SURREY & WHITE ROCK BOARD OF TRADE

CONNECTING INCENTIVES TO VEHICLE BATTERY RECYCLING PROGRAMS (2023)

Issue

B.C. has made significant commitments to electrification of passenger and some light-industrial vehicles. Canada has also proposed regulations that indicate one-fifth of all passenger cards, SUVs and trucks sold in Canada in 2026 will need to operate on electricity.

Battery lifespans are estimated to last between 10-20 years. Electric vehicles have been on the market for close to 10 years already and some already require battery recycling. The batteries will then need to be recycled. The issue remains that there are limited battery recycling facilities across Canada.[1] As a result, the Provincial and Federal Government should investigate how many more recycling facilities will be needed and determine which communities to target.

Background

Canada has proposed one-fifth of all passenger cars, SUVs and trucks sold in Canada in 2026 will need to run on electricity. Under new regulations proposed by Environment Minister Steven Guilbeault, 60 per cent of all vehicle sales will be EVs by 2030 and every passenger vehicle sold in Canada will need to be electric by 2035.[2]

B.C. passed the Zero-Emission Vehicles Act (ZEV Act[3]) on May 30, 2019. The ZEV Act requires automakers to meet an escalating annual percentage of new light-duty ZEV sales and leases, reaching: 10% of light-duty vehicle sales by 2025, 30% by 2030 and 100% by 2040. To increase uptake of electric vehicles, B.C. has also provided other incentives to consumers through the Go Electric Program.[4]

While these investments and targets are heavily debated, it is noted that many people are purchasing electric vehicles since a record 86,032 electric vehicles were registered in Canada in 2021, making up 5.3% of total vehicle registrations for that year. In comparison, there were 56,165 electric vehicles registrations (2.9% of total registrations) in 2019 and 19,696 (1% of total registrations) in 2017.[5]

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[1] https://www.cbc.ca/news/business/electric-vehicle-battery-recycling-1.6695010

[2] https://www.cbc.ca/news/politics/canada-ev-mandates-2026-1.6693967

[3] https://www.bclaws.gov.bc.ca/civix/document/id/complete/statreg/19029

[4] https://www2.gov.bc.ca/gov/content/industry/electricity-alternative-energy/transportation-energies/clean-transportation-policies-programs/clean-energy-vehicle-program

[5] https://www.cer-rec.gc.ca/en/data-analysis/energy-markets/market-snapshots/2022/market-snapshot-record-high-electric-vehicle-sales-canada.html#:~:text=Release%20date%3A%202022%2D10%2D26&text=A%20record%2086%2C032%20electric%20vehicles,of%20total%20registrations)%20in%202017

Over the years, these electric vehicles will undergo wear and tear, and their batteries will need to be recycled. It is estimated that the car battery's life expectancy is 10-20 years.[6]

Recycling is also important since lithium, nickel and cobalt are scarce resources. The lithium, nickel and cobalt can be theoretically recycled limitlessly.

According to market analysts, a combined total of over 180,000 tonnes of lithium, cobalt, nickel and manganese could be recovered by 2030 through Li-ion recycling, a value which is forecast to grow by approximately 10x by 2042 worldwide.[7]

While Canada hasn't pledged federal funding for recycling EV batteries, the U.S. is spending hundreds of millions of dollars on recycling projects. The U.S. Senate also just passed a bill to increase EV battery recycling, which could soon be signed into law.[8]

Canada needs to step up and invest in battery recycling.

THE CHAMBER RECOMMENDS

That the Provincial Government:

1. Commission a study and action plan for the implementation of electric vehicle battery recycling plants we will need per region.[9]

[6] https://www.jdpower.com/cars/shopping-guides/how-long-do-electric-car-batteries-last
[7] https://www.mining.com/how-much-could-battery-recycling-actually-aid-cobalt-lithium-supply-shortages/#:~:text=According%20to%20the%20market%20analyst,by%20approximately%2010x%20by%202042.
[8] https://www.utilitydive.com/news/ev-battery-recycling-senate-romney-ndaa/639317/
[9] The geographical regions of Canada are groupings of provinces and territories established for the purpose of statistical reporting. The six geographical regions of Canada are: Atlantic, Quebec, Ontario, Prairies, British Columbia, and Territories