

Background

The famous yellow North American school bus has been transporting children to school since the 1930s, fuelled almost exclusively by fossil fuels. Today, these very same buses contribute, along with the rest of the transport sector, to a quarter of Canada's greenhouse gas (GHG) emissions. It is one of the only sectors whose emissions have continued to increase over the last 30 years.¹ In addition to its climate consequences, sustaining a fleet of all-diesel school buses also exacerbates concerns linked to road transportation, such as air quality and noise pollution. Our children are exposed to these first-hand on a daily basis, on the way to school and in the school zone.

A vast majority of school buses are still powered by diesel and, marginally, natural gas and conventional motor gasoline. In 2022, **electric school buses** (ESBs) comprised only **0.2% of school bus sales**.² These numbers are not compatible with pathways to net zero by 2050.

The federal government must therefore step up to ensure that its existing programs provide school transportation with enough support to accelerate the transition and contribute to achieving the **2040 target of 100% zero-emission medium- and heavy-duty vehicle (MHDV) sales**. In the school transportation sector, this objective could be achieved even earlier if the right investments are made now.

Why do we need to act now?

A little over 80 years since the yellow bus made its first appearance, and in the midst of a global climate and health crisis, the time has come for Canada to electrify its school bus fleet for the sake of today's and tomorrow's youth. Accelerating the electrification of school bus transportation represents a unique opportunity to support 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.³ In British Columbia alone, electrifying the public fleet of school buses (1,280) could save the province, over a 12-year lifetime, up to **\$212M in energy costs** by switching to cheaper and locally generated electricity, and over **\$15M in health care costs**⁴, 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.⁵

¹ Environment and Climate Change Canada. (2021). [National Inventory Report 1990–2019: Greenhouse Gas Sources and Sinks in Canada](#).

² Pollution Probe, The Delphi Group & Canadian Partnership for Children's Health and Environment. (2022). [Opportunities for Accelerating School Bus Electrification in Ontario](#).

³ Statistics Canada. (2022). [Canadian passenger bus and urban transit industries, fuel consumption, by industry \(x 1,000\)](#).

⁴ Pembina Institute. (2022). [Electric school buses: The benefits to British Columbians and options for accelerating the transition](#).

⁵ Task Force on School Bus Safety. (2022). [Strengthening school bus safety in Canada](#).

Existing Programs

- **Zero Emission Transit Fund (ZETF):** An average of \$550M in funding is available through Infrastructure Canada's ZETF program to plan school bus replacement, as well as upfront vehicle and infrastructure costs.⁶
- **Zero-Emission Vehicle Infrastructure Program (ZEVIP):** Administered by Natural Resources Canada, ZEVIP provides funding towards the purchase and installation of electric vehicle charging infrastructure. The funding is delivered through cost-sharing contribution agreements for eligible projects.
- **Zero-Emission School Bus Initiative:** The Canada Infrastructure Bank (CIB) offers direct loans through the Zero-Emission Buses Initiative.

What are the main barriers?

Public funding mechanisms have helped subsidize electrification for school districts and private fleet operators. However, accessing those programs remains a barrier and, while purchase incentives play a key role in enabling fleet electrification, they are only one piece of the puzzle. Right now, the transition to electric school buses is slowed down by:

- Administrative delays in the application process for ZETF;
- Multiple funding opportunities that are administratively burdensome to school transportation operators, especially where provincial funding is also available;
- Lack of workforce training and capacity nationwide;
- Necessary electrical service upgrades and efforts to install charging infrastructure;
- School districts hesitant to take on CIB loans.

Recommendations

1. Ensure federal funding for ESBs and charging infrastructure is accessible

There are many provinces and territories across Canada in which no ESB funding programs exist. That means that there are a significant number of school bus operators that will be relying on federal programs to help bring down the cost of an ESB should they decide to make the switch.

2. Review and optimize existing programs

To reduce administrative delays and burden on school bus operators:

- Combine ZETF and ZEVIP funding under one program run by Infrastructure Canada that offers funding both for ESB procurement and charging equipment purchase;
- Offer direct or automatic access to the Zero-Emission Transit Fund;
- Provide complementary funding for ESB and charging equipment purchase to provinces that already have a provincial funding program to streamline the application process.

3. Allocate federal funding past the 2025 horizon and increase existing funding

The \$2.75B in funding available under the ZETF program has been allocated for the 2021-2025 period. Given that ESBs are not expected to reach price parity with diesel buses

⁶ Dunsy Energy+Climate Advisors. (2023). *Pathways for Canadian Electric School Bus Adoption (under review)*.

between now and 2040, the federal government should continue to help make ESBs more affordable by allocating additional funds to this program after they expire in 2025. This would help provide more long-term certainty around the market. Additionally, because the ZETF funding stream is to be shared amongst school bus operators and transit agencies, there is a clear need to increase available funding for the current period.

4. Communicate and build capacity among stakeholders

Investment in education and capacity-building is a necessary complement to incentives in the net-zero puzzle. This is why the federal government should invest in developing an awareness and communication campaign, as well as training programs, addressed to relevant stakeholders on:

- The various environmental, economic and health benefits of ESBs;
- Available federal funding programs and other sources of revenue, such as the CIB loan program, for school transportation stakeholders;
- Key elements to consider when transitioning to electric buses.⁷

Regarding the latter item, fleet managers and operators need to be equipped with the capacity and training to manage new ESBs, install charging infrastructure, and undertake any necessary electrical service upgrades. Undertaking feasibility studies, navigating infrastructure barriers and clarifying fleet requirements can present barriers to adoption. Canada needs to support additional programs that build the confidence of school bus stakeholders to jump into the zero-emission transition, and therefore ensure successful long-term management of electric school buses.⁸

CESBA is available to provide more detail on these recommendations and to contribute to discussions on these issues.

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. [Website](#)



⁷ An alternative could be to provide support to provinces and territories for them to lead that kind of training.

⁸ Green Budget Coalition. (2022). [Building capacity to accelerate the electric school bus transition](#).