



STRENGTHENING ONTARIO'S FREIGHT COMPETITIVENESS THROUGH A HIGHWAY 401 ELECTRIC TRUCK CORRIDOR

Briefing note by Electric Mobility Canada's MHDV Working Group
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A. THE FACTS

Highway 401:

- Runs from US border to Quebec border – more than half of trucks NOT from Ontario.
- One of North America's busiest freight corridors, with the busiest bridge, and the busiest border crossing.
- One of the most important road freight routes globally.
- Has 60-70% (est) of Canada's non-primary production GDP operating within 50 kilometres.

Ontario's electricity:

- Among the cheapest and cleanest in the world
- Has excess overnight capacity; new Darlington nuclear SMR looking for off peak off take

Electric Heavy Duty Trucks:

- Significant Reduction in Total Cost of Operation - mostly 10-20%
 - While use cases and TCO are varied, 10-20% (excluding driver) can be achieved for Class 8 trucks.
 - Industry cost reduction of electric trucks: \$3b - \$6b annually. (Ontario Class 8 VMT @ \$1.05/km)
- Significantly reduced NOISE pollution with ZERO tailpipe emissions, and superior performance
- Industry analysis indicates that current generation electric Class 8 trucks can meet the requirements of a significant majority of regional and short-haul freight movements.
 - Latest models have a range up to 800km, and charging times under 30 minutes
 - Toronto – Montreal, or Toronto – Michigan easily achievable in any Ontario weather conditions
- Electric truck corridors and charging already operational or planned in Michigan, New England and Quebec. Ontario 401 links this infrastructure together.

B. ECONOMIC IMPLICATIONS OF ADOPTING ELECTRIC TRUCKS

1) Reduce Ontario's dependence on imported diesel fuel

- Ontario imports billions of dollars of diesel annually, much of it from outside the province. Electrifying freight allows more transportation spending to remain within Ontario's economy, supporting local electricity generation, infrastructure investment, and economic activity.

2) Significant Reduction in Healthcare costs

- Diesel air pollutants significantly increase the risk of cancer, heart attacks and strokes
 - A [University of Toronto Study](#) found that diesel commercial vehicles in the GTHA are responsible for 9,810 years of life lost annually (or \$3.2 billion in annual social costs).

- 3) **Freight Cost Reduction** significantly increases Ontario's competitiveness and attracts investment
 - Provincial cost reduction removes structural economic barriers
 - *Improves competitiveness of a struggling industry in 905 and SW Ontario.*
- 4) **Investment and job creation:** An electrified freight corridor can help attract private investment in Ontario's growing zero-emission vehicle, battery, charging infrastructure, and clean energy supply chains.

C. INDUSTRY REQUEST*

Primary request

- Designate Highway 401 as a Strategic Electric Freight Corridor.

Supporting actions

- Introduce a targeted program, "ChargeON HD" for truck charging infrastructure (Megawatt Charging Standard/MCS) along 401 corridor based on the successful ChargeON legacy. Fund non MCS charging through the existing ChargeON program.
- Work with provincial utilities and regulators to proactively plan and build electricity infrastructure required to support freight electrification along strategic transportation corridors, with appropriate cost recovery mechanisms.
- In collaboration with the private sector, build out charging with rest stop facilities to support long-haul freight and interjurisdictional fleets.
- Assist with EV truck assessments, education (business case, adoption and maintenance).
- Link with Federal Government efforts to support electric trucks and build out charging infrastructure.

*** Notice:** EMC recognizes the valuable contributions of numerous organizations and industry-led initiatives working to advance freight electrification in Ontario. This briefing note communicates specific recommendations that have been reviewed and supported by EMC's Medium- and Heavy-Duty Vehicle Working Group and does not imply endorsement of positions beyond those identified in this document.

About Electric Mobility Canada

Electric Mobility Canada (EMC) is the unifying and authoritative voice for the transition to electric transportation across Canada. Founded in 2006, EMC is the national industry association that enables and accelerates the transition to sustainable electric mobility through advocacy, collaboration, education, and thought leadership, with the goal of creating a cleaner, healthier, and more prosperous future for all Canadians.

EMC has 190+ member organizations, including electricity suppliers; manufacturers of light, medium, heavy, and off-road vehicles; infrastructure providers; technology companies; research centres; government departments and agencies; cities; universities; fleet managers; unions; environmental NGOs; and EV owner groups.

Members of EMC collaborate under different working groups to identify barriers and solutions specific to different industry segments: Batteries (life cycle), Charging infrastructure (accelerating deployment), Utilities (best practices and grid planning), and MHDVs (Fleet electrification).