



Key Facts and Figures



Report 2025

Powering Up: The Path to Electric School Bus Adoption in Canada



Canadian
Electric
School
Bus
Alliance

Équiterre

Green
Communities
CANADA

What drives such strong Canadian support for the ESB transition?

Canadians strongly support the transition to electric school buses (ESBs).

78%

Express concern about the health impacts of diesel school bus emissions on children

83%

Advocate for a shift to 100% ESBs by 2040

77%

Back an ESB sales mandate

Benefits



ESBs reduce greenhouse gas emissions, improve public health by lowering air pollution, and offer long-term economic benefits through lower energy and maintenance costs, job creation, and new revenue opportunities.



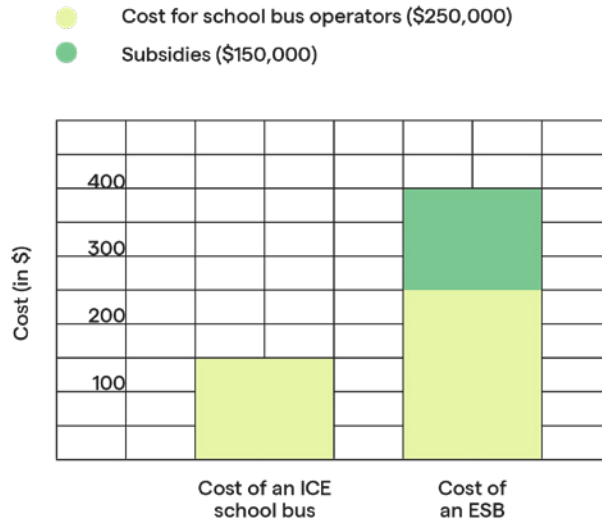
ESBs operate quietly, benefiting children with sensory sensitivities and drivers seeking a less stressful work routine, while supporting climate action to ease eco-anxiety in youth.



However, the transition to ESBs still encounters numerous challenges.

— FUNDING

- Fleet operators identify the high cost of ESBs as a major challenge; in Quebec, for instance, prices are around \$400,000, resulting in a net expense of \$250,000 after subsidies, which is about \$100,000 more than diesel buses.
- The federal Zero-Emission Transit Fund (ZETF) faces significant limitations due to oversubscription and a budget cut from \$2.75 billion to \$2.4 billion.
- Delays in federal funding are forcing some jurisdictions, like P.E.I., to purchase diesel buses instead of ESBs, while operators in other areas remain without ESBs despite applying for funding years ago.



— CHARGING INFRASTRUCTURE

- Limited charging infrastructure, installation delays, connectivity issues, and lack of equitable access for remote and Indigenous communities hinder the smooth integration of ESBs.

— KNOWLEDGE, AWARENESS, TRAINING

- A key challenge for school bus operators is convincing drivers to switch to ESBs, as initial hesitance stems from concerns about battery life and unfamiliarity with new technology.

− LOGISTICAL ISSUES

- Range remains a significant limiting factor for ESBs, particularly in rural and remote areas, hindering their use for longer trips, such as school outings, due to challenges like headwinds, uphill driving, and frequent stops.
- Winter issues with ESBs include exposed heating lines freezing, compromising efficiency, and air brake compressors freezing due to moisture and wind, as U.S.-manufactured buses have not been adequately tested for Canadian winter conditions.
- Maintenance issues with ESBs are significant, exacerbated by inadequate repair services, with slow heater repairs averaging six months due to parts delays, and repair rates for ESBs at 15% compared to 7% for diesel buses.
- There are some challenges with regenerative braking systems, raising safety concerns during operation.

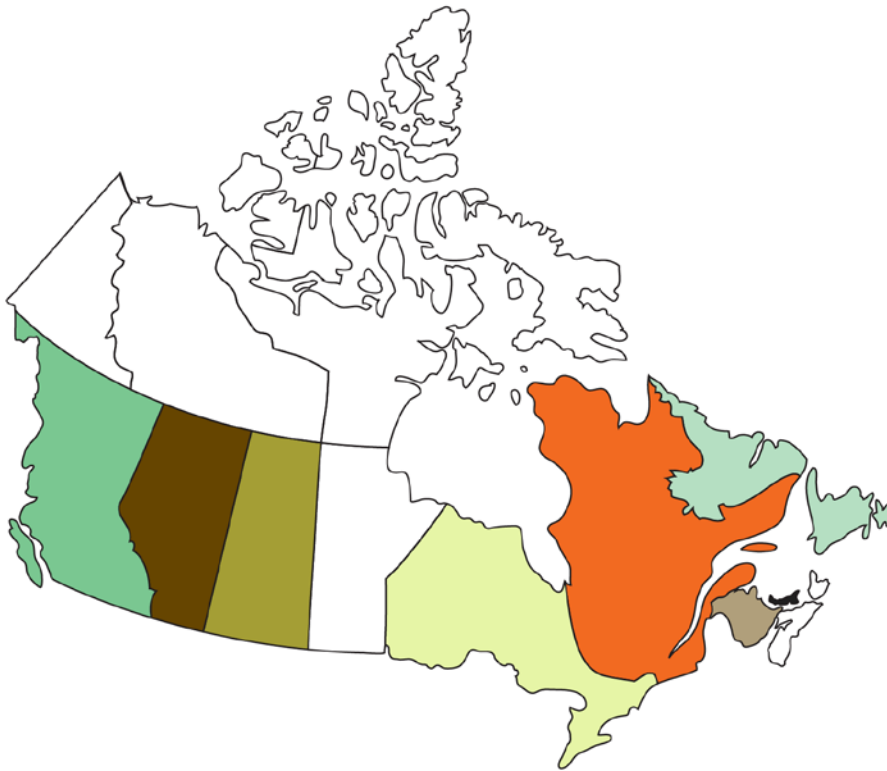
Despite this long list of obstacles, some progress is still being made**+ PROGRESS**

- Drivers with experience prefer ESBs over diesel buses.
- Jurisdictions are installing more charging at drivers' homes to reduce infrastructure costs and maintain drivers' satisfaction.
- New high-voltage electrical courses and MHDV programs are being developed in provinces like P.E.I. and B.C.
- Advancements in chargers, such as adjusting power delivery based on the battery's state, optimize battery temperature, enhance safety, and improve software compatibility for seamless integration.

How is Canada's ESB transition progressing so far?

Total ESBs in Canada: Over 1,930
(3.9% of total Canadian fleet)

Comparison to the U.S.: 2.4% of the U.S. fleet
(12,000 ESBs out of 500,000)



- Québec: 1,606 ESBs
- P.E.I.: 107 ESBs
- B.C.: 158 ESBs
- Ontario: 25 ESBs
- New Brunswick: 22 ESBs
- Alberta: 5-10 ESBs
- Newfoundland & Labrador: 1 ESB
- Saskatchewan: 1 ESB
- Jurisdictions Without ESBs: Manitoba, Nova Scotia, Yukon, Nunavut, Northwest Territories



2,900

Despite this growth, it falls short of the nearly 2,900 annual electric bus additions that CESBA advocates for to achieve a fully electric fleet by 2040, aligning with Canada's net-zero objectives.

What new measures does CESBA recommend to accelerate ESB adoption?



- The following new recommendations complement those made in the previous edition:
- Allocate \$375 million in ZETF bridge funding specifically for ESBs, alongside an additional \$2.5 billion designated for ESBs from 2027 to 2032.
 - Establish comprehensive standards for the installation, maintenance, and compatibility of charging infrastructure for ESBs at schools and bus depots.
 - Develop a standardized template for school boards and transportation consortia to integrate ESB requirements into their requests for proposals with fleet operators, ensuring clarity in procurement.
 - Expand Ontario's Skills Development Fund to include ESB manufacturing, maintenance, and repair training, while adjusting the Transportation Services Allocation to boost ESB funding, support driver incentives, and enhance training.
 - Invest in research on ESBs' feasibility and benefits, standardize data collection, and promote information sharing among school transportation providers.

“ ... ”

1,930 electric school buses are a start, but Canada's net-zero vision requires greater momentum—let's drive adoption forward.