

Urban Freight Electrification in the GTHA

Smart Freight Symposium 2020

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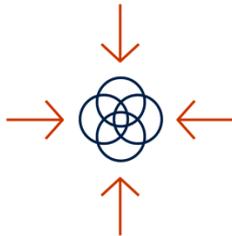
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Leading Canada's transition to clean energy

The Pembina Institute is a non-profit think-tank that advocates for strong, effective policies to support Canada's clean-energy transition.



Research
and Analysis

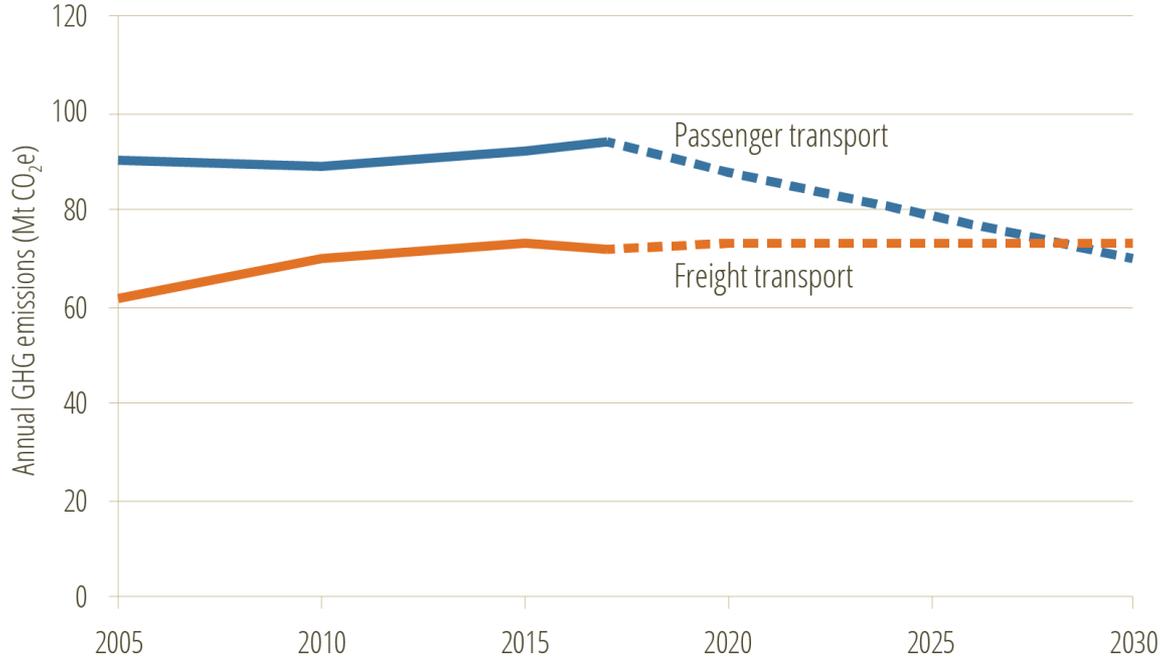


Convening
Stakeholders



Credible
Perspectives

The state of freight



Freight GHG emissions in Canada are expected to surpass those of passenger vehicles by 2030

Data source: Canada's Fourth Biennial Report on Climate Change

Electrification of urban (last-mile) deliveries

ZERO EMISSIONS PATHWAY

*Diverse Vehicle Models, Expanding Supply Chains,
A Growing ZEV Market*



The shift so far

Urban delivery companies in North America are committed to electrification:

- **Amazon** purchasing 100,000 e-cargo vans from Rivian
- **UPS** purchasing 10,000 e-cargo vans from Arrival
- **FedEx** purchasing 1,000 e-cargo vans from Chanje
- **Purolator** testing EVs in Toronto and Montreal
- **DHL** transitioning delivery fleet to EVs by 2030
- **IKEA** transitioning delivery fleet to EVs by 2025

The shift in manufacturing

Vehicle **OEMs** committed to electrifying the last-mile:

- Ford E-Transit
- Mercedes eSprinter
- GM reportedly working on electric delivery van
- Lion Electric Lion6
- Daimler eM2
- BYD 5F/6F



Ford E-Transit

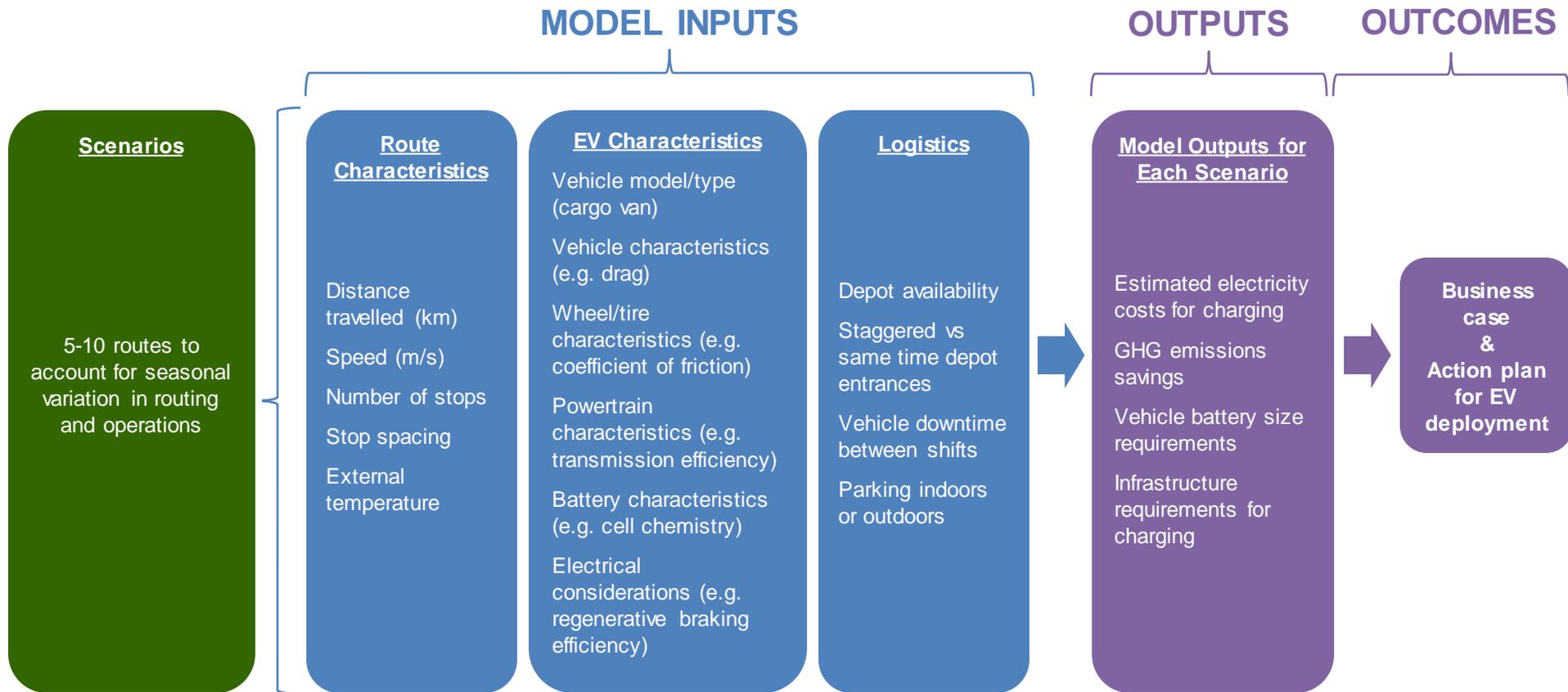
Image source: <https://www.ford.ca/commercial-trucks/e-transit/2022/>

Barriers to address

- **Policy gaps:** limited and inconsistent ZEV policy and supporting infrastructure
- **Costs:** prohibitively high vehicle costs, high demand charges on utility bills
- **Charging infrastructure:** limited public charging infrastructure, installation of private chargers is time intensive and expensive
- **Lack of resources and information:** businesses need a better understanding of the impact of commercial EV adoption in the GTHA

What we're doing at Pembina

1. Building the **business case** for urban delivery fleet electrification



2. Developing an **action plan** for urban delivery fleet electrification

- Outlining steps to EV deployment
- Identifying common obstacles and potential solutions with:
 - Utilities (power generators and local distribution companies)
 - Fleets that have experience with electrification

3. Establishing a ZEV-supportive **policy guide**

- Identifying and advocating for supportive policies to reduce barriers to electrification through:
 - Strategic planning and regulations
 - Incentives for deployment
 - Charging infrastructure
 - Fleet capacity

What's coming up

- **Reporting:** our main findings will be highlighted in a policy guide for government and an action plan for businesses
- **Webinar:** to discuss how to accelerate urban freight electrification in the GTHA
- **Engagement with policymakers:** to implement ZEV-supportive policies

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