



# 2023 PSO Climate Change Accountability Report

British Columbia Emergency Health Services

May 2024

## *British Columbia Emergency Health Services* 2023 PSO Climate Change Accountability Report

**Title:** 2023 PSO Climate Change Accountability Report

**Organization:** British Columbia Emergency Health Services

**Declaration statement:** This PSO Climate Change Accountability Report for the period January 1, 2023 to December 31, 2023 summarizes our greenhouse gas (GHG) emissions profile, the total offsets to reach net-zero emissions, the actions we have taken in 2023 to minimize our GHG emissions, and our plans to continue reducing emissions in 2024 and beyond.

This Climate Change Accountability Report will be available our website at [www.bcehs.ca](http://www.bcehs.ca).

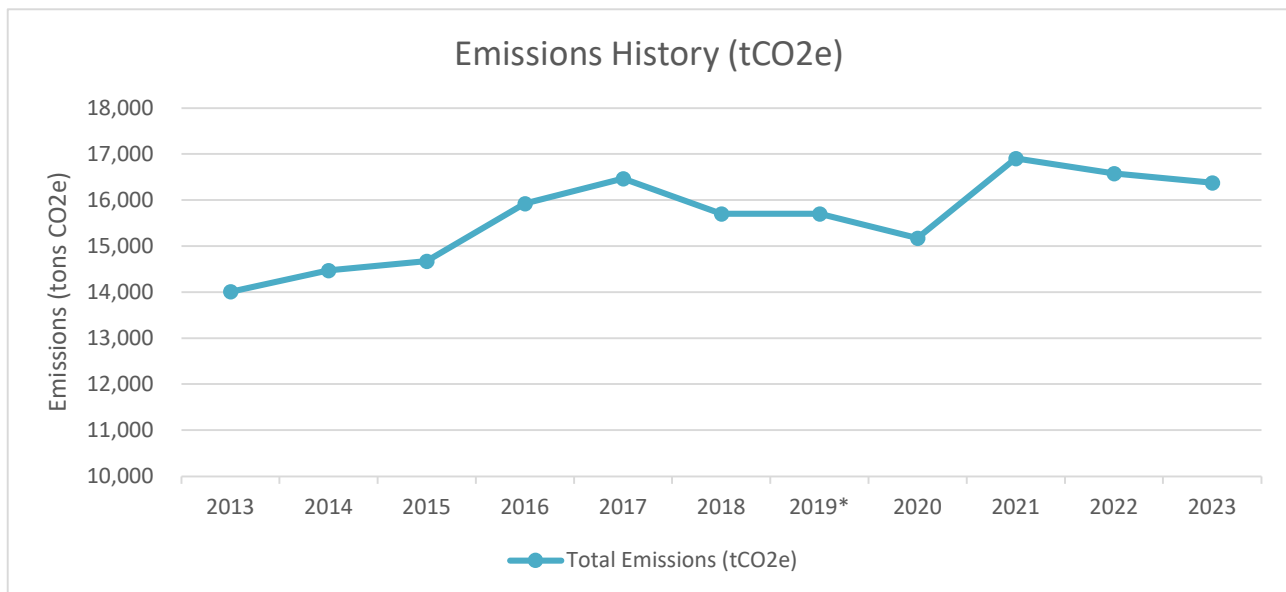
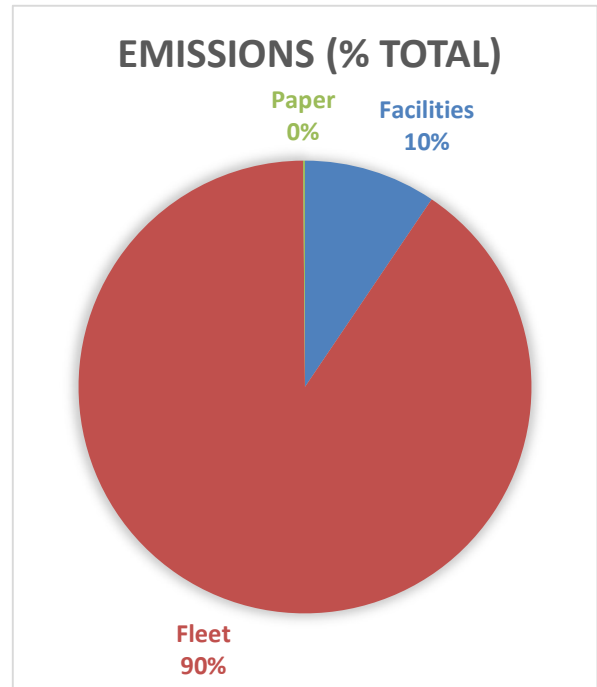


Members of Vancouver's BCEHS bike squad

## Part 1 - BCEHS Emission Reductions: Actions & Plans

BCEHS has begun development of a **Decarbonization & Clean Fleet Plan** for emission reductions across the organization. BCEHS' emissions are produced mostly from the approximately 28 million kilometers driven by our fleet. The fleet is composed up of 658 internal-combustion ambulances. With limited Original Equipment Manufacturers (OEMs) in the electric ambulance market, our 273 support vehicle fleet of mostly light-duty vehicles (LDVs) are a prime short-term target for decarbonization and electrification initiatives. In 2023, BCEHS started to decarbonize the supervisor, Paramedic Response Unit (PRU), and additional support fleet with the purchase of chargers and Battery Electric Vehicles (BEVs). Facilities contribute to about 10% of our emissions, and we are exploring solutions for carbon, energy, and waste reduction where applicable.

BCEHS understands that to successfully decarbonize and drive sustainable practices across the organization, a cultural shift is required. The actions below lay the foundation for this transformation, as part of the *Decarbonization & Clean Fleet Plan*.



# 1 - Fleet and Mobile Sources

## Ground Fleet

### ○ Strategic Initiatives

- The BCEHS' Strategic Plan includes emissions reductions as a goal.
- Established the joint BCEHS/Ambulance Paramedics of BC (APBC) Decarbonization Committee to improve the sustainability of BCEHS operations. This will be further developed and enhanced in 2024.
- Introduced an Earth Day pin to engage and remind staff of our environmental goals.
- Increased standardization in operations.
- BCEHS' Logistics team is working to reduce weight in vehicles and increase efficiency in operations.
- BCEHS' bike squads continue to play a role in urban responses and planned events. The team responds to calls in the downtown cores of Victoria and Vancouver. Additionally, a bike squad is active at Vancouver International Airport (YVR) supporting both landside and airside emergencies.



### ○ Vehicle Charging Infrastructure & Deployment

- Procured twenty and deployed nine Level II chargers across our stations for supervisors and PRUs.
- A Level II charger was also installed in the ambulance bay at Surrey Memorial Hospital in preparation for support vehicles and future EV ambulance deployment.

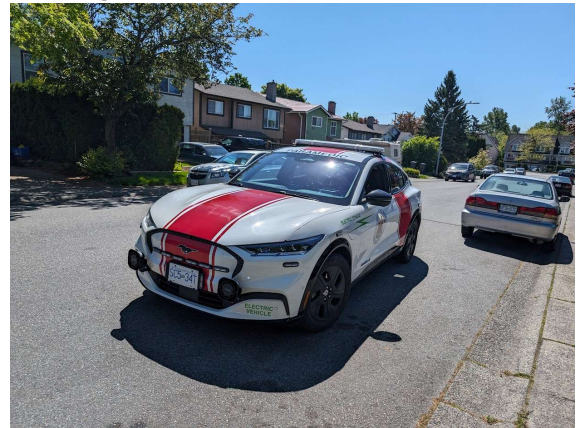


○ **EV and HEV Procurement & Deployment**

- Procured and deploying 18 zero-emission BEV vehicles as supervisor and PRU units, using Provincial Carbon Neutral Capital Program (CNCP) funding.
- Deployed 70 Hybrid Electric Ford Interceptors in front-line response roles.
- Procured BCEHS' first EV ambulance to be deployed and tested in calendar year 2024 in our Patient Transfer Fleet.

○ **2023 Fleet Highlights**

- **EV Pilot Project** with the deployment of six Ford Mustang Mach-Es and the EV ambulance estimates a 10-year lifetime cost savings of \$1.18M, and GHG reduction of 1,088 tCO<sub>2</sub>e.
- The **First 'Code 3' (Lights & Sirens) Emergency Response with a BEV in North America** was conducted in June 2023 in Langley, BC using a Ford Mustang Mach-E BEV's (see **Success Story**).
- Conducted a **vehicle idling reduction campaign** and survey with the goal of reducing unnecessary emissions and idling across the fleet.



**Aviation Fleet - Contract Operations**

- New Fixed-wing and Rotary-Wing contracts require carriers to achieve carbon neutrality for BCEHS in each year of the contract.
- New Fixed Wing Fleet of King Air 360CWH is more fuel efficient.
- Our new Fixed Wing fleet are fitted with the ground fleet-wide electric stretcher system that is compatible with those in our ambulances, allowing for seamless patient transfers and reducing additional equipment needs.

**2024 BCEHS Clean Fleet Plan**

*BCEHS is working towards having a Clean Fleet Plan for the end of calendar year 2024. This plan will be an actionable, multi-year plan to accelerate emissions reduction across the organization, and transition the entire fleet to zero-emissions options, with the necessary infrastructure deployments in line with Provincial goals. BCEHS hired a Fleet Decarbonization Manager in April 2024, to lead the charge with strategic planning, development, and the transition to zero-emissions.*



## 2 - Facilities and Infrastructure

- PHSA and BCEHS are committed to further investigation through a planetary health lens into strategic planning and operations of our facilities.
- This commitment includes reducing facilities energy use intensity by 30% and GHG emissions in 2030 by 50% of 2007 emissions.
- New builds are built to LEED Gold standards, and building retrofits are to BCBC 2024 and conform to Step Code guidelines where applicable.

## 3 - Paper Consumption

- Paper consumption has been an action item at BCEHS over the years, and the organization is actively working towards digitalization of paperwork and administrative tasks.
- Exploring policy with our supplier in collaboration with PHSA around a shift to sustainable paper products.



Members of Victoria's BCEHS bike squad (Source: CTV Vancouver Island)

## 2023 GHG Emissions and Offsets

### Summary Table:

<b>BC Emergency Health Service 2023 GHG Emissions and Offsets Summary</b>	
<b>GHG emissions for the period January 1 - December 31, 2023</b>	
Total BioCO <sub>2</sub>	499
Total Emissions (tCO <sub>2</sub> e)	17,333
Total Offsets (tCO <sub>2</sub> e)	16,834
<b>Adjustments to Offset Required GHG Emissions Reported in Prior Years</b>	
Total Offsets Adjustment (tCO <sub>2</sub> e)	0
<b>Grand Total Offsets for the 2023 Reporting Year</b>	
Grand Total Offsets to be Retired for 2023 Reporting Year (tCO <sub>2</sub> e)	16,834
Offset Investment (\$)	\$420,850

### Retirement of Offsets:

In accordance with the requirements of the *Climate Change Accountability Act* and the Carbon Neutral Government Regulation, British Columbia Emergency Health Services (**the Organization**) is responsible for arranging for the retirement of the offsets obligation reported above for the 2023 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 Climate Leadership

Decarbonization is the focus, as we understand that it will take much more than electrification to achieve the Provincial Climate Targets. There are opportunities in optimization and fleet rightsizing, particularly in densifying urban areas across the Province. In 2024, BCEHS will release a *Decarbonization & Clean Fleet Plan* and continue engaging with Canadian ambulance manufacturers on reduced or zero-emissions ambulance platforms. BCEHS is in the process of reviewing early mock-ups and prototypes from the ambulance manufacturer retained on contract. As other hybrid and low-emission technology becomes available at a commercial level, BCEHS will continue to assess these options.

BCEHS continues to operate with funding from the CNCP (Carbon Neutral Capital Funding) program and will provide details and justify its next use of the funding in the coming months in line with the *Decarbonization & Clean Fleet Plan*. BCEHS' continued involvement with CNCP allows consideration for the systems, infrastructure, and facilities involvement required to decarbonize the fleet, as well as estimating operating cost and GHG reductions.



### Climate Risk Management

Climate change has put a strain on the BC Emergency Health Services, through increasing heat and extreme weather-related dispatches, flood and wildfire support, evacuations and more. This results in increased operating expenses to support citizens in these events. Fleet decarbonization efforts through optimization, electrification, and vehicle rightsizing will help mitigate not only the environmental impacts of our services but reduce our operations costs as electrification and zero-emission fleet deployment accelerates in the coming years.

BCEHS has a Disaster Risk Reduction and Resilience (DR3) team focused on ensuring the organization is adaptable and can respond to adversity and disruption. Disaster resilience is the capacity of BCEHS to adapt to and recover from hazards, vulnerabilities, or stresses to continue providing pre-hospital care to British Columbians. As the BC Ministry of Environment and Climate Change Strategy (MECCS) recently stated "climate change hazards are impacting health determinants" (2018, p. 1) and that action "will strengthen our health care system and improve

the resiliency of our communities" (2018, p.2). BCEHS needs to adapt and be flexible to rapid change and impacts to our organization, staff, and our patients.

### **BCEHS Sustainable Fleet Success Story**

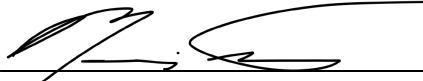
#### **BEV Support Vehicle Deployed in 'Code 3' (Lights & Sirens) Response: A First in North America!**



*BCEHS was the first in North America to deploy a battery electric vehicle (BEV) into Code 3 Service. The Paramedic Response Unit (PRU) was deployed on it's first Code 3 call in June 2023. The first Ford Mustang Mach-E received into the BCEHS fleet has served as a technology test bed and proof-of-concept vehicle, notching up several "firsts" along the way including being the first EV in the BCEHS fleet and the first Code 3 paramedic response EV in North America.*

*Prior to upfitting the Mach-E to Code 3 capabilities, there was significant stakeholder engagement with design teams consisting of paramedic, ergonomic, medical & vehicle subject-matter experts (SMEs). The result was a leveraging of vehicle, systems, & practice level integration to optimize provider & patient experience in alignment with the BCEHS strategic plan. Some of the technology innovation includes IMITS evaluation of Mach-E centre touchscreen for potential Mobile Responder display, as well as BCEHS Treatment Guidelines and BCEHS Intranet. The fully integrated approach to role specific systems, equipment & kit bag design and layout, coupled with the Mach-E's vehicle performance resulted in a superior response vehicle in most metrics versus comparable ICE vehicles. Each support vehicle replaced by an EV contributes to a lifetime savings over 10 years of \$162,769, mostly in fuel costs, and an emissions reduction of 138 tons CO<sub>2</sub>e.*

## Executive Sign-off:



Signature

May 29, 2024  
Date

Manraj Chohan

Executive Director, Logistics & Transportation Operations

