

Background

In the [CleanBC Roadmap to 2030](#), the Government of British Columbia (B.C.) has set a goal to reduce greenhouse gas (GHG) emissions by 40% and transportation emissions by 27-32% by 2030. To achieve this, it has committed to decarbonizing all medium- and heavy-duty vehicles in the province, including school buses. The B.C. government provides significant financial support to public school districts, independent schools and private operators for the purchase of electric school buses (ESBs), as well as associated charging infrastructure and facility assessments. This has been available through different funding sources¹:

- **CleanBC Go Electric School Bus Program:** 33% of the pre-tax purchase price of an ESB (up to \$150,000), 75% of charging infrastructure costs (up to \$6,000) and 75% of facility assessment costs (up to \$5,000)
- **CleanBC Go Electric Fleets Program:** 75% to 90% of DC fast chargers costs (depending on charging capacity) for Indigenous communities and businesses
- **Ministry of Education and Child Care:** Core bus funding (yearly budget of \$15M) for publicly-operated buses that are due for replacement and an additional \$25,000 to \$30,000 (depending on bus size) over and above the core bus funding
- **Carbon Neutral Capital Program:** One-time grant of \$50,000 to help school districts reduce their carbon footprint, if not previously accessed for another project

According to data from the Association of School Transportation Services of B.C, these funding programs have helped purchase a total of **70 ESBs**; however, this represents only **6% of the public fleet of 1,280 buses**.

Why do we need to act now?

Accelerating the electrification of the school bus fleet represents a unique opportunity to achieve meaningful progress on B.C.'s climate target while generating complementary health and economic benefits for the province.

Climate Benefits

An entirely electric school bus fleet would eliminate 92% of the GHG emissions from school buses, which contributed to over 7,000 kilo tons equivalent of carbon dioxide in 2020².

¹ The B.C. government also offers credit revenue for operating ESB charging sites through its Low Carbon Fuel Standard.

² Government of British Columbia. (2019). [Provincial greenhouse gas emissions inventory 1990-2019](#).

Health Benefits

A report commissioned by Pembina Institute³ finds that electrifying the 1,280 buses owned by school districts in B.C. could save the province up to \$15 million in health care costs⁴. This primarily impacts the health of the school bus drivers, the 128,000 children who ride the bus to school each day⁵, as well as low socio-economic status communities, who tend to be located close to major roads and thus daily bus routes.

Economic Benefits

Over a 12-year lifetime, public electric school buses would also save school districts up to \$212 million in energy costs by switching to cheaper and locally generated electricity and over \$46 million in maintenance costs. These benefits would be even larger when considering the privately-operated school bus fleet (600 buses) and the school bus fleet operated by private and First Nations Band-operated schools (over 1,300 buses).⁶

What are the main barriers?

- The purchase price of an electric school bus remains **up to three times the cost of a diesel equivalent**, meaning that even with the existing provincial subsidies, school districts must still **budget between \$60,000 and \$147,000 more** to cover the remaining difference between diesel and electric models;
- Acquiring ESBs also involves significant investments in charging infrastructure and potential electrical upgrades from school transportation operators, with some experiencing issues with network connectivity and charging ports;
- Core bus funding from the Ministry of Education and Child Care is only available to replace buses that are ready for retirement, which **excludes new additional buses**⁷;
- Additional loans and contributions to cover the capital costs are available through the Canada Infrastructure Bank and [Zero Emission Transit Fund](#), but many school districts are **unaccustomed to taking on debt** and see the application process as **administratively burdensome**;
- With today's technology and infrastructure, electric buses cannot cover 100% of routes and maintain the educational programs requiring transportation due to range issues.

Recommendations

The B.C. government's funding for electric buses has certainly helped to create momentum in the province. However, care must be taken so that additional measures and financial incentives are put in place to accelerate the uptake of electric school buses in B.C and, thus maximize the climate, economic and health benefits of school transportation electrification. The Pembina Institute recommends that the government **establish a goal of nearly 100% of new public school bus purchases being zero-emission by 2030** and provide a strategy for accelerating the adoption of electric school buses and tackling current barriers to their adoption. Such a strategy should include:

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

⁴ This results from avoided air pollutants, including nitrous oxides, sulfur oxide and particulate matter.

⁵ Data collected by the Association of School Transportation Services of B.C.

⁶ School Bus Fleet. (2019). [2019 Canadian Fact Book](#).

⁷ Ministry of Education and Child Care. (2022). [Capital Management Branch Update \[presentation\]](#).

1. Streamlined provincial funding programs;
2. Direct or automatic access to the Zero-Emission Transit Fund;
3. Capacity building support for school transportation operators in terms of funding opportunities and driver training services;
4. Increased subsidy to cover the full capital cost for a limited number of years;
5. Increased accessibility to charging infrastructure through support programs and new services to meet the diverse needs of school districts, particularly those in rural, remote and Indigenous communities who often lack grid connection;
6. Outreach and education efforts on the Canadian Infrastructure Bank program with school transportation stakeholders;
7. Support for the Association of Student Transportation Services of B.C. to collect and distribute LCFS credits on behalf of participating school districts;
8. Support for school district boards to adopt net-zero commitments at the school board level to help prioritize investments in electrification;
9. Require bus manufacturers to provide a minimum 200kWh battery for type C and D electric buses to help avoid ranging issues.

We are 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 – from school boards passing through environmental organizations to national health associations, 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](#)

