



The Payload

Why buses and trucks are Canada's forgotten emissions and manufacturing opportunity

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 CLEAN ENERGY CANADA



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Executive summary

There has been much chatter about electric vehicles. Are sales going up or down? Should we put tariffs on imports? How much money do they save? But these conversations have an asterisk: they're about passenger EVs—the cars we drive to work or soccer practice or take on road trips. These are just some of the vehicles on our streets. And from a pollution perspective, they're only part of the problem.

At least 37% of transport emissions in Canada come from commercial vehicles, such as delivery vans, buses, big rigs, and garbage trucks.^{1,2} And in all the debate over EVs, these often higher-polluting buses and trucks remain largely forgotten. This report dives into this overlooked sector and maps out a package of policies that can get it onto a cleaner path.

Taking action has major upsides. Not only can it make a sizable dent in Canada's emissions, it could also be a boon for our homegrown manufacturing industry. The first fully electric vehicle to ever roll off a Canadian assembly line was a delivery van (GM's Brightdrop Zevo 600). And there are no less than seven clean bus and truck manufacturers headquartered in Canada. That doesn't even include other players in the space, like hydrogen fuel cell manufacturers.

Despite its manufacturing prowess, Canada is firmly at the back of the pack when it comes to adoption. Just 2% of new trucks and buses sold in Canada in 2023 were zero-emissions, compared to 9% globally.^{1,3} By failing to put our homemade zero-emission vehicles on the road, we're putting Canadian companies at a disadvantage and limiting their capabilities to scale up and export to a large and growing global market.

But more than that, slow adoption is also impacting Canadians' health. An enormous 15,300 premature deaths per year are linked to air pollution, with vans, trucks, and buses having an outsized impact.⁴ In fact, **every local delivery truck electrified is the equivalent of more than five households adopting EVs.**⁵ With poor air quality primarily affecting the most vulnerable in our population, such as children and seniors, it's a serious problem in need of a serious solution.



Medium- and Heavy-Duty Vehicles

(MHDVs): Medium and heavy-duty vehicles are vehicles in class 2B-8, which can include, from small to large: cargo vans, shuttle buses, school buses, transit buses, yard tractors, straight trucks, box trucks, and tractor-trailers. For the purposes of this report, we will generally use the term “trucks and buses” (unless indicated otherwise) as our work does not consider more specialized vehicles.

Thankfully, there are a number of actions governments can take to accelerate the deployment of cleaner trucks and buses. **These include purchase incentives to reduce the upfront cost for fleets and operators, support for charging, and regulations that compel manufacturers to sell more zero-emission commercial vehicles.** The latter is especially important to improve supply. While a Clean Energy Canada catalogue published earlier this year showcased the more than 150 zero-emission trucks and buses available for sale in Canada today, wait times can be up to three years for some models, delaying fleets’ ability to decarbonize.⁶

Some of these solutions are already in place, with the federal government and certain provinces farther along than other provincial governments. But there’s much more to be done to get enough clean trucks and buses on the road. Luckily, we can look to other jurisdictions for inspiration. California has the highest zero-emission truck and bus sales in North America with an impressive 17% market share (excluding transit buses), largely thanks to an effective set of policies, including a sales regulation. And the EU recently introduced some of the most ambitious heavy-duty vehicle emission standards in the world, limiting the amount that trucks and buses can pollute.

Without these actions and more, it will be very hard to fight climate change—both here in Canada and around the world. In fact, BloombergNEF recently indicated that the world’s medium- and heavy-duty vehicles are not on track to hit net zero by 2050 and that rapid policy intervention is needed.¹ It’s time to stop overlooking our biggest vehicles.

There are four things Canada should do:

1

Expand vehicle purchase incentives

The federal government should extend its clean bus and truck incentive program until at least 2030, and provinces that do not already have point-of-sale vehicle incentive programs should introduce them.

2

Increase support for charging

Governments and utilities should launch programs that support zero-emission bus and truck charging infrastructure and ensure these programs cover a broad range of costs, including grid connections.

3

Introduce supply-side regulations

Federal and provincial governments should implement regulated zero-emission bus and truck sales targets to reduce wait times and provide more certainty for utilities and charging infrastructure providers.

4

Grow education and awareness

Governments can help by funding programs and working with industry associations to educate fleet operators on technology readiness, vehicle availability, infrastructure needs, and other aspects of integrating zero-emission vehicles into their operations.



The wrong direction

Canada has seen an uptick in EVs on the road in recent years. In some provinces, electric vehicles now make up a quarter of all new passenger vehicles sold thanks to policies that cut upfront costs and encourage automakers to sell more zero-emissions options. Across the country, ribbons are being cut on new battery manufacturing facilities, and decades-old factories are retooling for the shift to EVs. In short, electric cars have hit the mainstream.

But trucks and buses are a different story. Just 1.9% of these new vehicles sold in Canada in 2023 were zero-emissions.⁷ That's well below the global

average of 9%, led largely by zero-emission buses that accounted for 52% of new global sales.¹ In California, zero-emission school buses, trucks, and vans made up 17% of new sales.⁸

That's not to say there aren't some bright spots. Many Canadian fleets—from Staples to the City of Toronto to P.E.I.'s entire school bus fleet—have already begun transitioning to electric. But the speed of change is slow, especially compared to our allies and trading partners, many of whom are much further down the zero-emissions road. And this lag has consequences.

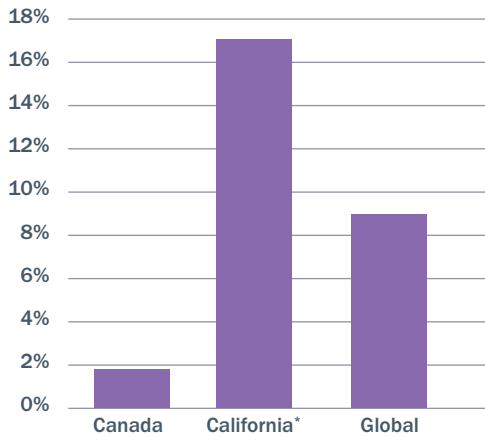
P.E.I. kids get pollution-free rides

P.E.I. hosts one of the largest electric school bus fleets in the country, with 107 electric buses making up roughly 30% of its fleet. The province's ambition started from its 2040 net-zero framework, including a goal to reach a 100% zero-emission government-owned fleet and register at least 40% medium- and heavy-duty vehicles by 2040. A key part of the strategy was to electrify half of the province's school buses by 2027 and, so far, **the province has invested \$40 million in electric buses over a five-year period.** As many of the school buses embark on predictable routes of between 40 and 112 kilometres and return to the same depots overnight for easy charging, the island's buses are primed for electrification. And because most school buses across the country act in much the same way, the province is a role model for pollution-free commutes for kids.³³



Photo: Lion Electric

2023 zero-emissions MDHV market share

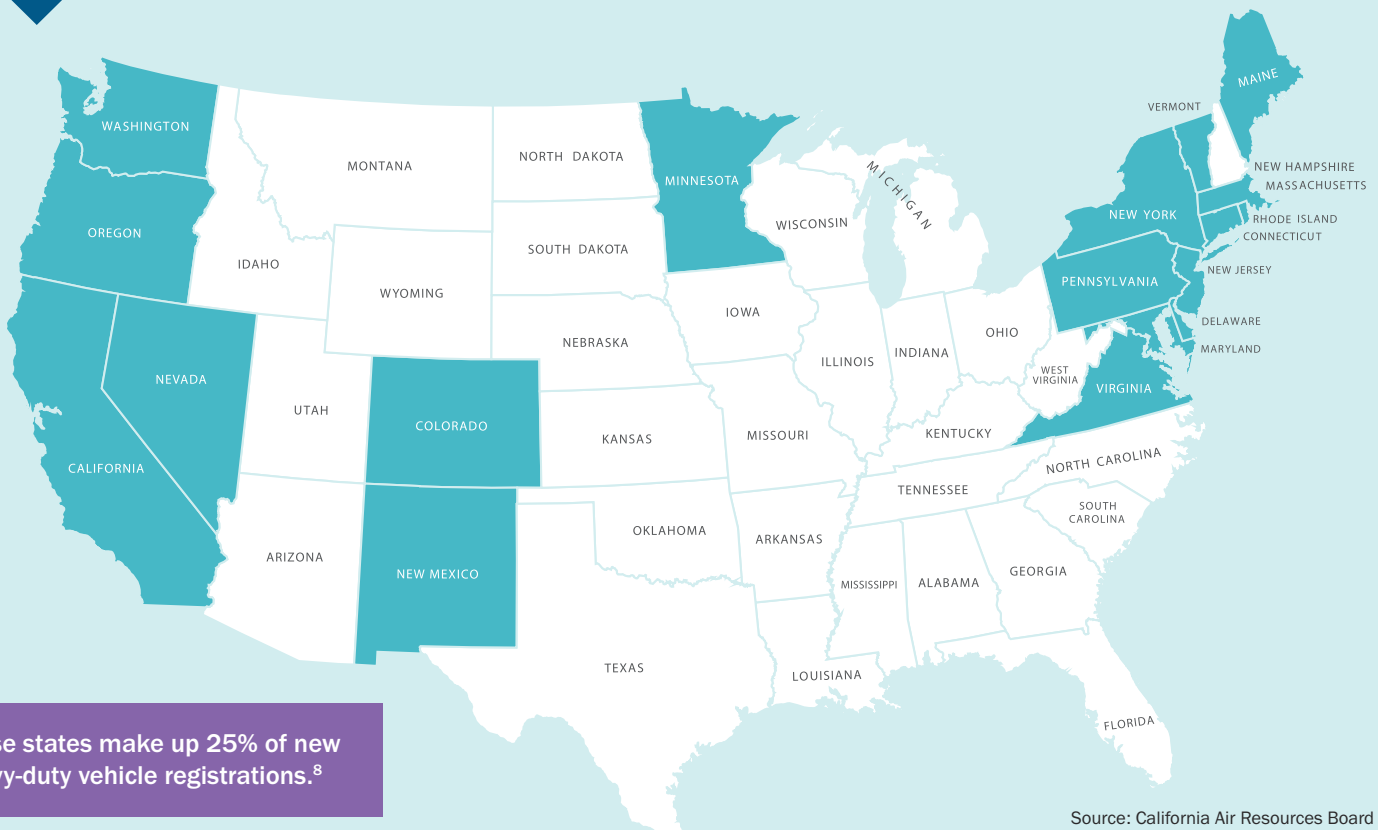


*Doesn't include transit buses but includes school buses

As emissions in many key sectors of the Canadian economy—from electricity generation to passenger EVs—declines, pollution from commercial transportation is on the up. Freight transport emissions have seen a 9% increase since 2005 thanks to the slow adoption of cleaner vehicles and an absence of meaningful policies and regulations. And despite making up only 17% of Canada's total vehicle stock, MHDVs make up more than 37% of vehicle-related emissions.^{9,10}

If we want to curb climate pollution, we need to change out our trucks. And there are plenty of examples around the world where jurisdictions are successfully doing just that. The U.S., for instance, has finalized the strongest ever tailpipe emission limits for buses and trucks, expected to avoid a billion tons of greenhouse gas emissions and provide US\$13 billion in benefits to health, the climate, and fleet operators through fuel cost savings.¹¹ The regulations are projected to result in up to 60% zero-emission vehicle sales by 2032 in some bus and truck classes.¹¹ The Biden administration has also upped its game in other ways, releasing a national freight corridor strategy for charging and offering nearly US\$1 billion in funding for heavy-duty vehicles—a good portion of which will go to school buses.¹³ These are in addition to the many clean transportation-related tax credits introduced under the Inflation Reduction Act.¹⁴

States that have adopted California's light- and heavy-duty vehicle sales regulations



These states make up 25% of new heavy-duty vehicle registrations.⁸

Source: California Air Resources Board

California, in particular, has kickstarted the shift to cleaner trucks and buses thanks to world-leading policies and regulations. In fact, the sale of zero-emission trucks and buses in California doubled between 2022 and 2023. Zero-emission trucks (including vans and school buses, but not transit buses) now make up one out of every six new vehicles sold for services—five times the amount required by its vehicle sales goals.¹⁵ The vast majority of these include smaller vehicles, like cargo vans and small utility trucks. What's more, 10 other U.S. states have now adopted versions of the California rules, including New York, New Mexico, Washington, Oregon, Colorado, and Maryland. Together, these 11 states represent over 25% of new heavy-duty vehicle registrations in the nation.⁸

There are plenty of success stories further afield, as well. The EU recently revised its emissions regulations for trucks and buses, making it one of the most ambitious standards in the world. The bloc is aiming for a 45% reduction in carbon emissions from trucks and buses by 2030, 65% by 2035, and 90% by 2040.¹⁶ No less than 11 EU countries, as well as Norway and the United Kingdom, offer purchase incentives to drive the uptake of zero-emission buses and trucks, while other countries have introduced tax incentives (Denmark, Spain) and carbon emission-based road toll exemptions (Czech Republic, Germany).¹⁷

Put simply, when it comes to cleaner buses and trucks, Canada is headed in a rather different direction than our allies, not to mention our own climate goals. Thankfully, it's not too late for a U-turn.

SPOTLIGHT

Staples Canada started its electrification journey in 2022. Since then, the company has added zero-emission delivery vans to its B.C. and Ontario fleets, trying out vehicles like the Ford E-Transit and GM BrightDrop ZEVO. Staples has plans to further expand its electric fleet in the future. **In 2023, Staples Canada's EV fleet resulted in more than 3,500 kilograms in reduced CO₂ equivalents.** An added bonus of its electric trucks is that they have software that identifies the most efficient delivery route options for drivers, resulting in further emission reductions while providing real-time analytics that allow the company to measure, monitor, and share results.¹⁸





More than emissions

While truck and bus exhausts are undoubtedly a problem for pollution, there are plenty of reasons to ditch these vehicles that have little to do with what comes out of them.

For starters, by going electric, fleets can save thousands of dollars in fuel and maintenance annually. Specifically, a study in the Greater Toronto and Hamilton Area found that **a zero-emission urban delivery van would save a business between \$3,800 to \$4,400 per year on fuel compared to its fossil-fuel equivalent.**¹⁹ A 2022 study of the cost of school buses in Canada found that the total cost of ownership (capital and operating costs) over a 12-year lifetime would be \$184,000 for an electric bus compared to \$275,000 for a diesel bus. While the electric bus had the higher upfront costs, its fuel and maintenance savings would make up for it in less than seven years.²⁰ Meanwhile, a 2021 study from the Lawrence Berkeley National Lab estimated that an electric semi-truck with a 375-mile range would have a 13% lower total cost of ownership than a diesel model. This leads to a net savings of \$200,000 over the vehicle's 15-year lifetime.²¹

While the sticker price may not have hit cost parity yet, costs are being offset, at least in part, by federal and some provincial incentives. The good news is that a California-based study found that EV technology will be able to compete with diesel trucks in nearly every class without incentives by the end of this decade.^{22,23}

Then there's the manufacturing opportunity. Canada is already home to a host of zero-emissions bus and truck manufacturers, including General Motors, Lion Electric, New Flyer, Nova Bus, and others—many of which are also headquartered here. In fact, a majority of clean buses and trucks sold in North America are made here too.⁶² Policies that increase demand will boost local manufacturing while also helping these companies scale up and export. A recent report by the Pembina Institute found that electrifying 65% of Ontario's school bus stock by 2030 would support 13,000 Ontario jobs and generate nearly \$2 billion of economic output in the province.²⁴

Meanwhile, a 2022 report from Clean Energy Canada found that if zero-emission medium- and heavy-duty sales reach 35% in Canada and 23% in the U.S. by 2030, manufacturing these vehicles could contribute as much as \$829 million in GDP and support 6,800 jobs. In reality, these numbers are a conservative estimate as they do not include additional parts of the EV battery supply chain, such as batteries, mining, or mineral processing.²⁵

Across North America, the industry is responding fast to the opportunity, with the number of manufacturers offering zero-emission heavy-duty vehicles increasing almost threefold between 2020 and 2023.¹²

And this is only the beginning of the road for these companies. Registrations of zero-emission buses already more than quadrupled in the United States between 2021 and 2023, making up 2.8% of all new bus registrations. According to the International Energy Agency, 12% of heavy-duty truck sales, 37% of medium-duty van sales, and 43% of bus sales are projected to be electric in the U.S. by 2030 as a result of policies already in place.¹²

In short, cleaner commercial vehicles are about more than just emissions. They can help Canadian industry thrive through the energy transition.

SPOTLIGHT

New Flyer was founded in Winnipeg in 1930 with just five employees and is now the largest bus manufacturer in North America. The company has two manufacturing plants in Winnipeg as well as four others in the U.S.²⁶ New Flyer makes hybrid, trolley-electric, battery-electric, and fuel-cell electric buses including its Xcelsior Charge battery-powered bus.²⁷





In the market

There are a range of zero-emissions commercial vehicles of all shapes, sizes, and purposes. Zero-emission options are available in the Canadian market today across all vehicle and weight classes in pre-production, production, or for retrofit.

Helpfully, you can find all these options in a recent [Clean Energy Canada catalogue](#), made in conjunction with CALSTART. The catalogue features more than 150 zero-emission van, bus, and truck models already available for sale in Canada by 34 different manufacturers: cargo vans, shuttle buses, school and transit buses, yard tractors, tractor-trailers, and more.⁶

Indeed, if there's one thing that the catalogue highlights, it's the variety of medium- and heavy-duty vehicles in terms of size, function, and driving distance. But despite some impressive vehicle ranges on offer, the reality is that the vast majority of buses and trucks travel comparatively short distances daily. Operational data suggests that 81% of medium-duty trucks and 53% of heavy-duty trucks travelled less than 240 kilometres per day in North America.²⁸ Last-mile deliveries in urban and suburban centres in particular are primed for electrification, as they involve relatively short daily distances and travel along planned routes where charging needs are minimal and predictable. In fact, according to a Californian study, about 70% of small and medium trucks are electrifiable today.²⁹ It is no coincidence that zero-emission delivery vans received more than 88% of the incentives awarded through the Canadian federal government's commercial vehicles incentives program.³⁰



Zero-Emission Medium- and Heavy-Duty Vehicle

CANADIAN MODEL AVAILABILITY CATALOGUE

Clean Energy Canada and CALSTART partnered to develop a [Canadian zero-emission medium- and heavy-duty vehicle \(ZEMHDV\) model availability catalogue](#).

But despite North America's manufacturing capabilities, and the range of vehicles available, supply is still an issue. While gathering information for the catalogue, we found that wait times could be as long as three years from placing the purchase order to vehicle delivery.⁶

And with 11 U.S. states (representing a quarter of the American market) adopting clean bus and truck sales regulations, Canada could struggle even more to secure supply for its fleets in the future without a similar policy in place.^{31,32}

GM's Brightdrop Zevo 600

This cargo van is the first fully electric vehicle to be made in Canada, manufactured in Ingersoll, Ontario. Cargo vans like the Brightdrop are prime for electrification. Models available in Canada have ranges between 241 and 400 kilometres. Purchase prices vary from \$68,000 to \$137,000, and payloads range from just over 1,030 kilograms to over 4,300 kilograms.



Green Power Motor Company's EV Star

With a payload of 2,857 kilograms and a charge time as low as two hours (depending on the charger speed), this electric cargo van could be a perfect complement to decarbonize last-mile or urban delivery routes.

Kenworth's K270E

Medium-duty trucks come in a variety of sizes, classes, and configurations. They can be used in everything from urban deliveries to work trucks to refuse trucks. Operationally, medium-duty box trucks such as the Kenworth K270E are used in return-to-base journeys for urban and last-mile deliveries. These are typically within an 80-kilometre radius of home base, and the trucks that drive them typically travel less than 160 kilometres a day. Currently, there are 27 different types (and lots of different use cases) of zero-emission medium-duty trucks in Canada. Most are battery electric with some fuel cell electric options, with ranges varying from 95 kilometres to 425 kilometres. Prices range from \$159,000 to \$427,000, and wait times range from three to 12 months. Payload capacity also varies, from just under 1,000 kilograms up to almost 15,000 kilograms.



Learn more about the above vehicles and see the full list of available models in the [Canadian zero-emission medium- and heavy-duty vehicle \(ZEMHDV\) model availability catalogue](#).



Breathing the benefits

Health Canada estimates that an enormous 15,300 premature deaths per year are linked to air pollution, with tailpipe emissions from vehicles being the primary culprit.⁴ What's more, diesel trucks and buses emit a disproportionate amount of pollution.

Electrifying just 10 last-mile delivery trucks has the same benefit as 56 households buying an electric car, while swapping out one heavy-duty truck for a zero-emissions version is equivalent to taking almost 50 passenger vehicles off the road.^{5,34,35} In fact, a U.S. study found that counties with busy trucking routes could prevent 66,800 premature deaths between 2020 and 2050 primarily by making all new medium- and heavy-duty vehicles zero-emission by 2040.³⁶

Canadians in urban areas are particularly at risk, with nearly 30% of the population living within 250 metres of a major roadway where traffic related air pollutants can be as much as 300% higher.³⁷

A recent study found that diesel commercial vehicles in the Greater Toronto Area are responsible for 9,810 years of life lost annually.³⁸ Meanwhile, the air in Metro Vancouver on a weekday has more than double the amount of nitrogen oxide emissions compared to weekends, largely because of the significant drop in commercial traffic.³⁹ And Canadians are feeling it. Polling by the Canadian Lung Association found that, in 2023, half of Canadians reported that outdoor air quality was having an increased impact on their daily lives. The same poll found that 77% of Canadians support introducing policies that would more quickly transition vans, buses, and trucks to zero-emission vehicles.⁴⁰



The next mile

It's clear that pollution from medium- and heavy-duty vehicles is a problem in need of a solution. Canadian federal and provincial governments, thankfully, have taken some steps in the right direction.

Federal action

Canada's most recent federal climate plan, the 2030 Emissions Reduction Plan, included targets that 35% of all new medium- and heavy-duty vehicle sales by 2030 should be zero-emission and 100% by 2040, where feasible, and a commitment to move forward with a clean bus and truck sales mandate.^{4,41}

To help spur uptake, the federal government recently introduced an Incentives for Medium- and Heavy-Duty Zero-Emission Vehicles (iMHZEV) program that offers **between \$10,000 and \$200,000 off the purchase price of qualifying commercial vehicles**. Canada also offers a tax incentive for small businesses to write off between 55% and 100% of the purchase price of eligible EVs, including some freight trucks.

On charging infrastructure, the federal Zero-Emission Vehicle Infrastructure Program provides grants to offset some of the capital costs associated with charging infrastructure installation. However, while technically eligible for this program, clean bus and truck fleets have generally not made use of this funding because

the program design does not work well for them (in part because it does not cover grid connection or electrical infrastructure upgrade costs, a large part of fleet electrification projects).

Finally, the Zero-Emission Transit Fund provides support for vehicle purchases, public transit and school bus fleet electrification planning, and other infrastructure needs. Since its inception in 2021, the program has supported the purchase of 2,500 zero-emission buses and 500 charging stations, making electric buses a bright spot of Canadian clean vehicle deployment.⁴² Indeed, the Canadian Urban Transit Research and Innovation Consortium forecasts that **Canada is on track to meet its target of deploying 5,000 zero-emission buses by 2026.**⁴³

Finally, on the regulatory side, Canada has typically aligned with the U.S.'s heavy-duty emissions standards and is expected to similarly adopt the Biden administration's most recent version of these requirements.

TORONTO TRANSIT'S ELECTRIFICATION JOURNEY

The Toronto Transit Commission has one of the largest electric transit bus fleets in North America as it works to electrify 50% of its fleet by 2030 and 100% before 2040.⁴⁴ Operating about 60 electric buses today, the transit agency plans to add 340 more battery-electric buses by the end of 2025. It also plans to purchase only fully electric buses starting this summer.⁴⁵ In addition to transit buses, the Toronto Transit Commission plans to pilot up to 10 battery-electric models in its Wheel-Trans fleet. And, of course, its subways and streetcars are already fully electric.

Currently, the Toronto Transit Commission has charge points in service across four bus divisions in different areas of the city. It has taken a phased approach to charging, which has allowed it to install newer, better charging technology as it scales up electrification efforts. While the electric buses can be charged in three hours, the transit agency has the ability to charge buses more slowly while they are stored overnight to minimize grid impact. It plans to install over 300 more by the end of 2025 to accommodate the hundreds more electric buses that will be added to its fleet by then.



Provincial action

Provincially, Quebec and B.C. have shown real clean bus and truck leadership, introducing fairly comprehensive packages to support adoption (see chart below). Nova Scotia also recently joined the clean commercial vehicle club by introducing rebates ranging from \$10,000 to \$50,000 per vehicle.

Beyond that, provinces are not doing nearly enough to help Canadian fleets go electric, according to Clean Energy Canada's recent report grading provinces on their clean economies.⁴⁶

| POLICY/PROGRAM | QUEBEC | B.C. |
|--|--|---|
| Regulated ZEMHDV sales targets | Launched studies on a potential provincial sales regulation. ^{47,48} | Begun formal pre-consultations for regulated ZEMHDV sales and fleet targets. |
| Vehicle Purchase Incentives | <p>Eco-camionnage Program offers up to \$175,000 (and an additional 5% to 15% if the technology is installed, assembled, or manufactured in Quebec).⁴⁹</p> <p>School Transport Electrification Program offers a rebate between \$150,000 to \$175,000 per electric school bus.⁵⁰</p> | Has post-purchase incentives: the Commercial Vehicle Pilot Program and the Go Electric program . Has committed to revisiting this to see if they can be made point-of-sale. ^{51,52} |
| Charging and electrical infrastructure incentives (hardware, software, infrastructure upgrades) | <p>Transportez Vert Program provides up to 50% off eligible expenses to a maximum of \$60,000.⁵³</p> <p>School Transport Electrification Program provides up to 75% of eligible expenses for a charger up to \$50,000.⁵⁰</p> <p>Loi Favorisant L'Établissement D'Un Service Public De Recharge Rapide Pour Véhicules Électrique enables the utility to ratebase investments in public charging infrastructure.⁵⁴</p> | <p>Go Electric Fleet Charging Program offers up to \$20,000 in rebates for electrical infrastructure upgrades.⁵⁵</p> <p>Commercial Vehicle Pilot Program provides grants that offset some energy infrastructure costs.⁵¹</p> <p>Electrical Infrastructure Incentive helps offset some of the cost of installing electrical infrastructure.⁵⁶</p> <p>Greenhouse Gas Reduction Regulation allows utilities to ratebase certain contributions to emissions reductions, including EV charging.⁵⁷</p> <p>BC Hydro's Fleet Electrification Rates help reduce demand charges and incentivize cheaper overnight charging.⁵⁸</p> |
| Support for planning and fleet advisory services | Hydro Quebec's subsidiary Cleo supports fleet operators who want independent guidance and customized assistance as they transition to electric vehicles (paid service). ⁵⁹ | <p>BC Hydro's EV Fleet Incentives offers the EV Ready Fleet Plan rebate that offsets 50% of planning costs up to a maximum of \$10,000 to \$15,000 (depending on fleet size) to perform fleet and electrical infrastructure needs assessments.⁵⁶</p> <p>B.C.'s Go Electric Fleet Charging Program offers up to \$50,000 in rebates for telematics, up to \$5,000 in rebates for facility planning assessments and training sessions/webinars, and up to 40 hours of zero-emission vehicle fleet advisory services.⁵⁵</p> |

A clean bus and truck policy package for Canada

Canada's current patchwork of policies won't be sufficient to meet the country's own targets—let alone keep up with global momentum and set its clean bus and truck industry up for success.⁶⁰ Federal and provincial governments must collaborate to roll out a clean commercial vehicle policy package for Canada, working closely with municipalities, utilities, and the private sector. This should include:

-  **Vehicle purchase incentives:** Vehicle purchase incentives are an important policy tool to help bridge the cost between combustion-powered and zero-emission vehicles. Without government purchase incentives, clean buses and trucks may not reach cost parity (even on a total cost of ownership basis that accounts for savings in fuel and maintenance) until 2030 (vans and small trucks) or 2035 (larger vehicles).⁶¹ The federal government should extend its existing clean bus and truck incentive program until at least 2030, and provinces that do not already have point-of-sale vehicle incentive programs should introduce them.
-  **Support for charging:** Zero-emission bus and truck projects face unique charging infrastructure challenges compared to passenger vehicle fleets. These include higher power requirements, electrical infrastructure upgrades, and uncertainty around how long it will take to connect to the grid and how much it will cost. Governments and utilities should launch programs that support zero-emission bus and truck charging infrastructure and ensure these programs cover a broad range of eligible expenses, including grid connections and distribution system upgrades.
-  **Supply side regulations:** The U.S.-Canada heavy-duty emissions standards will help to drive emissions in the sector down and improve zero-emission bus and truck supply. But these standards will not be sufficient to spur the investments needed to deploy zero-emission commercial vehicles at scale and safeguard Canada against a future in which America decides to roll back its ambition. Canada also needs regulated zero-emission bus and truck sales targets, which have been recognized by a coalition of 17 U.S. states, the District of Columbia, and Quebec as the most effective tool available to rapidly advance the market.⁶³ Regulated sales targets would also provide certainty to utilities and charging infrastructure providers to plan, invest, and build the grid capacity needed.
-  **Education and awareness:** Most Canadian fleets are just at the beginning of their decarbonization journey and are not quite sure where to start. Governments can help by funding programs and working with industry associations to educate fleet operators on vehicle availability, infrastructure needs, government and utility incentive programs, assessing the total cost of ownership, and integrating zero-emission vehicles into their operations. Fleet advisory services, often offered by electric utilities or private companies, are also great resources. Given the prevalence of small fleet operators in Canada, education and awareness programs must be designed to work for them.

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