

# Building a zero-emission goods movement system in Canada

*Written Submission for the Pre-Budget Consultation in Advance of Budget 2021*

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- **Recommendation 1:** That the government provide funding in the amount of \$334 million over five years (2021-22 to 2025-26) (\$66.9 million for 2021-22) and increase its maximum cost share for zero-emission delivery vehicles from 50% to 80%, to enhance and extend access and uptake for the Zero Emission Vehicle Infrastructure Program (ZEVIP).
- **Recommendation 2:** Expand the iZEV program by \$615 million over five years (2021-22 to 2025-26) to include medium and heavy-duty (MHD) trucks. Allocate \$123 million for the first year (2021-22). The program should cover the same portion of the cost of an MHD truck as it currently covers for light-duty passenger vehicles and should be structured as a rebate.
- **Recommendation 3:** Provide funding in the amount of \$35.7 million over five years (\$7.1 million for 2021-2022) to support existing programs that advance skills training with practical sessions in charging infrastructure, electrical installation, mechanical installation, maintenance of medium- and heavy-duty vehicles, EV fleet management and creation and maintenance of fleet charging infrastructure.
- **Recommendation 4:** Formalize a “forum” whereby relevant federal departments and agencies can be more co-ordinated in policymaking and the delivery of ZEV programs.

**Total proposed funding for Budget 2021: \$197.1 million**

## Introduction

The Urban Delivery Solutions Initiative is a national network of businesses and organizations working to create an efficient and low-carbon urban freight system in Canadian cities. The transportation sector represents a quarter of Canada's greenhouse gas (GHG) emissions.<sup>1</sup> Freight sources represent 42% of national transportation emissions,<sup>2</sup> and by 2030, freight emissions are expected to surpass passenger vehicle emissions in Canada.<sup>3</sup> Increased urbanization, online shopping and the demand for same-day and home deliveries contribute to the rise of freight activity. Between 2016 and 2018, the average number of online purchases made by Canadians rose by 58%.<sup>4</sup> Post-pandemic, it is expected that, as consumers become more comfortable with online shopping and the use of e-commerce platforms, the demand for last-mile delivery trips will rise.

## Slow market transformation for zero-emission goods movement vehicles in Canada

Not only are existing incentive tools limited and restricting, the lack of a solid national zero-emission vehicle (ZEV) policy and investment strategy for medium- and heavy-duty and last-mile delivery have resulted in slow market transformation for even first movers in this sector. Canada accounts for just 0.03% of global heavy-duty electric vehicle sales, with under 50 units sold in 2018.<sup>5</sup>

Major barriers to adoption of commercial-ready, zero-emission vehicles for commercial purposes (battery-electric, plug-in hybrid, hydrogen fuel cell) often relate to the high cost of ownership, and high up-front capital expenditures, the need for infrastructure upgrades, and the availability of charging/refuelling infrastructure. This proposal aims to address key challenges, including:

- **Restrictive ZEV programs create an unlevel playing field:** Not all business sizes and types with freight and delivery operations are able to access the program. Fleet managers are not able to overcome the major barriers to implementation.
- **Financial incentives are insufficient and expire too soon:** Financial incentive programs for zero-emission vehicle procurement and supporting infrastructure expire in 2024, four years from now. That is insufficient lead time for planning, procurement and infrastructure build-out. Current structure of financial incentives still makes it unfeasible for fleet managers.

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<sup>1</sup> Environment and Climate Change Canada, *National Inventory Report 1990-2018: Greenhouse Gas Sources and Sinks in Canada - Part 3* (2020), 11. <https://unfccc.int/documents/224829>

<sup>2</sup> Ibid.

<sup>3</sup> Government of Canada, *Canada's Fourth Biennial Report on Climate Change* (2019), Annex 2. <https://unfccc.int/sites/default/files/resource/Canada%E2%80%99s%20Fourth%20Biennial%20Report%20on%20Climate%20Change%202019.pdf>

<sup>4</sup> Canada Post, *The 2019 Canadian E-Commerce Benchmark Report*. [https://smallbusinessbc.ca/wp-content/uploads/2019/04/2019\\_ecomm\\_benchmark\\_report-en-Canada-Post.pdf](https://smallbusinessbc.ca/wp-content/uploads/2019/04/2019_ecomm_benchmark_report-en-Canada-Post.pdf)

<sup>5</sup> Ben Sharpe, Nic Lutsey, Cedric Smith and Carolyn Kim, *Power Play: Canada's Role in the Electric Vehicle Transition* (The International Council on Clean Transportation, 2020), 1. <https://www.pembina.org/pub/power-play>

- **Skills training and education are lagging:** The transition to a clean transportation and energy system requires Canada to build the next generation of technical experts and management to operate and maintain zero-emission commercial fleets across Canada.
- **Implementation is unco-ordinated and inconsistent:** Policies and programs are not aligned. That has created considerable market fragmentation and gaps which make it more difficult to establish a clean transportation and energy system and network in Canada.

## Recovering from COVID-19 and shaping the future ahead

The full impacts of the global COVID-19 pandemic have yet to be understood but to date, Canada's clean-transportation industry is experiencing negative effects. The pandemic has resulted in delayed or restricted procurement of zero-emission vehicles and alternative fuel vehicles, and has slowed progress of ZEV deployment and/or build-out of supporting infrastructure. The pandemic may have also slowed the supply of zero-emission commercial vehicles due to manufacturer delays and/or vehicle components such as battery production. Collectively, this has serious implications for Canada's economic recovery and long-term growth. There will be significant repercussions for the Government of Canada as it tries to build a zero-emission economy and become a global clean-tech leader.

A coherent and integrated national policy framework, including a ZEV target for light-, medium- and heavy-duty vehicles, is needed along with major financial investments to increase demand for zero-emission vehicles and lay the foundation for mainstream adoption across Canada. These initiatives, plus significant stimulus investments to build domestic zero-emission vehicle production, will bring economic growth and job creation.

Over the next five years, we expect many businesses operating fleets will retire fleets and procure a substantial volume of new vehicles. Because MHD trucks have a life span ranging from 12 to 21 years, the investments made today will shape the stock of vehicles on the road in the long-term future.

We recommend that the federal government plan for an increase of **24,000 commercial zero-emission vehicles over a five-year period, to 2025**, thus putting Canada on a path to achieving 2% zero-emission medium- and heavy-duty fleet penetration by 2025. This would help Canada become a global leader and support progress to achieve 15% by 2040. To achieve this goal, we recommend that the federal government's 2021-22 Budget consider an infusion of spending in the amount of **\$197.1 million**.

We suggest that this money may come from revenue sources that currently fund the federal government's ZEV programs and freight programs such as the Green Freight Assessment Program, as well as the Climate Action Incentive Fund (for eligible provinces), and the Environmental Damages Fund.

## Expand and enhance the Zero-Emission Vehicle Infrastructure Program

**Recommendation 1:** That the government provide funding in the amount of \$334.5 million over five years (2021-22 to 2025-26) to increase its maximum cost share for zero-emission delivery vehicles from 50% to 80%, and to enhance and extend access and uptake for the Zero Emission Vehicle Infrastructure Program (ZEVIP).

The ZEVIP is one of Canada's most significant programs supporting infrastructure for goods movement fleet electrification. We recommend that the federal government top up funding in the amount of \$334 million over five years (2021-22 to 2025-26) (\$66.9 million for 2021-22). This funding should be targeted at the ZEVIP infrastructure stream which currently exists for 'Medium and Heavy-Duty Vehicle Fleets'.<sup>6</sup> Considerations for improving the program design include:

- Extending the program to 2025-26, at a minimum, to enable fleet managers more lead time to plan and take advantage of it.
- Increasing the government's maximum cost share from 50% to 80%.
- Expanding program eligibility to level the playing field and allow access to businesses of all sizes and types (e.g., private sector businesses, not-for-profits, Crown corporations) with freight and delivery operations, and removing the minimum 20 stations per fleet application program requirement.
- Extending eligible costs to include those associated with electrical upgrades and with feasibility and planning studies for related capital work.

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<sup>6</sup> Natural Resources Canada, "Zero Emission Vehicle Infrastructure Program." <https://www.nrcan.gc.ca/energy-efficiency/energy-efficiency-transportation/zero-emission-vehicle-infrastructure-program/21876>

## Expand and enhance the iZEV Program

**Recommendation 2:** Increase funding to the iZEV program by \$615 million over five years (2021-22 to 2025-26), expanding it to cover commercial vehicles.

The iZEV program is currently targeted at light-duty passenger vehicles. The program could be made more useful for commercial goods-movement fleets by adding light-, medium-, and heavy-duty zero-emission vehicles to its eligibility list.

We recommend that the federal government top up funding in the amount of \$615 million for the iZEV program over the period 2021-22 to 2025-26, expanding the program to include MHD trucks. \$123 million should be allocated for the first year (2021-22). It should cover the same portion of the cost of an MHD truck as it currently covers for an LDV and should be structured as a rebate program.

## Skills training for Zero-Emission Vehicle Deployment

**Recommendation 3:** Provide funding in the amount of \$35.7 million over five years (\$7.1 million for 2021-2022) to support existing programs that advance skills training.

Skills training and development is a critical part of Canada's transition to ZEVs. Industry workers including mechanics, electricians and fleet managers require training in areas such as electrical installation, mechanical installation, maintenance of medium- and heavy-duty vehicles, EV fleet management and fleet charging infrastructure.

We recommend the federal government provide funding in the amount of \$35.7 million over five years (\$7.1 million for 2021-2022) to support the expansion of ZEV skills-training programs in Canada. This funding can be used to develop new training programs and/or scale existing ones at a national level, such as the Electric Vehicle Infrastructure Training Program,<sup>7</sup> which provides training and certification for electricians installing electric vehicle supply equipment (EVSE) or higher education programs like the Electric Vehicle Maintenance Training program offered at British Columbia's Institute of Technology.<sup>8</sup> Currently these training programs are concentrated in British Columbia.<sup>9</sup>

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<sup>7</sup> Electric Vehicle Infrastructure Training Program. "Training." <https://evitp.org/>

<sup>8</sup> British Columbia Institute of Technology, "BCIT Electric Vehicle Maintenance Training Program to Launch in Early 2020." <https://commons.bcit.ca/news/2019/12/ev-maintenance-training/>

<sup>9</sup> Government of British Columbia, "B.C. Funds Training in Electric Vehicle Infrastructure." <https://news.gov.bc.ca/releases/2016MEM0001-000061>

## Co-ordinate policymaking and program delivery

**Recommendation 4:** Formalize a “forum” whereby relevant federal departments and agencies can be more co-ordinated in policymaking and the delivery of ZEV programs.

We encourage greater co-ordination between Natural Resources Canada, Environment and Climate Change Canada, Innovation, Science and Economic Development, Transport Canada, Finance, and Employment and Social Development Canada on ZEV policymaking and program delivery. The federal government should continue to work closely with the Federation of Canadian Municipalities and the Canada Infrastructure Bank to leverage public- and private-sector financing for an integrated ZEV system that is suitable for freight- and goods-movement purposes. This forum can be the main driver/mechanism to develop a national ZEV policy and investment strategy and provide a “one-window” platform for program delivery and engagement with stakeholders.

## Conclusion

Our recommendations for Budget 2021 do not constitute an exhaustive list of the policy levers needed to put Canada on track to decarbonize its transportation sector and achieve its longer-term net-zero 2050 goal.<sup>10</sup> Over the medium and long-term, major investments will be required to build out Canada’s supply of commercial ready zero-emission vehicles to match demand. Long-term financial support is needed to grow domestic zero emission vehicle production, battery technology development and manufacturing.

A recent study by Navius Research Inc. illustrates that a strong zero-emission policy framework can help decarbonize Canada’s transport sector while contributing to global cost reductions of ZEVs and boosting the Canadian economy. In a policy scenario that includes 100% of light-duty vehicle sales, 50% of medium-duty sales, and 15% of heavy-duty sales by 2040, as well as ZEV production incentives to reduce production costs by 10%, Canada's economy could grow by \$152 billion and by 1.1 million workers in this sector by 2040, the study found.

Investing in Canada’s zero-emission vehicle economy would yield economic benefits and employment opportunities for Canadians in the short- and long-term.

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<sup>10</sup> Please refer to the Green Budget Coalition for the Pembina Institute’s recommendations to advance zero-emission light-duty vehicles.