

## Background

The famous yellow North American school bus has been transporting children to school since the 1930s, fueled almost exclusively by fossil fuels. 90 years later, nearly all school buses in Canada still rely on these carbon-emitting energy sources, with **less than 2% of the fleet being electric**.<sup>1</sup> Not only do these very same buses contribute, along with the rest of the transport sector, to a quarter of Canada's greenhouse gas (GHG) emissions, but they also exacerbate concerns linked to road transportation, such as air quality and noise pollution, putting at risk children who are exposed to these first-hand on a daily basis.

Although the federal government offers funding for electric school bus (ESB) purchases through the Zero Emission Transit Fund (ZETF) and the Zero Emission Vehicle Infrastructure Program (ZEVIP), the **current funding is not sufficient and accessible enough** to support the transition to 100% ESB sales by 2040, in line with the government's target of **achieving 100% zero-emission medium- and heavy-duty vehicle sales by 2040**.

## Why do we need to act now?

In light of the ongoing global climate and health crisis, electrifying the school bus fleet in Canada presents a unique opportunity to make significant strides towards decarbonizing the transportation sector, further supporting Canada's transition away from fossil fuels, while generating health and economic benefits for the country.

An entirely electric school bus fleet would significantly **reduce GHG emissions** from school buses, and **eliminate around 243,000 litres of fossil fuels** that the school bus transportation sector consumes annually.<sup>2</sup> Only in British Columbia, electrifying the public fleet of school buses (1,280) could save the province, over a 12-year lifetime, up to **\$212 in energy costs** by switching to cheaper and locally generated electricity, and over **\$15M in health care costs**<sup>3</sup>, as diesel emissions are a leading cause of respiratory problems. On a national scale, these benefits would be even greater considering the **51,000 school buses** on the road and the **2.2M of children** who ride the bus to school each day.<sup>4</sup>

## What are the main barriers and what can be done?

Federal funding programs have helped subsidize electrification for school bus operators. However, to accelerate the uptake of ESBs and maximize its climate, health and economic benefits, addressing the different barriers in terms of funding sufficiency, accessibility and outreach is essential.

<sup>1</sup> Dunsky Energy + Climate. (2023). [Pathways for Canadian Electric School Bus Adoption](#).

<sup>2</sup> Statistics Canada. (2022). [Canadian passenger bus and urban transit industries, fuel consumption, by industry \(x 1,000\)](#).

<sup>3</sup> Pembina Institute. (2022). [Electric school buses: The benefits to British Columbians and options for accelerating the transition](#).

<sup>4</sup> Task Force on School Bus Safety. (2022). [Strengthening school bus safety in Canada](#).

## Ensure sufficient supply of ESBs

The recent US announcement for school bus electrification federal funding has sparked demand for ESBs in North America, putting Canadian fleet operators at a disadvantage, as they are facing procurement delays and onerous application requirements. To ensure there is sufficient ESB supply for Canadian school bus operators to make the switch, federal funding for ESBs should therefore be complemented by nationwide 100% zero-emission MHDV sales requirements. Such targets might be modeled on California Advanced Clean Fleets rule recently announced by the California Air Resources Board (CARB), and the Québec government's regulation requiring the purchase of new ESBs adopted in April 2021.

### Recommendations

1. Set a 100% sales requirement specifically for ESBs to achieve a fully electrified fleet by 2040, in line with the federal MHDV target;
2. Work with provinces to temporarily extend the retirement age of current ICE buses to smooth out the demand for new ESBs needed in the near-term and address procurement delays.

## Extend and restructure existing funding programs

Many fleet operators, notably in Atlantic Canada, are choosing not to pursue ESB federal funding due to administrative delays in ZETF application processes and cumbersome application procedures, particularly for operators seeking provincial funding in addition to federal support. This causes ESB order delays and hampers vehicle replacement planning.

In addition, the current annual funding available through the ZETF program is around \$550M, but to meet the 100% by 2040 target, over \$1.25 billion would be needed only in 2023.<sup>5</sup> The total capital required over the 2023-2040 period is equivalent to approximately 2.5 times the annual capital requirements for diesel buses.<sup>6</sup> Since ESBs are not expected to reach price parity with ICE buses by 2040, the federal government must allocate additional funds to existing programs immediately.

### Recommendations

1. Provide direct or automatic access to the Zero-Emission Transit Fund;
2. Extend ZETF funding beyond 2025-2026, allocating an additional \$2.5G for school bus electrification between 2027 and 2032;
3. Extend ZEVIP funding beyond 2027;
4. Review the structure of funding allocation through bilateral agreements between the federal government and provinces/territories to decrease competition among program applicants with less capacity;
5. Eliminate the second phase of the ZETF capital application process in favor of a point-of-sale rebate to simplify the application process and provide more certainty to fleet operators as they build their budgets.

## Facilitate data collection and knowledge-sharing

Federally managed databases would increase access to ESB operational data on the impact of temperature variation on battery performance, which is perceived as significant

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<sup>5</sup> Dunsy Energy + Climate (2023). [Pathways for Canadian Electric School Bus Adoption](#).

<sup>6</sup> Ibid.

barriers to ESB adoption. The availability of such data would decrease the need for redundant pilot projects in provinces and territories with similar operating conditions.

### Recommendation

1. Establish federal databases for ESB operational data to facilitate knowledge sharing among provinces and territories.

### Build knowledge and expertise of fleet operators and workforce on ESBs

Fleet managers require a comprehensive understanding of the benefits of ESBs and the financial support available. They also need training to efficiently manage, maintain, and operate ESBs. Implementing additional federal programs would instill confidence among school bus stakeholders and facilitate their transition to zero-emission solutions.

### Recommendations

1. Invest in the development of standardized training programs for the school transportation workforce;
2. Fund education and awareness campaigns through the Zero-Emission Vehicle Awareness Initiative (ZEVAI) targeting fleet operators across Canada.<sup>7</sup>

### Contact

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## About CESBA

Led by Équiterre in partnership with Green Communities Canada, the **Canadian Electric School Bus Alliance** (CESBA) is an initiative that brings together provincial and federal school transportation stakeholders to advocate for measurable policies that will accelerate the transition to a 100% zero-emission school bus fleet by 2040, in alignment with Canada's climate targets. [Visit our website](#)



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<sup>7</sup> According to the ZEVAI's list of applicants, there are 0 awareness projects on ESBs being funded as of August 2023.