, cost effective means of improving fuel economy and reducing carbon emissions. Information collected by the Fleet Information Management System is and will continue to be used to measure success of this project.*

*BCEHS will continue efforts to collect and analyse vehicle operating data to define the ambulance energy cycle. This information will assist in being able appropriately specify electric ambulance and associated charging infrastructure.*

*BCEHS Fleet Operations has included in the 2020 10-year capital projections a plan to reduce emissions through further use of hybrid electric systems, the use of smaller chassis and the introduction of electric ambulances into the BCEHS fleet. This initial plan will form the basis of future funding requests associated with emission reduction and will be refined new information is learned.*

*In 2020 BCEHS will be working on release of the next ambulance supply request for proposal (RFP). The contract established from the RFP process will supply ambulances for the next three to five years. The supply agreement will include options for hybrid electric drivetrains and smaller chassis. The RFP requirements will continue to include aerodynamic considerations, idle reduction technology, and efficiency measures that have been included in previous contacts.*

*BCEHS will continue to replace the remaining diesel-powered ambulances with gasoline powered units equipped with idle reduction technology.*

**Note for 2020 – Impact of COVID 19**

*An easing in emissions is expected at the beginning of 2020 due reduced call volumes resulting in fewer kilometers being travelled by the BCEHS fleet. This reduction in demand, associated with COVID 19 pandemic, is expected to be temporary and while this may result in reduced 2020 emissions it not reflective of an overall reduction in demand.*

**Facilities:**

*In 2020, BCEHS will remain diligent in working at reducing building emissions through effective energy use and recycling, reuse of other products.*

**Emissions and Offset Summary Table:**

<b>BCEHS GHG Emissions and Offsets for 2019</b>	
<b>As per the <a href="#">Directive</a> issued March 31, 2020, each PSO will use their 2018 GHG Emissions as a placeholder for the purposes of their 2019 CNAR.</b>	
Total Emissions (tCO <sub>2</sub> e)	15,700
Total BioCO <sub>2</sub>	477.6
Total Offsets (tCO <sub>2</sub> e)	15,253
Offset Investment (\$25 per tCO <sub>2</sub> e)	\$381,325

**Retirement of Offsets:**

In accordance with the requirements of the Climate Change Accountability Act and Carbon Neutral Government Regulation, BC Emergency Health Services (**the Organization**) is responsible for arranging for the retirement of the offsets obligation reported above for the 2019 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.

**Executive sign-off:**



May 27, 2020

---

Signature

Date

Manraj Chohan

/Executive Director, Provincial Programs

---

Name (please print)

Title

**Confirmation number:** 00B78555

**Submitted date:** 2020-07-28 09:55:28 Pacific Daylight Time

# Carbon Neutral Action Report Survey - 2019

Public sector organizations (PSOs) are required to complete this survey, in addition to a Carbon Neutral Action Report (CNAR) as mandated by BC's [Climate Change Accountability Act](#) and the [Carbon Neutral Government Regulation](#).

Due to the COVID-19 pandemic, the following [Directive](#) was issued on March 31, 2020. Certain deadlines were also extended for the 2019 reporting year (see below).

## **March 31, 2020 Directive:**

*Under my authority as the Director for the purposes of the Act, and under the authority delegated to me in Section 6 of the Carbon Neutral Government Regulation, I hereby direct that all ministries and Public Sector Organizations covered by the Carbon Neutral Government requirement shall use their 2018 GHG emissions as a temporary estimate for their actual 2019 GHG emissions, for the purposes of the 2019 Carbon Neutral Action Reports and 2019 Carbon Neutral Government reporting required under the Climate Change Accountability Act.*

Neil Dobson, Executive Director, Clean BC Implementation  
Climate Action Secretariat

Although 2018 emissions data will be used as a placeholder for 2019, **all other (qualitative) components of the CNAR and CNAR Survey are to be completed with information from 2019 (e.g., actions taken or planned to reduce emissions)**. The only change to the survey is that the deadline was extended by one month to June 30, 2020.

This survey is divided into two parts:

**Part 1** - Will be made public on the Climate Action Secretariat (CAS) [website](#) after June 30, 2020; however, it will not be appended directly to each individual PSO CNAR as was done in previous years. This section collects details about actions taken or planned to reduce emissions and is intended to supplement the legislative requirements in your CNAR.

**Part 2** - Will NOT be made public. Information you provide in this section is important and will be used internally to help CAS staff with planning for emissions reduction and climate change adaptation initiatives. Although not required, PSOs are highly encouraged to complete Part 2.

**Note:** Survey progress can be saved at any time by clicking the "Save and continue later" button at the bottom of each page. A new window will open and you will be asked to provide your name and email. An email will be sent to you from [Carbon.Neutral@gov.bc.ca](mailto:Carbon.Neutral@gov.bc.ca) with the subject line: "Questionnaire Link", which will include a hyperlink for the "Project: Carbon Neutral Action Report Survey – Broader Public Sector 2019". You can then continue responding at another time or email the hyperlink to a colleague to complete remaining section(s).

May 29, 2020	<ul style="list-style-type: none"><li>The final, signed version of the <b>CNAR</b> (or Small Emitters Form) must be submitted by email to: <a href="mailto:Carbon.Neutral@gov.bc.ca">Carbon.Neutral@gov.bc.ca</a></li></ul>
June 30, 2020*	<ul style="list-style-type: none"><li>Ministry of Environment and Climate Change Strategy must post a final CNAR for each organization on the BC Government's CNG <a href="#">website</a> and each PSO is encouraged to post the report on their website.</li><li>The <b>CNAR Survey</b> (optional for Small Emitters) must be completed and submitted online. *Deadline extended from May 29, 2020.</li><li><u>All offset invoice payments must be submitted to CAS.</u></li></ul>
Sept 30, 2020*	<ul style="list-style-type: none"><li><b>Clean Government Reporting Tool (CGRT) Data Entry</b> must be completed for the 2019 reporting year.</li></ul>

	*Deadline extended from April 30, 2020.
Oct 15, 2020*	<ul style="list-style-type: none"> <li>• <b>Self-Certification checklist</b> must be completed, signed and submitted by email to: <a href="mailto:Carbon.Neutral@gov.bc.ca">Carbon.Neutral@gov.bc.ca</a>.</li> </ul> *Deadline extended from May 15, 2020.

\*See the [Carbon Neutral Government – Program Requirements website](#) for more information on program requirements, timelines and templates.

## PART 1 - Included as part of your public CNAR report.

Reminder that Part 1 will be made public on the CAS [website](#).

<b>Contact Name:</b>
<i>Robert Howland</i>
<b>Contact Email:</b>
<i>Robert.Howland@bcehs.ca</i>
<b>Organization Name:</b>
<i>BC Emergency Health Services</i>
<b>Role – Please select the best category for your current role with your organization. If more than one individual completed the survey, multiple categories may be selected:</b>
Fleet Manager Facilities/Operations Manager/Coordinator
<b>Please select your sector:</b>
Health (H)

## Stationary Sources (e.g. Buildings, Power Generators): Fuel Combustion, Electricity use, Fugitive Emissions.

Actions taken by your organization in 2019 to support emissions reductions from buildings

<b>Do you have a strategy to reduce emissions from stationary sources?</b>
Yes

Whether you have a strategy or not, briefly describe your organization's plans to continue reducing emissions from stationary sources:

<b>Over the medium-term term (1-5 years)</b>
<i>Continue with practices related to reduction of electricity consumption but upgrading lighting, HVAC systems, etc.</i>
<b>Over the long term (6-10 years)</b>
<i>Same as above</i>
<b>Please describe your strategy's goals (if any) related to energy audits.</b>
<i>Reviewing BEPI reports to spot anomalies and determine root causes of high energy use.</i>

What % on average of your building portfolio has an energy audit completed each year (if any)?

>1%

Please describe your strategy's goals (if any) related to building retrofits.

*When capital becomes available to retrofit/upgrade buildings, those with the highest energy consumption will be the first to be reviewed and actioned.*

What % on average of your building portfolio is retrofitted each year in the following categories (if any) - click here for further information:

>1%

Minor retrofits (e.g. low cost, easy to implement measures including caulking, lighting, adding roof insulation, etc.)

*When projects are undertaken, any opportunities to increase building efficiencies are reviewed and actioned if appropriate.*

Major retrofits (e.g. replacing windows and doors, equipment replacement such as boilers, etc.)

*None at this time*

Deep retrofits (e.g. replacing roof, replacing the heating, ventilation and air-conditioning system with a renewable technology like a ground-source heat pump, etc.)

*None at this time*

Please describe your strategy's re/retro-commissioning goals (if any)?

*Due to a lack of capital funding, BCEHS does not have a current re/retro commissioning goal.*

What % on average of your building portfolio do you recommission each year?

*These records would have been kept by WSI. As WSI is no longer the maintenance/repair service provider, these records would only be kept by the service firms performing work.*

Do you keep records of Refrigerant gases<sup>1</sup> category and refilling volumes?

[1] Fugitive emissions from stationary cooling equipment are attributed to the leakage and loss of HFC and PFC based coolants from air conditioning and commercial type refrigeration systems. Coolant loss can occur during the manufacturing, operation, and disposal of such equipment. Gases that may be reported via CGRT include HFC R-134, HFC R-134a, HFC R-404a, HFC R-407c, HFC R-410a.

No

What, if any, mitigation approaches have been considered? Please describe.

*All maintenance work is performed by qualified contractors who are responsible for recapture of refrigerant gases.*

How many newly constructed buildings received at least LEED Gold certification in 2019?

0

How many newly constructed buildings did not receive LEED Gold certification?

N/A

Please explain why LEED Gold certification was not obtained for those new buildings.

*BCEHS has not built any new buildings in the past few years. Our portfolio is largely leased and landlords determine the level of LEED certification they wish to pursue.*

Other actions? Please describe briefly:

*Review building plans and specifications to determine opportunities to improve product life cycles, energy efficiencies, and green programs on material selections and usages.*

## Mobile Sources (Fleet Vehicles, Off-road/portable Equipment): Fuel Combustion:

Actions taken by your organization in 2019 to support emissions reductions from mobile sources?

Do you have a strategy to reduce emissions from mobile sources?

No

Whether you have a strategy or not, briefly describe your organization's plans to continue reducing emissions from mobile sources:

Over the medium-term term (1-5 years)

- Induct additional traditional ambulances with aftermarket Hybrid Electric drive systems.
- Include option for smaller chassis in new ambulance procurement Request For Proposal
- Develop ground work for the introduction of fully electric vehicles in the fleet.

Over the long term (6-10 years)

- Introduce and expand the use of all electric ambulance in the fleet.

How many fleet vehicles did you purchase from the following categories:

Electric Vehicle – EV - (e.g., Nissan Leaf, Chevy Bolt)

0

“Plug In” Electric Vehicle – PHEV (e.g., plug-in Prius, Chevy Volt)

0

Hybrid vehicle – HEV – non “Plug In”- (e.g., Toyota Highlander Hybrid)

10

Hydrogen fuel cell vehicle

0

Natural gas/propane

0

Gas/diesel vehicle

68

If you purchased new gas/diesel vehicles, can you briefly explain why vehicles from the other categories were not chosen?

*All vehicles acquired in 2019 were ambulances. No viable OEM option is available with alternative drive trains.*

Actions taken by your organization in 2019 to support emissions reductions from mobile

## sources? (Continued)

How many existing EV charging stations does your organization have in each category:

Level 2?
4
Level 3?
2
How many level 2 stations (if any) are specifically for your fleet vehicles? As defined as Level 2 stations only your organization's fleet vehicles may use
0
How many level 3 stations (if any) are specifically for your fleet vehicles? As defined as Level 3 stations only your organization's fleet vehicles may use
0

How many EV charging station(s) did you install in 2019 in each category:

Level 2?
0
Level 3?
0
How many level 2 stations (if any) were installed specifically for your fleet vehicles? As defined in the previous section
0
How many level 3 stations (if any) were installed specifically for your fleet vehicles? As defined in the previous section
0
Please briefly describe any other related actions, (e.g. charging station feasibility studies, electrical panel upgrades, etc.)
None

Please indicate the total number of the vehicles in the following vehicle classes that are in your current fleet

### Definitions:

- Light duty vehicles (LDVs) are designated primarily for transport of passengers <13 and GVWR<3900kg
- Light duty trucks (LDTs) are designated primarily for transport of light-weight cargo or that are equipped with special features such as four-wheel drive for off-road operation (include SUVs, vans, trucks with a GVWR<3,900kg )
- Heavy duty vehicles (HDV) includes vehicles with a GVWR>3,900 kg (e.g. ¾ tonne pick-up truck, transport trucks)

Light duty vehicles (LDVs)



Electric Vehicles – EV - (e.g., Nissan Leaf, Chevy Bolt)

0

“Plug In” Electric Vehicle – PHEV -- (e.g., plug-in Prius, Chevy Volt)

0

Hybrid vehicles – HEV – (e.g., non “Plug In”- older Toyota Prius, Toyota Camry hybrid)

0

Hydrogen fuel cell vehicles

0

Natural gas/propane

0

Gas/diesel

223

#### Light duty trucks (LDTs)

Electric Vehicles – EV

0

“Plug In” Electric Vehicle – PHEV

0

Hybrid vehicles – HEV – (e.g., non “Plug In”- older Ford Escape Hybrid, older Chevrolet Silverado pickup hybrid, etc)

10

Hydrogen fuel cell vehicles

0

Natural Gas/propane

0

Gas/diesel

613

#### Heavy duty vehicles (HDV)

Electric Vehicles – EV

0

“Plug In” Electric Vehicle – PHEV

0

Hybrid vehicles – HEV – (e.g., non “Plug In”)

0

Hydrogen fuel cell vehicles

0

Natural Gas/propane

0

Gas/diesel

1

Actions taken by your organization in 2019 to support emissions reductions from paper supplies.

Briefly describe your organization’s plans to continue reducing emissions from paper use:

Over the medium-term (1-5 years)

*To use 100 % recycled paper for all printing and copying needs .  
Also ,encourage program areas to think twice about necessity to print a document before doing so .*

Over the long term (6-10 years)

*To use 100 % recycled paper for all printing and copying needs .  
Also ,encourage program areas to think twice about necessity to print a document before doing so .*

Do you have an awareness campaign focused on reducing office paper use?

Yes

Purchased alternate source paper (bamboo, hemp, wheat, etc.)

No

Other 2019 actions, please specify

*We assist departments in designing records management strategies to keep their records in electronic form.*