

# Keeping Canada Competitive with EV Standards

Balancing flexibility with strong  
targets for investment, jobs,  
affordability

Chandan Bhardwaj and Adam Thorn

October 2025

## Key takeaways

- Ambitious EV targets drive confidence and investment: Clear and predictable standards encourage automakers, charging infrastructure developers, battery supply chains and utilities to invest in Canada, supporting industrial growth and competitiveness
- Flexibility supports industry without weakening outcomes: Adjustments like including plug-in hybrids and charging infrastructure credits help automakers meet targets while keeping the EV Availability Standard's ambition intact
- Strong standards protect jobs and consumer interests: Maintaining ambitious targets ensures Canada captures global EV market opportunities, creates new jobs and increases EV affordability and choice for households

## Introduction

The world is moving toward the Age of Electricity as countries power more of their economies with clean energy.<sup>1</sup> Global demand for electric vehicles (EVs) is rising rapidly, with sales increasing roughly 25% annually in recent years. In Europe, EVs already account for one in five new car sales. In China, nearly half of new vehicles sold are electric, and one in ten vehicles on the road is an EV. This year alone, one in four cars sold worldwide will be electric.<sup>2</sup>

To guide Canada's transition, the federal government introduced the Electric Vehicle Availability Standard for light-duty vehicles in December 2023. The regulation requires automakers to sell an increasing share of zero-emission vehicles.<sup>3</sup>

Canada cannot afford to fall behind in the global rush to electrify. The domestic auto industry has been shrinking for a decade, reliance on fossil fuels leaves households vulnerable to price volatility, and traffic-related air pollution costs Canadians an estimated \$9 billion annually in health impacts<sup>4</sup>. The EV Availability Standard is Canada's clearest path to addressing these

---

<sup>1</sup> International Energy Agency, *World Energy Outlook 2024* (2024). <https://www.iea.org/reports/world-energy-outlook-2024>

<sup>2</sup> International Energy Agency, "Global EV Outlook 2025: Trends in electric car markets", 2025. <https://www.iea.org/reports/global-ev-outlook-2025/trends-in-electric-car-markets-2>

<sup>3</sup> Government of Canada "Canada's Electric Vehicle Availability Standard (regulated targets for zero-emission vehicles)", December 2023. <https://www.canada.ca/en/environment-climate-change/news/2023/12/canadas-electric-vehicle-availability-standard-regulated-targets-for-zero-emission-vehicles.html>

<sup>4</sup> Government of Canada, "Health impacts of traffic-related air pollution in Canada", March 2022. <https://www.canada.ca/en/health-canada/services/publications/healthy-living/health-impacts-traffic-related-air-pollution.html>

challenges. It ensures consumers have access to affordable, cleaner vehicles, provides certainty for investors and strengthens the resilience of Canada's economy, energy systems and communities.

The regulation is under a 60-day review from September 5 to November 4, and some stakeholders have called for it to be weakened or repealed.<sup>5</sup> That would be a mistake. While adjustments should be made to support automakers facing the added burden of U.S. tariffs, the ambition of the policy must remain intact.

In this background, the Pembina Institute provides early guidance on how the EV Availability Standard can be refined without undermining its effectiveness. It outlines preliminary options for adding flexibility to support industry needs while preserving the strong targets that drive investment, consumer choice and emission reductions.

## Benefits of the EV Standard

### Driving investment and innovation

The EV Availability Standard guarantees future EV demand, giving governments, utilities and companies the confidence to plan and invest. Clear targets encourage automakers and battery supply chains to expand in Canada and help utilities prepare for new electricity loads.

It is no coincidence that two of the world's largest EV manufacturers — Tesla from California and BYD from China — originated in jurisdictions with long-standing EV standards. The EV Availability Standard sends a signal to global investors that Canada is serious about competing for clean economy capital and jobs.

This year, global energy investment is projected to reach \$3.3 trillion, with \$2.2 trillion flowing into clean energy, nearly double fossil fuel investment.<sup>6</sup> Canada needs policies that position us to capture this growth.

### Expanding consumer choice and lowering household costs

The EV Availability Standard keeps Canada's market competitive, so consumers don't face fewer choices and higher prices than drivers in markets like Europe and China. It increases the number of available models, drives competition and brings down upfront costs.

---

<sup>5</sup> Pembina Institute, "Delaying EV targets serves auto industry, not Canadians," media release, September 5, 2025. <https://www.pembina.org/media-release/delaying-ev-targets-serves-auto-industry-not-canadians>

<sup>6</sup> International Energy Agency, *World Energy Investment 2025* (2025). <https://www.iea.org/reports/world-energy-investment-2025>

Over time, it also lowers household expenses. EVs cost less to fuel and maintain, saving families \$30,000 to \$40,000 over ten years compared to gasoline vehicles.<sup>7</sup>

Surveys consistently show Canadians support regulatory policies like the EV Availability Standard. Recent polling from Clean Energy Canada shows two-thirds of Canadians support maintaining an adjusted EV Standard. More than half (52%) believe EVs cost more in Canada than in other countries<sup>8</sup> — and they are right. A separate Clean Energy Canada analysis found that Europeans can choose from 21 EV models under \$40,000, while Canadians have access to just one.<sup>9</sup>

Our modelling shows that a strong EV Standard can make affordable EVs available for consumers up to 15% sooner. This is partly due to automakers’ adjusting prices across their fleets to encourage EV adoption. Greater production scale and competition then drive EV prices down even further (Figure 1).

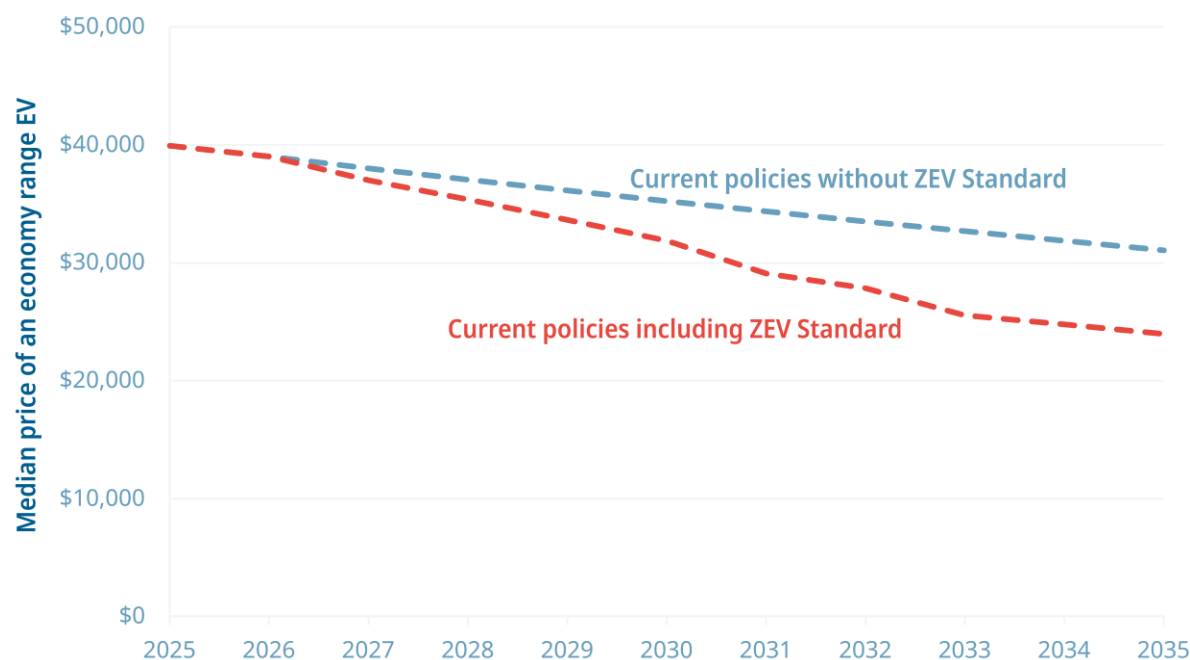


Figure 1. Modelled EV sales with and without EV Standard

With the EV Standard, stronger sales targets accelerate affordability by driving scale, competition and the introduction of lower-cost models.

<sup>7</sup> Clean Energy Canada, “Charging an EV equal to paying 40 cents a litre for gas: report” June 2024, <https://cleanenergycanada.org/charging-an-ev-equal-to-paying-40-cents-a-litre-for-gas-report>

<sup>8</sup> Clean Energy Canada, “Poll: Two-thirds of Canadians support keeping EV mandate, though many want adjustments, as EV rebate pause causes would-be buyers to wait”, September 2025, <https://cleanenergycanada.org/poll-two-thirds-of-canadians-support-keeping-ev-mandate-though-many-want-adjustments-as-ev-rebate-pause-causes-would-be-buyers-to-wait>

<sup>9</sup> Clean Energy Canada, “Missing Out”, September 2025, <https://cleanenergycanada.org/report/missing-out/>

## Protecting jobs and positioning Canada as competitive

Canada's auto industry has faced significant challenges in recent years. Between 2014 and 2024, total vehicle production in Canada, which has largely focused on vehicles powered by diesel and gasoline, has declined by more than 50%.<sup>10</sup> Canada's share of global vehicle production has also halved over the same period. Sales of conventional gasoline and diesel vehicles have been declining in Canada since 2017.<sup>11</sup>

Meanwhile, global demand for electric vehicles is surging (Figure 2). Aligning our industry with this shift is essential for protecting jobs and attracting investment.

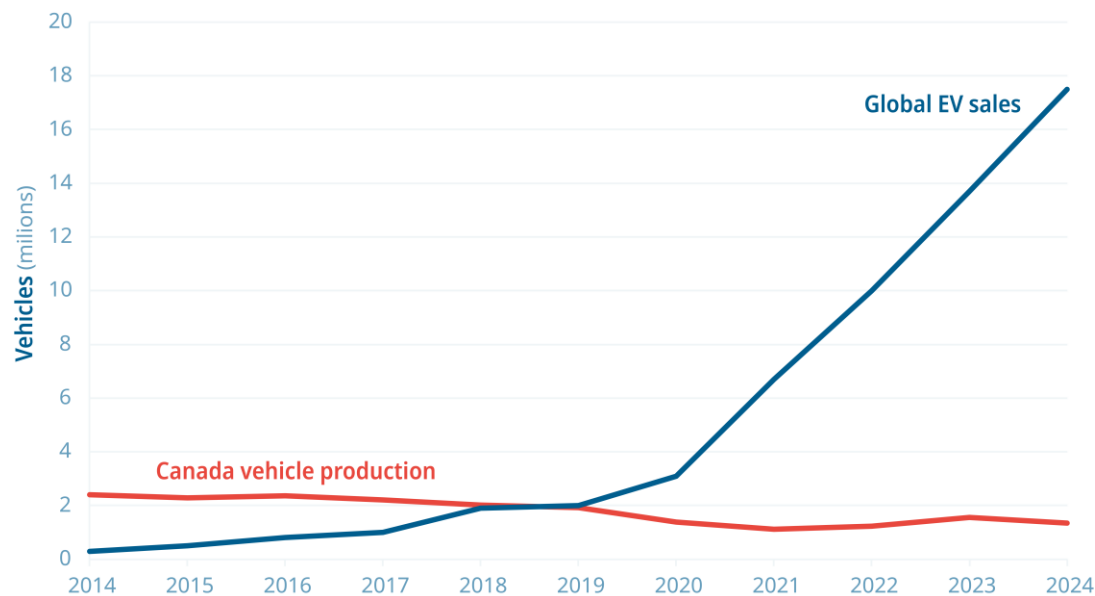


Figure 2. Canadian vehicle production compared to global EV sales

While domestic production of conventional vehicles has halved, global EV sales are surging. The EV Standard can help Canada capture a share of this growing market.

Data sources: IEA, International Organization of Motor Vehicle Manufacturers<sup>12</sup>

<sup>10</sup> International Organization of Motor Vehicle Manufacturers, “2024 Statistics: Production Statistics.” <https://oica.net/category/production-statistics/2024-statistics/>

<sup>11</sup> Government of Canada, “New motor vehicle registrations, quarterly, by geographic level,” October 2025. <https://www150.statcan.gc.ca/t1/tbl1/en/tv.action?pid=2010002501&pickMembers%5B0%5D=1.1&pickMembers%5B1%5D=3.1&cubeTimeFrame.startMonth=01&cubeTimeFrame.startYear=2017&cubeTimeFrame.endMonth=04&cubeTimeFrame.endYear=2025&referencePeriods=20170101%2C20250401>

<sup>12</sup> IEA, “Global EV Outlook 2025: Trends in electric car markets”; International Organization of Motor Vehicle Manufacturers, “Production Statistics.” <https://oica.net/production-statistics/>

The EV Availability Standard provides that alignment. It supports new opportunities in EV manufacturing, battery production and charging infrastructure. Already, over 130,000 Canadian jobs depend on the EV industry, and this could grow to 600,000 by 2035.<sup>13</sup>

Relying on alignment with U.S. policy is not a viable strategy. The current U.S. administration's rollback of EV regulations would effectively leave Canada without a framework, setting us back years. Keeping the EV Availability Standard ambitious protects domestic manufacturing capacity, supply chains and jobs, while ensuring investment decisions are not dependent on U.S. policy shifts.

---

<sup>13</sup> Electric Mobility Canada, "Electrifying progress: A complete economic outlook of the Canadian EV industry", April 2025, <https://emc-mec.ca/blog-post/electrifying-progress-a-complete-economic-outlook-of-the-canadian-ev-industry/>

# Improving the EV Availability Standard

The ongoing federal review offers an opportunity to refine the EV Availability Standard in ways that add flexibility for industry while preserving the ambition needed to deliver its benefits. The recommendations below are intended to guide that process at a high level. More detailed input is being provided through the formal consultation.

While the EV Availability Standard could be modified significantly to include mechanisms such as credits for investments across the EV supply chain, these objectives are better addressed through a dedicated, complementary industrial policy. The suggestions that follow focus on improving the flexibility of the EV standard for automakers without rewriting the regulations rulebook.

## Keep plug-in hybrids in the mix but maintain emissions integrity

Plug-in hybrids (PHEVs) can play a valuable role in Canada's EV transition.<sup>14</sup> They offer extended range for drivers concerned about charging access, are more readily adopted by certain consumer segments, and place less pressure on public charging infrastructure and critical mineral supply chains. They can also reduce compliance costs for automakers.

Under current regulations, automakers can meet a portion of their EV Availability Standard obligations using PHEVs, but this portion declines from 45% in 2026 to 30% in 2027 and 20% in 2028 and beyond. We recommend extending the 45% cap through 2030 (Table 1).

Table 1. Proposed adjustments to the PHEV cap

| Year             | PHEV cap |                        | Estimated reduction in compliance costs for automakers |
|------------------|----------|------------------------|--------------------------------------------------------|
|                  | Current  | Recommended            |                                                        |
| 2026             | 45%      | 45%                    | -                                                      |
| 2027             | 30%      | 45%                    | 1% to 3%                                               |
| 2028, 2029, 2030 | 20%      | 45%                    | 5% to 10%                                              |
| 2031 and later   | 20%      | 20%, to review in 2030 | -                                                      |

<sup>14</sup> Chandan Bhardwaj, "Why we like plug-ins: 5 reasons for sticking with hybrid passenger cars a little longer," *Pembina Institute*, June 27, 2024. <https://www.pembina.org/blog/why-we-plug-ins>

Our modelling shows that even if PHEVs represent up to 50% of all zero-emissions vehicles (ZEVs) sold by 2030, Canada can still meet its 2030 greenhouse gas (GHG) reduction targets, even accounting for variations in the amount of time a PHEV runs on electricity versus gasoline.<sup>15</sup>

Raising the cap would give automakers more flexibility and reduce compliance costs by 5-10%, without compromising emissions outcomes. About half of Canada's auto sector stands to benefit, particularly global automakers producing Canada's top-selling PHEV models.<sup>16</sup> Importantly, the regulation should continue to exclude conventional hybrids, as they make no real contribution to emissions reductions or air quality improvement.

## Unlock private investment by increasing EV charging credit cap

Canada's transition to EVs depends on building sufficient charging infrastructure, and the EV Availability Standard can help accelerate that investment.

We recommend raising the credit allocation for EV charging infrastructure to 5% of total annual EV credits after 2030 (up from the current 0%) (Table 2).

A 2024 study by Natural Resources Canada estimates that the charging requirements needed to support the federal EV sales targets will require significant capital investments by governments and private actors between now and 2040.<sup>17</sup> The study estimates that capital costs for light-duty vehicle chargers remain constant — at about \$1 billion annually — between 2025 and 2040.

About 1.5 million light-duty vehicles (passenger and light trucks) are sold in Canada each year, and we assume a similar number will be sold in 2035. Under current regulation, 100% of vehicles sold will need to be EVs. This equates to between 750,000 and 1.5 million EV credits created in 2035, depending on the share of plug-in hybrids and battery electric vehicles. Increasing the credit limit for investments in EV fast charging infrastructure up to 5% could generate between 37,500 and 75,000 credits. At a rate of one credit earned per \$20,000

---

<sup>15</sup> Jonn Axsen, Chandan Bhardwaj, and Curran Crawford, "Comparing policy pathways to achieve 100% zero-emissions vehicle sales by 2035," *Transportation Research Part D: Transport and Environment* 112 (2022). <https://www.sciencedirect.com/science/article/pii/S1361920922003145>

<sup>16</sup> Timothy Cain, "Canada's best-selling cars, trucks, SUVs, auto brands in 2025's first quarter," *Driving.ca*, April 2025. <https://driving.ca/column/driving-by-numbers/best-selling-cars-trucks-suvs-brands-canada-2025-q1>

Toyota Canada, "Toyota Canada Releases March and Q1 Sales Results." <https://www.toyota.ca/en/discover/news/2025/toyota-canada-releases-march-and-q1-sales-results/>

Timothy Cain, "Best-Selling Cars: Canada's best-selling EVs and PHEVs in 2024's first eight months", October 2024. *Driving.ca*, <https://driving.ca/column/best-selling-ev-phev-2024-first-eight-months>

<sup>17</sup> Government of Canada, "Electric Vehicle Charging Infrastructure for Canada," February 2024. <https://natural-resources.canada.ca/energy-efficiency/transportation-energy-efficiency/resource-library/electric-vehicle-charging-infrastructure-canada>



invested, earning these credits would require automakers to invest between \$750 million and \$1.5 billion in 2035 — aligning with the \$1 billion annual investment in charging infrastructure Natural Resources Canada estimates is needed. That is, increasing the EV infrastructure credit cap from 0% to 5% post 2030 would help incentivize private investment in charging infrastructure while also reducing the stringency of the EV Standard for automakers.

Table 2. ZEV infrastructure recommendations

| Year            | Infrastructure cap |                                      | Potential incremental contribution by automakers towards charging infrastructure |
|-----------------|--------------------|--------------------------------------|----------------------------------------------------------------------------------|
|                 | Current            | Recommended                          |                                                                                  |
| 2026 to 2030    | 10%                | 10%<br>(same as original regulation) | -                                                                                |
| 2031 and beyond | 0%                 | 5%                                   | ~\$1 billion annually                                                            |

## Set targets at 50% or higher by 2030

The strength of the EV Standard is what gives it credibility and impact. Moderating targets risks slowing the adoption of EVs and delaying affordability for Canadian consumers.

We recommend maintaining the 2030 target of 60% new vehicle sales as EVs, recognizing that the early years of the EV Standard are the most important for reducing EV prices and especially, health benefits. However, if adjustments are being considered, the target should not fall below 50% and the 2035 target should not be lower than 95% with appropriate adjustments to remaining years. Given compliance flexibilities, such as infrastructure and early action credits, these targets are the minimum needed to ensure Canadians have access to affordable EVs and to significantly reduce transportation-related emissions.

Canada has committed to reducing greenhouse gas emissions by 40% to 45% below 2005 levels by 2030 and reaching net-zero by 2050. Transportation is Canada’s second-largest source of emissions, with the light-duty vehicle sector emitting 84 megatonnes (Mt) carbon dioxide equivalent in 2005.<sup>18</sup> Increasing EV adoption can reduce these emissions to 50 Mt or lower by 2030, a meaningful step toward cleaning up one of the country’s most challenging sectors.

Our modelling shows that EV share of new sales must reach at least 35% to 40% by 2030 to achieve this (Figure 3). With incentives such as early action and infrastructure credits, the effective requirement is already reduced by roughly 10%. For example, the 60% target can be

<sup>18</sup> Government of Canada, “Greenhouse gas emissions,” <https://www.canada.ca/en/environment-climate-change/services/environmental-indicators/greenhouse-gas-emissions.html#transport>

met with 54% actual EV sales, with the remaining 6% satisfied through credits (10% of the 60% target). Lowering the target to 50% would allow sales as low as 45%, leaving little margin to meet Canada's emissions reduction goals.

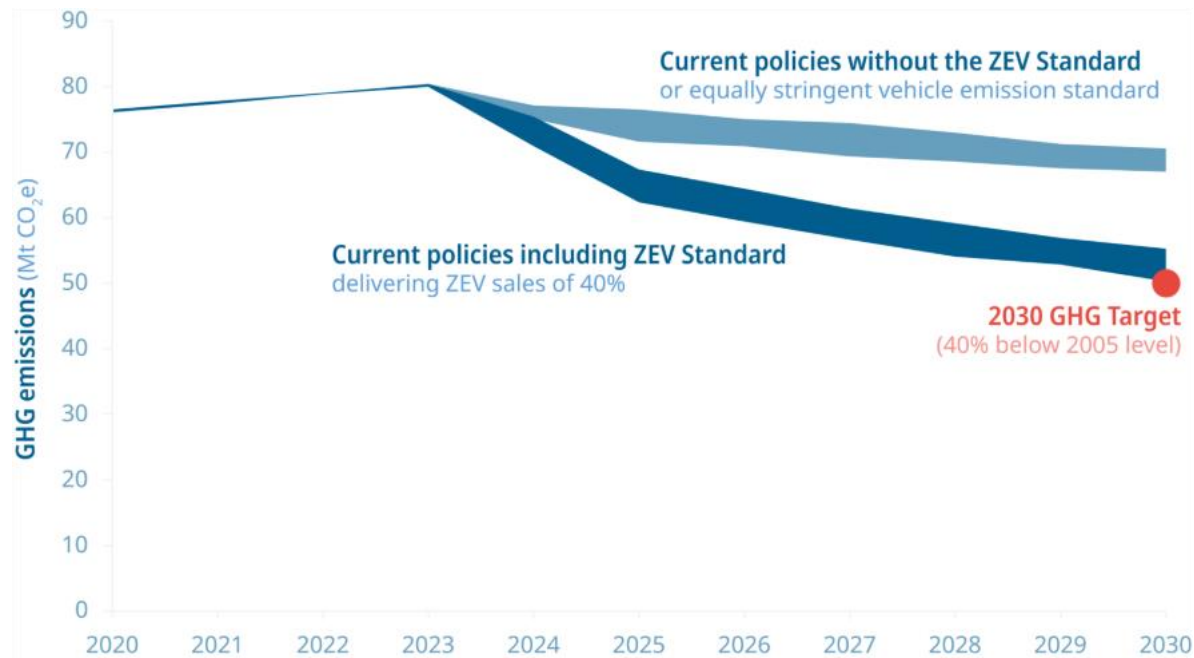


Figure 3. Canada's light-duty vehicle emissions under different policy scenarios

Without the EV Availability Standard or vehicle emissions standard, emissions fall modestly but stay far above the 2030 goal.

Source: Bhardwaj and Axsen<sup>19</sup>

## Increase transparency in EV credit trading

As Canada's EV market matures, transparency in credit trading will become increasingly important for maintaining public confidence.

Automakers should be required to report annual credit trading activity and prices, making it clear how Early Action Credits affect compliance.

California's approach offers a good example. The California Air Resources Board publishes yearly EV credit balances for each manufacturer under its ZEV Regulation. Adopting a similar

<sup>19</sup> Chandan Bhardwaj and Jonn Axsen, "How Stringent Should Vehicle Emission Standards Be? Simulating Impacts on Greenhouse Gas Emissions, Zero-Emissions Vehicle Sales, and Cost-Effectiveness." *Canadian Public Policy* 50, no. 1 (2024). <https://utppublishing.com/doi/abs/10.3138/cpp.2023-002>

The variation arises due to uncertainty over battery costs, consumer preferences, vehicle travel and annual vehicle sales.

system in Canada would ensure the EV Availability Standard remains flexible and credible, without compromising its integrity.

## Conclusion

The EV Availability Standard supports many of Canada's priorities, from industrial competitiveness to affordability, public health and climate commitments. By guaranteeing a domestic market for EVs, it attracts investment in manufacturing, battery production and charging infrastructure while strengthening energy security and economic resilience.

Weakening or abandoning the EV Standard would not protect Canada's auto sector. It would cede opportunity to competitors and deny Canadians the health, affordability and economic benefits that EVs provide.

While maintaining ambition is essential, Canada's auto sector is facing difficult economic times that require practical solutions. The government is encouraged to improve the EV Standard through targeted adjustments such as maintaining the inclusion of plug-in hybrids, increasing the EV charging credit cap, holding the 2030 sales target at a minimum of 50%, reducing the 2035 cap from 100% and improving the transparency in credit trading. The question for government is not whether Canada should electrify transportation — the world is already moving that way. The real question is whether Canada will lead or be left behind.

We have everything we need to succeed: a skilled workforce, clean electricity, abundant critical minerals and growing consumer demand. A strong EV Availability Standard ensures we make the most of these advantages and remain competitive in the Age of Electricity.