



Canadian Vehicle
Manufacturers' Association
Association canadienne
des constructeurs de véhicules

MEMO

TO: Interested Parties
FROM: Canadian Vehicle Manufacturers' Association
DATE: December 13, 2023
RE: Auto perspective on forthcoming zero-emission vehicle sales regulations

Environment and Climate Change Canada (ECCC) is expected to release final zero-emission vehicle (ZEV) sales regulations that will prescribe annual ZEV sales from the 2026 model year (MY) to the 2035 MY. This memo answers questions about the regulations, their implications, and feasibility.

What is ECCC expected to announce?

The regulations will mandate that ZEVs compose an increasing proportion of new light duty vehicle sales annually in Canada starting in the 2026 model year. ZEVs must make up a minimum of 20% of new light duty vehicle sales in 2026, 60% in 2030, and 100% in 2035. ZEVs include Plug-in Hybrids (PHEVs), Battery Electric Vehicles (BEVs), and Fuel Cell Electric Vehicles (FCEVs).

What are automakers doing to increase electrification?

Since 2012, the number of ZEV models available to Canadians has grown from [3 to 77](#). An additional 41 models are expected next year in every vehicle segment.

Automakers have committed USD [\\$1.2 trillion globally to electrification](#). In Canada, Ford, GM and Stellantis are leading the transformation to electrification with nearly CAD \$15 billion in new investment since 2020, the majority dedicated to ZEV assembly and the battery supply chain.

Are the regulations feasible?

ZEV sales have been increasing in Canada, reaching [13.3% of new vehicle sales in Q3 in 2023](#), thanks to automakers bringing new models to market to meet Canadians needs. Achieving higher ZEV sales levels depends on favorable market conditions, stronger consumer purchase incentives, effective consumer education and awareness, widespread charging infrastructure, expanded grid capacity, and the development of a North American battery supply chain.

What are the impacts of the proposed regulation on Canadians?

According to the government's [analysis of the regulation](#), the sales mandate is expected to reduce consumer choice as non-ZEVs are phased out and increase vehicle prices due to the higher cost of ZEVs:

- “The proposed Amendments are expected to have a disproportionate impact on low-income households due to the higher upfront cost of ZEVs in early years and the potential for non-ZEV costs to increase due to a decreasing supply of these vehicles in response to the increasing ZEV sales targets....”

- “Low-income households are also more likely to live in rental units, which in some cases may not be suitable for at-home charging equipment. This indicates that low-income households that do purchase ZEVs would be more likely to have to rely on publicly available charging stations that may charge a premium on the cost of electricity.”
- “The proposed Amendments would also disproportionately impact households living in rural and northern communities that may have lower access to public charging infrastructure. In addition, northern communities are expected to face more difficulties with the transition to ZEVs due to prolonged periods of cold temperatures that may affect the range of battery-powered electric vehicles. Furthermore, electricity costs vary by region, thus Canadians living in regions with high electricity costs may not benefit from energy savings as much as those living in lower-cost areas...”

Can Canadians conveniently charge ZEVs?

With only [25,000 operational public chargers](#) available today there is no obvious pathway to having the needed charging infrastructure to support 100% ZEV sales.

The government’s projections show that ZEV sales need to reach 400,000 vehicles in 2026, 1.2 million in 2030, and 2 million in 2035. This means a sixteen-fold increase in sales from 2022 levels. Growth rates of this magnitude will result in 12.4 million EVs on Canada’s roads in the next 12 years, up from 345,000 ZEVs on the road today.

Keeping this rapidly growing fleet charged requires an extensive network of public and private ZEV chargers. Natural Resources Canada (NRCan) [estimates](#) that Canada will need 195,000 public charging ports by 2030 and 442,000 by 2035 to support the ZEV sales targets. Building this public charging infrastructure will require a total investment of approximately \$20 billion over the next three decades.

The public charging requirements depend on widespread multi-unit residential building (MURB) charging availability. NRCan estimates that 2.2 million EV chargers need to be installed in MURBs by 2035. If less MURB charging is available, more public charging options will be required.

To support this charging infrastructure Canada needs to invest in clean electricity generation and grid capacity. In Ontario alone, [decarbonizing the electricity system](#) will cost between CAD \$375 billion and \$425 billion. According to Boston Consulting Group, utilities will need to [invest between \\$1,700 and \\$5,800 USD](#) per EV in grid upgrades.

According to the [Commissioner of the Environment and Sustainable Development](#), “there remains a large gap between the current number of charging stations and those needed by 2035”. The Commissioner’s [report](#) found that if the number of charging ports does not keep pace with the ZEV sales targets, there is a risk that these targets will be unachievable.

Doesn’t the federal ZEV purchase incentive address affordability challenges?

Consumers will not purchase ZEVs at the rates required to achieve mandated sales targets without stronger government incentives to close the price gap.

According to J.D. Power, there is an [average price gap](#) between internal combustion engine vehicles and ZEVs of CAD \$14,000. Until price parity between ZEVs and ICE vehicles is achieved, consumer incentives like the federal iZEV, provincial purchase incentives, and other consumer financial and non-financial measures will be critical to offset the higher costs faced by consumers.

The iZEV program provides Canadians with a maximum incentive of CAD \$5,000. The credit applies to new vehicles with a manufacturer's suggested retail price (MSRP) of less than CAD \$65,000 for cars and CAD \$70,000 for trucks, SUVs, and vans.

For comparison, the U.S. Inflation Reduction Act provides Americans with a USD \$7,500 (approximately CAD \$10,000) tax credit through to 2032 for new vehicles and USD \$4,000 for used vehicles. The credit applies to vehicles with a manufacturer's suggested retail price (MSRP) of less than USD \$55,000 (approximately CAD \$75,000) for cars and less than USD \$80,000 (approximately CAD \$109,000) for trucks, SUVs, and vans.

Is there enough battery production and critical mineral supply to support electrification?

The International Energy Agency (IEA) projects that for the world to achieve net zero globally by 2050, [six times more mineral inputs will be required](#) by 2040 than today. Of this increase, EVs and battery storage demand for mineral inputs are expected to grow by at least 30 times to 2040.

According to Benchmark Minerals Intelligence, [384 new mines](#) producing cobalt, lithium, nickel, and graphite are needed by 2035 to meet demand for lithium-ion batteries. And that's just the first step, processing of raw critical minerals is dominated by China. By 2030, it is estimated that North America will domestically fulfil only 3.5 per cent and 3.4 per cent of its cathode and anode demands respectively.

Do automakers oppose regulations to reduce carbon emissions?

No. The auto industry consistently delivers on increasingly stringent emissions regulations.

Since 2005, based on Environment and Climate Change Canada's GHG Emissions Performance Report, the industry achieved nearly a 29 per cent reduction in GHG emissions in new vehicles through to model year 2019. This is due to investments in new technologies, including ZEVs and conventional powertrains, to meet increasingly stringent vehicle GHG emissions standards.

Canada has historically aligned its light-duty emissions regulations with the U.S. Environmental Protection Agency (EPA). Canada must continue to align its GHG emissions standards with the U.S. given the highly integrated nature of the industry. This gives Canadians access to the broadest range of vehicles and advanced technologies — at the lowest price.

Continued alignment with the U.S. EPA is expected to reduce emissions and increase ZEV penetration even further given the Biden Administration's strongest-ever proposed emissions standards. The federal government's cost-benefit analysis of the ZEV sales regulation found negligible additional GHG reductions attributable to the sales mandate.