

November 12, 2021

Military Emissions Reporting: An Opportunity for Proactive Canadian Leadership

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Introduction

On 29 June 2021, the government of Canada adopted a Net Zero emissions law.¹ In so doing, Canada joins several other major economies which have already legislated Net Zero societies by 2050. These include Sweden (2017),² the United Kingdom (2019),³ France (2019),⁴ Denmark (2019),⁵ New Zealand (2019),⁶ Switzerland (2019),⁷ and Hungary (2020)⁸. These governments are now legally required to modernize policies, processes, government programs and infrastructure such that the country will produce no more greenhouse gas (GHG) emissions than can be absorbed by the environment by 2050.

The [guidelines for reporting of national emissions](#) are published by the Intergovernmental Panel on Climate Change. The 2050 deadline predicates substantive changes, following an all-of-government and all-of-society approach to reshape social and economic activities. It is understood that the military sector may wish to exercise reasonable discretions regarding sensitive operations.⁹ While change and reporting procedures will be difficult across sectors, the need remains for base data from all sectors in nations where Net Zero legislation has been adopted into law.

Background

The legislation being passed by individual states stems from international negotiations concerning the global management of emissions. International treaties concerned with the dangers of climate system disruptions have evolved over the past 30 years. The [United Nations Framework Convention on Climate Change \(UNFCCC\)](#) was first established in 1994. The Kyoto Protocol was then implemented in 1997,¹⁰ with the objective of reducing emissions to a level that would prevent dangerous anthropogenic effects. The United States participated in Kyoto but negotiated that military emission reporting be excluded. This exclusion shifted with the adoption of the Paris Agreement¹¹ in 2015.

Canada is presently classified by the UNFCCC as an Annex 1 industrialized economy in transition. Annex 1 Countries are required to submit a National Inventory Report (NIR) annually.¹² With respect to Annex 1

military sectors, it is stipulated that emissions and removals should be reported at the most disaggregated level of each source or sink category, but a minimum level of aggregation may be required to protect confidential business and military information”¹³. Canada’s most recent NIR report included estimates for military ground vehicle, naval and aviation fuel use as well as certain stationary uses of fuel, such as heating buildings on military bases.

Comparative Analysis of Military Emissions Reporting

Internationally, military sectors typically disclose less emission information than civilian sectors. As pressures upon all sectors continue to rise, it is anticipated that military emissions reporting pressures will also increase. In November 2021, the United Kingdom-based [Conflict and Environment Observatory](#) (CEOBS) launched a public-facing resource which analyzes and [aggregates UNFCCC military emissions reporting](#). The purpose of this campaign is to highlight leaders and laggards in military emissions reporting.

The CEOBS analyzed military emissions reporting from 72 states. Of these, emissions data accessibility was categorized as ‘fair’ for only four nations – Germany, Norway, Luxembourg and Cyprus. Of these countries, Germany has the largest military and, as such, may be understood as the leader in emissions transparency. Thirty-six states, including the United States, Russian Federation, China, United Kingdom, Japan, France, and Canada were categorized by the CEOBS as having ‘poor’ quality emissions data accessibility. The remaining 32 states categorized as having ‘very poor’ data accessibility including India, Egypt, Turkey, and Saudi Arabia.

A comparison of data reporting between Arctic Council members provides interesting insights into the inconsistent approaches of different militaries. As summarized in **Table 1**, Finland, Norway, and Russia reported emission relating to their bases, but did not report fuel use data for their vehicles. Conversely, Canada, Denmark, Sweden, and the United States reported data concerning fueling their vehicles, but not emissions relating to stationary buildings.

Table 1 - UNFCCC Emissions Reporting by Arctic Council Nations

Arctic Council States	Stationary Emissions ^a	Mobile Emissions ^b	Comments
Canada		0.316	Disaggregated data not reported through UNFCCC
Denmark		0.204	Disaggregated data not reported through UNFCCC
Finland	1.128		Data reported through UNFCCC includes civilian sources
Iceland			Non-reporting due to low military expenditures
Norway	0.002	0.111	Data is reported through the UNFCC
Russian Federation	27.895		Disaggregated data not reported through UNFCC
Sweden		0.183	Disaggregated data not reported through UNFCC
United States		17.2	Data reported through UNFCCC includes civilian sources, is not clearly disaggregated

Source: www.militaryemissions.org

a, b: Data submit to the UNFCCC under sections 1A5a and 1A5b. Unit of measure is a **metric tons of carbon dioxide equivalent** (MTCO_{2e}).The unit "CO_{2e}" represents an amount of a greenhouse gas whose atmospheric impact has been standardized to that of one unit mass of carbon dioxide (CO₂), based on the global warming potential.

Concluding Remarks

In its 2021 NIR submission to the UNFCCC, Canada reported on fuel use for various military transportation applications.¹⁴ The report breaks out the mode of travel as distinct line items and identifies Planned GHG Inventory Improvements (section 8.3).¹⁵ In contrast, there are no stand-alone line items for the reporting of military stationary fuel expenditures. In the 2021 NIR report, military fuel consumption to heat and power bases are rolled into a broad section titled “Other Sectors, Commercial/Institutional.”¹⁶

The reporting of stationary fuel uses by other nations suggests there may be opportunities for Canadian Armed Forces Bases and Wings to disclose fuel and energy use with greater specificity. To do so would highlight DND and CAF efforts to meet the government-wide target to reduce emissions. Since 2004, DND has built more than 50 buildings meeting industry-recognized level of high-environmental performance (Leadership in Energy and Environmental Design (LEED) certification.¹⁷ Reporting upon emissions generated from both transportation and stationary operations has the potential to enhance the CAF’s reputation with the international community, elected officials, and the Canadian public as a champion of climate change mitigation and “greening” defence.

Notes

¹ Environment and Climate Change Canada (2021) [Government of Canada legislates climate accountability with first net-zero emissions law](#)

² UNFCCC (2017) [Sweden plans to be carbon neutral by 2045](#)

³ department for Business, Energy & Industrial Strategy and The Rt Hon Chris Skidmore MP (2019) [UK becomes first major economy to pass net zero emissions law](#)

See also Parliament (2008) [Climate Change Act](#)

⁴ Felix, Bate (2019) [France sets 2050 carbon-neutral target with new law](#)

⁵ Danish Parliament (2019) [Broad agreement on ambitious and binding climate law](#)

See also France (2019) Law no. [2019-1147 on Energy and climate](#)

⁶ New Zealand Parliament (2019) [Climate Change Response \(Zero Carbon\) Amendment Bill](#)

⁷ Swiss Federal Council (2019) [Federal Council aims for a climate neutral Switzerland by 2050](#)

⁸ CEEnergy News (2020) [Hungary adopts new climate law to reach net-zero targets by 2050](#)

⁹ UNFCCC (2014) [Report of the Conference of the Parties on its nineteenth session, held in Warsaw from 11 to 23 November 2013. Section 1. General guidance. Sect. 36](#)

¹⁰ United Nations (1998) [Kyoto protocol to the United Nations framework convention on climate change](#)

¹¹ United Nations (2015) [Paris Agreement](#)

¹² UNFCCC (2013) [Decision 24 CP.19 National Inventory Submissions 2021 | UNFCCC](#)

¹³ UNFCCC (2014) [Report of the Conference of the Parties on its nineteenth session, held in Warsaw from 11 to 23 November 2013. Section 1. General guidance. Sect. 36](#)

¹⁴ UNFCCC (2021) [National Inventory Submissions](#)

¹⁵ Environment and Climate Change Canada (2021) [National Inventory Report 1990-2019: Greenhouse gas sources and sinks in Canada. Canada’s submission to the United Nations Framework Convention on Climate Change p.72](#)

¹⁶ Ibid

¹⁷ Department of National Defence (2018) [Greening Defence](#)