

# Urban Delivery Solutions Initiative

## 2023: Year in Review

In 2023, Canada's leading delivery companies, along with those who support them — you — made remarkable strides in transforming last-mile delivery.

By embracing cutting-edge technologies and expanding your electric vehicle fleets, you've taken significant steps towards a more sustainable future. Your commitment to reducing carbon emissions, promoting the use of zero- and low-emission vehicles, and optimizing delivery routes showcases your leadership in driving positive change. As you've

advanced these efforts, the Pembina Institute has worked with you, actively advocating for policies and strategies that support this crucial transition. Our 2023 year in review report highlights our key activities and achievements over the past year. Thank you for your continued participation and commitment to a sustainable future.

## Canada's Path to Net-Zero for Medium- and Heavy-Duty Vehicles

The likelihood of Canada meeting its international obligation to transition to a carbon-neutral economy by 2050 relies significantly on decarbonizing the transportation sector, which is the country's largest source of greenhouse gas (GHG) emissions after oil and gas.



When we look specifically at the transportation sector, [recent data](#) show that GHG emissions generated by medium- and heavy-duty vehicles (MHDVs) continue a relentless upward trend, accounting for 37% of overall transportation emissions and threatening to surpass the emission levels produced by passenger vehicles by 2030.

In 2022, we published draft recommendations to decarbonize Canada's MHDV sector. Building on that work, in 2023 we released [Canada's Pathway to Net-Zero for Medium- and Heavy-Duty Vehicles](#):

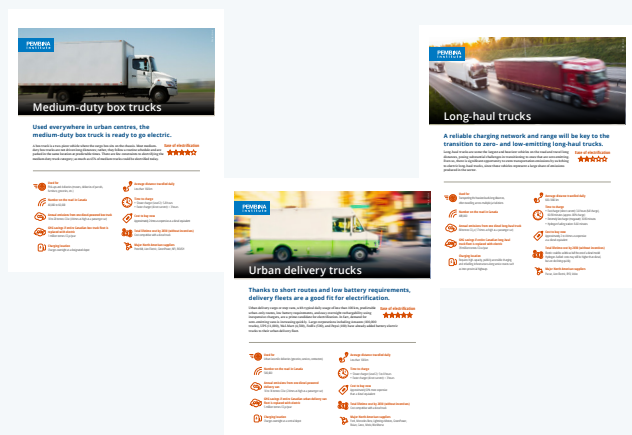
[The Drive to Clean Transportation in 2040](#). This comprehensive strategy outlines a path to transition Canada's fossil-fuelled MHDVs to non-emitting ones by 2040, offering over 20 policy recommendations to address planning gaps at the federal level and tackle market uncertainties related to the shift to clean transportation. Your significant contributions played a crucial role in shaping this important and timely strategic vision. We will continue to engage the federal government to implement many of the crucial recommendations to support urban delivery fleets, including:

- extending and refinancing the federal iMHZEV program with additional incentives for medium-duty vehicles
- increasing funding to support the buildout of depot charging infrastructure for MHDVs
- simplifying and standardizing infrastructure upgrade processes and providing guidance on setting competitive electricity rates for fleets

## Fact sheet series

We have developed a [series of fact sheets](#) that provide an overview of the carbon footprint of five categories of MHDVs, the challenges associated with the transition to zero-emission models in each category, and the key policies required for a successful shift to affordable, climate-friendly transportation solutions.

Please feel free to share the fact sheets with colleagues and interested parties in your network.

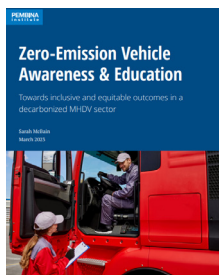


On a related note, the Toronto Star published Transportation director Adam Thorn's opinion piece, [Why Canada needs to put the pedal to the metal on the greening of trucks and buses](#). Adam makes the case — a familiar one to our UDSI participants — that the federal government needs to move swiftly from regulations around a sales mandate for light-duty vehicles (LDVs) to one for zero-emitting MHDVs, as

MHDVs produce the lion's share of transportation-related pollutants.

As we look forward to 2024, we will continue to advance our work in this sector, with a focus on the crucial role of charging infrastructure and how alternative fuels will play a role in decarbonizing road freight.

## Expanding equity and inclusion in ZEV outreach



Building on our work in the passenger vehicle market, we submitted our Zero-Emission Vehicle (ZEV) Awareness and Education report to Natural Resources Canada. This report offers insights into how equity,

diversity and inclusion can be incorporated into ZEV outreach projects to raise awareness and education in the MHDV sector. We will continue these efforts through our Zero-Emission Vehicle Awareness Initiative and Women in Fleet Transformation projects. Thank you to everyone who has supported this important work.

## Navigating toward net-zero: Our policy submissions

### Recommendations for national sales mandate for light-duty ZEVs

In March 2023, the Pembina Institute submitted [four key recommendations to Environment and Climate Change Canada](#) in response to the federal government's proposed Regulations Amending Passenger Automobile and Light-Truck Greenhouse Gas Emission Regulations under the Canadian Environmental Protection Act. Strategically, if

the final version of the LDV regulations retains the proposed sales levels and deadlines, it will set the course for future regulations that will guide the transition to zero-emission trucks and buses. For example, the Pembina Institute recommended including plug-in hybrid electric vehicles (with minimum ranges) as ZEVs under the regulation. This type of practical and realistic approach will guide our discussions with the federal government on establishing an MHDV mandate.

## Canada's clean fuel regulations

On May 16, 2023, the Pembina Institute was invited to be a witness before the Senate Committee on the Clean Fuel Regulations (CFR). We conveyed our strong support for the CFR as essential to Canada's climate plan to meet its enhanced Paris Agreement target, reducing emissions by 40-45% from 2005 levels by 2030 and achieving net-zero emissions by 2050. To ensure effective compliance and achieve the anticipated reduction of 204 Mt CO<sub>2</sub>e by 2040, we recommended that the federal government provide clear policy direction for eligible funds, ensure contributions to the compliance fund be used to support projects that will achieve a reduction in CO<sub>2</sub>e emissions in the short term, and establish the compliance fund as the last resort for meeting obligations. By creating a market and credits for lower-carbon alternatives, the CFR also incentivizes the production of biofuels in Canada, especially renewable diesel. We will continue to

support the CFR to provide fleets with more options for accelerating their decarbonization.

## Sales and fleet purchase requirements

In May 2023, the Pembina Institute provided valuable feedback on British Columbia's Medium- and Heavy-Duty Zero-Emission Vehicles (MHD ZEV) Consultation Paper aimed at enhancing zero-emission vehicle sales and fleet purchase requirements. One of the key policies discussed in the consultation paper was a potential fleet standard for "high priority" fleets. While decarbonizing fleets is essential, we recommend postponing a fleet mandate for commercial fleets. Instead, we recommended prioritizing government fleets and focusing new regulations on a sales standard to increase availability of zero-emission vehicles. This approach will support fleets in their decarbonization efforts without imposing unrealistic timelines on market leaders like those in the UDSI network.

## #ZEV-life: Stories from fleets making the switch

We continued to showcase remarkable innovation in the urban delivery space with our spotlight on Lion Electric and FedEx Canada, both demonstrating what zero-emission looks like in action.

Lion Electric is setting a high standard by pushing for electric vehicles for any trips under 400 kilometres. Since their start in 2008, they've led the charge with innovations like the first electric school bus, and now boast a fleet of 700 electric school buses across North America. These buses aren't just good for the environment — they also offer substantial savings, with up to 80% on fuel and 60% on maintenance costs. Lion Electric is also branching out into medium- and heavy-duty vehicles, with big names like Amazon and

Canadian National Railway already on board. As VP Patrick Gervais puts it, going electric isn't just a green choice — it makes financial sense too.



In 2020, FedEx Express Canada launched a cargo e-bike delivery program, starting with a mere three bikes. The pilot exceeded expectations, with couriers covering 25 to 26 kilometres a day along high-density routes in Toronto. Today, FedEx Canada's fleet has grown to over 40 e-bikes, making it one of the largest cargo e-bike fleets in FedEx's global network. In the coming year, the Pembina Institute will be supporting the expansion of cargo e-bikes into Calgary, helping to further reduce emissions and enhance sustainable urban delivery solutions.





# Engaging in public dialogue

We contributed to public discussions on the future of zero-emission vehicles, hosting a [panel discussion for UDSI members on the potential impact of the Inflation Reduction Act on Canada's MHDV sector](#), exploring what kind of actions the Government of Canada and policy-makers might take that would similarly support the Canadian sector.

At [Electric Mobility Canada's annual conference, EVVE](#), we presented the roadmap to zero-emission MHDVs in Canada. And we participated on the panel at a [University of Toronto seminar on electrifying Ontario's school bus fleet](#).

We hosted a roundtable discussion with leading health organizations, including the Canadian Association of Physicians for the Environment, Canadian Lung Association and B.C. Lung Association, to discuss the need for a zero-emission MHDV mandate. Together, we explored how transitioning to zero-emission MHDVs can improve public health by reducing emissions and improving air quality.



To further drive the electrification transition discussion, we also hosted webinars with key utilities, including Alectra Utilities, BC Hydro and PowerON Energy. These sessions focused on how utilities and fleets can collaborate effectively to support the energy transition.

## Thanks to our sponsors and supporters



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The Pembina Institute is a national non-partisan think tank that advocates for strong, effective policies to support Canada's clean energy transition. We use our expertise in clean energy analysis, our credibility as a leading authority on clean energy, and our extensive networks to advance realistic climate solutions in Canada.