PEMBINA Institute

SUBMISSION

Regulations Amending the Passenger Automobile and Light Truck GHG Emission Regulation

Pembina Institute comments and recommendations

Submitted to Environment and Climate Change Canada

Regarding: Vehicle Emissions Standard

Contact: Adam Thorn, Director, Clean Growth | Pembina Institute

October 2026

Recommendations

The adoption of electric vehicles (EVs) is key to the successful implementation of Canada's electrification strategy, and a strong regulatory approach is one of the most cost-effective actions the government can take to increase adoption and give customers more choice when purchasing an EV. The announcement on October 21, 2026, to delay the Vehicle Emissions Standard (VES) and instead provide billions to foreign automakers eliminates this pathway in the near-term.

As a result, the Government of Canada must now develop an expansive suite of market-based actions, in addition to strengthening regulation in subsequent years, to align with its electrification strategy and meet its stated goal of reaching emissions reductions equivalent to 75% EV sales by 2035.

The Pembina Institute urges the federal government to:

- **Develop a clear and credible pathway to meeting the government's EV sales target of 75% by 2035 and growing Canada's EV market:** Given that the VES will not increase in stringency over the next four years, the government will need to do more to grow the domestic market for EVs and increase EV uptake between now and 2030. This should include completing an ambitious national charging infrastructure strategy and improving access to lower-priced EVs.
- Take action to ensure that auto manufacturers who benefit from the $2.5 billion public investment into EV production **increase access to affordable EVs for all Canadians.**
- **Implement a single fleet-wide VES target:** A single target would be more effective at reducing emissions than maintaining separate targets for passenger cars and light trucks, as it would incentivize smaller and lighter vehicles. **The government does not need to wait until 2030** to make these changes and can take steps to strengthen regulation now.
- **Set a VES stringency for 2030–2035 that will meet the EV sales target:** The government should set the stringency for years 2030–2035 to create certainty for automakers and charging providers. Our modelling shows that a VES stringency of 40–62 g/mile or lower in 2035 with an interim 2030 target of 100–105 g/mile or lower is needed to achieve the 75% target. Now that the VES is frozen until 2030, **reaching this target without additional measures will be challenging.**

Context

The Pembina Institute welcomes the opportunity to provide input on the proposed Regulations Amending the Passenger Automobile and Light Truck Greenhouse Gas Emission Regulations. As outlined in the federal government's automotive strategy announced earlier this year, the amendments repeal the Electric Vehicle Availability Standard (EVAS) and commit to introducing a stronger, uniquely Canadian greenhouse gas (GHG) emissions standard, otherwise known as a vehicle emissions standard (VES). The VES sets annual fleet-wide emissions targets for automakers, measured in grams of carbon dioxide equivalent per mile (g/mile).

Despite committing to a more stringent emissions standard in the auto strategy, on October 21, 2026, the federal government announced that the standard will remain at 2026 levels (172 g/mile) through the 2029 model year, a decision that removes the policy tool intended to drive EV uptake.[1] The government has retained its objective of 75% EV sales by 2035, creating a significant question about how it intends to achieve that outcome with several years of delayed progress.

The government has invested billions to help automakers, but this is not a substitute for regulations that encourage automakers to bring more EVs to Canadian dealerships, including lower-cost models that Canadians are missing out on. Investment in EV manufacturing is welcome, but previous investments have shown the risk of relying on automakers' commitments without ensuring lasting benefits for Canadians.

There are many effective regulatory pathways to incentivize the transition to EVs. If designed well and implemented effectively, the new standard could have achieved many of the goals of EVAS.[2] This is no longer the case. The challenge now is how the government will grow EV adoption, bring more affordable EVs to market and keep on track to achieve its goal of 75% EV sales by 2035.

---

[1] Innovation, Science and Economic Development Canada, "Prime Minister Carney and Premier Ford launch new action plan to protect workers from tariffs and strengthen Ontario industries," October 21, 2026. https://www.canada.ca/en/innovation-science-economic-development/news/2026/10/prime-minister-carney-and-premier-ford-launch-new-action-plan-to-protect-workers-from-tariffs-and-strengthen-ontario-industries.html

[2] 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/abs/pii/S1361920922003145

Chandan Bhardwaj, Jonn Axsen, and David McCollum, "Which 'second-best' climate policies are best? Simulating cost-effective policy mixes for passenger vehicles." *Resource and Energy Economics*, 70 (2022). https://www.sciencedirect.com/science/article/abs/pii/S0928765522000367

Doubling electrification requires strong regulation

The federal government has identified electrification as a key part of Canada's climate and economic strategy, committing to electrify the economy and double the electricity grid. Both the government's auto and electrification strategies are welcome and reflect an integrated approach that has been missing to date. We support this direction, but policies are needed to match this ambition and deliver the benefits of electrification for Canadians, businesses, and the economy. Commitments alone will not drive investment; strong policy will. EVAS was introduced in 2023 but never took effect, and until the VES resumes, Canada will have no regulation to increase the electrification of vehicles and turn this commitment into action.

As vehicles shift from gasoline to electricity, transportation is expected to become one of the largest sources of new electricity demand over the coming decades, driving investment in electricity infrastructure, charging networks, and the skilled workforce needed to build and maintain them. Analysis by the Canadian Charging Infrastructure Council shows that a strong VES could unlock more than $20 billion in charging infrastructure investment by 2035.[3] That growth, however, depends on creating a market for EVs and giving consumers access to more affordable vehicles. A delayed standard slows adoption and leaves transportation policy out of step with the planned expansion of electricity supply and electrification goals, putting these broader economic benefits at risk.

Canada lacks a credible pathway to meeting its climate goals

A November 2025 report from the Auditor General of Canada found that "Canada's current measures and pace of emission reductions were not enough to meet the target of reducing greenhouse gas emissions by 40% to 45% below the 2005 level by 2030."[4] The report emphasized that the government will "need to strengthen or add measures if it is to meet Canada's national and international commitments in the global effort to limit temperature rise."

Canada's transportation sector is the country's second largest source of GHG emissions. Replacing EVAS with a less stringent and now delayed standard puts Canada's climate commitments at risk. Canada's VES has been in place since 2012. Despite this, emissions from Canada's light-duty vehicle sector (passenger cars and light trucks) have remained largely

[3] The Canadian Charging Infrastructure Council, "New Standard, New Investment: Strong Vehicle Emissions Rules Will Help Unlock More Than $20 Billion in Charging Infrastructure Investment Across Canada," July 7, 2026. https://www.ccic-ccir.ca/2026/07/07/ccic-media-release-new-standard-new-investment-strong-vehicle-emissions-rules-will-help-unlock-more-than-20-billion-in-charging-infrastructure-investment-across-canada

[4] Office of the Auditor General of Canada, "Implementing the Canadian Net-Zero Emissions Accountability Act—Financial Measures," November 2025. https://www.canada.ca/en/auditor-general/our-work/audit-reports/implementing-canadian-net-zero-emissions-accountability-act-financial-measures.html

unchanged. Between 2005 and 2023, emissions stayed at roughly 82 Mt of carbon dioxide equivalent.[5] This shows that simply having the policy in place is not enough. The strength of the targets matters.

The government's Regulatory Impact Analysis Statement on the amendments estimates the net forgone GHG emission reductions to be 326 megatonnes (Mt) from the repeal of the EVAS, with a value of $94.2 billion.[6] Our modelling indicates that a VES stringency of 74 g/mile by 2035 (the government's announced 2035 standard) would result in 62 Mt fewer cumulative emissions reductions by 2035 compared with the original EVAS (Figure 1). Using Government of Canada assumptions, this represents an additional social cost of GHG emissions of over $18 billion by 2035.[7]

Other progressively stringent VES targets are also shown on Figure 1:

- 62 g/mile (needed to achieve 75% sales with EVs and plug-in hybrids)
- 40 g/mile (needed to achieve 75% sales goal with EVs only)
- 30 g/mile (needed to achieve 45% GHG reduction below 2005 levels)

Our modelling shows that, in the absence of another strong climate policy, the VES target for 2035 needs to be 30 g/mile (or lower) for Canada to achieve its 2035 goal of reducing light-duty vehicle emissions by 45% to 50% below 2005 levels (Figure 1). All these targets would lead to progressively greater cumulative emissions reductions between now and 2035, although the reductions would not be as large as the original EVAS.

[5] Government of Canada, "Greenhouse gas emissions," March 2025. https://www.canada.ca/en/environment-climate-change/services/environmental-indicators/greenhouse-gas-emissions.html#transport

[6] Government of Canada, "Canada Gazette, Part I, Volume 160, Number 33: Regulations Amending the Passenger Automobile and Light Truck Greenhouse Gas Emission Regulations," August 15, 2026. https://gazette.gc.ca/rp-pr/p1/2026/2026-08-15/html/reg2-eng.html

[7] The social cost of GHG emissions estimates the economic damages caused by emitting one tonne of carbon dioxide (or equivalent) into the atmosphere, accounting for impacts on health, agriculture, property and ecosystems. Government of Canada, "Social cost of greenhouse gas emissions," April 2023. https://www.canada.ca/en/environment-climate-change/services/climate-change/science-research-data/social-cost-ghg.html

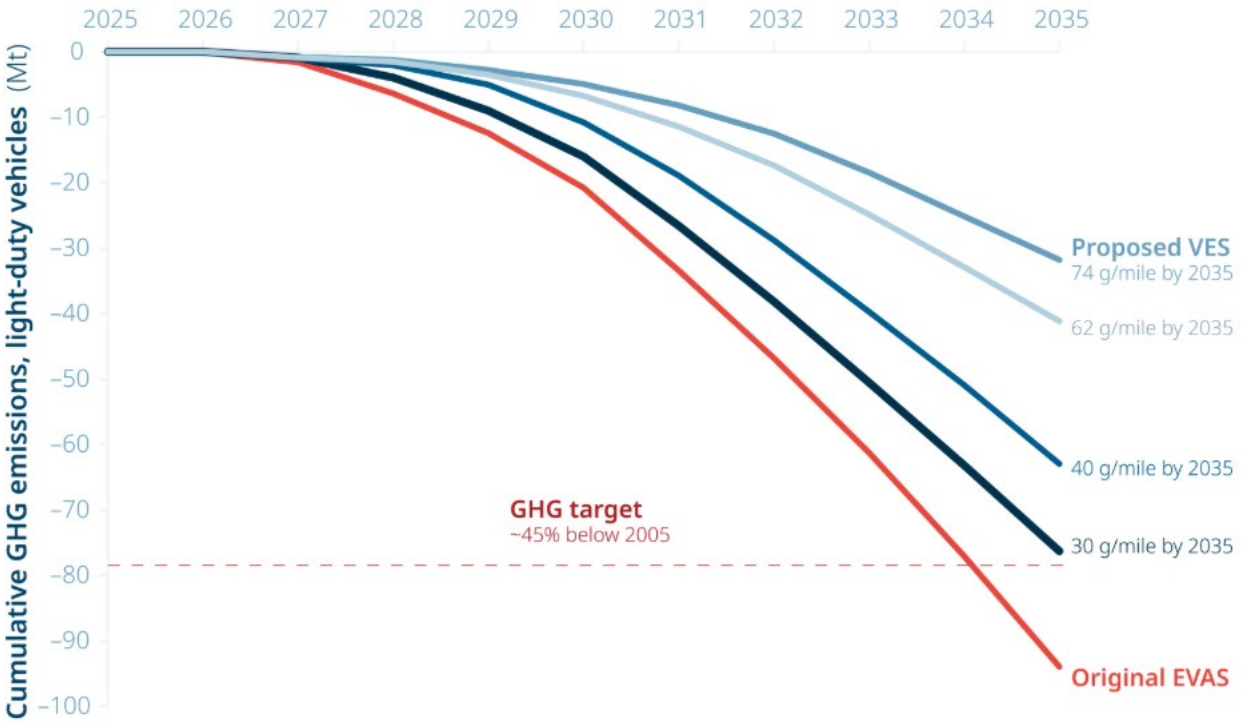


Figure 1. Cumulative GHG emissions from light-duty vehicles in Canada under the original EVAS (now repealed) compared with the proposed VES and other policy options

The government should also account for public health benefits of increased EV adoption. Every new gasoline- and diesel-powered vehicle sold contributes to air pollution over its operating lifetime, increasing the risk of illness and premature death. Health Canada estimates that traffic-related air pollution contributes to approximately 1,200 premature deaths and $9.5 billion in associated health-related economic costs annually.[8] Using Health Canada's methodology, The Atmospheric Fund estimates that EVAS could have delivered more than $90 billion in health benefits and prevented up to 11,000 premature deaths over 25 years.[9]

Canada lacks policies to deliver transportation affordability for Canadians

The federal government has made affordability a key policy objective. Transportation is one of the largest household expenses, yet Canadians remain exposed to volatile gasoline prices driven by global oil markets and supply disruptions. Rising fuel costs affect households both at the pump and through higher costs for transporting everyday goods. While the government

[8] Health Canada, *Health impacts of traffic-related air pollution in Canada* (2022). https://www.canada.ca/en/health-canada/services/publications/healthy-living/health-impacts-traffic-related-air-pollution.html

[9] The Atmospheric Fund, "Cancelling EV sales targets could cost 11,000 Canadian lives, climate and health experts warn," July 10, 2025. https://taf.ca/cancelling-ev-sales-targets-could-cost-11000-canadian-lives-climate-and-health-experts-warn/

introduced temporary fuel-tax relief to ease costs for drivers, increasing access to EVs would provide more substantial and lasting reductions in transportation expenses. Clean Energy Canada estimates that the federal fuel-tax suspension saved the average driver approximately $17 per month, compared with roughly $250 in monthly ownership savings from switching to an EV. [10]

The government's own analysis estimates that repealing the EVAS would result in $53.8 billion in forgone energy savings and a net social cost of $90.3 billion between 2026 and 2050,[11] even before accounting for health impacts. A strong VES would encourage automakers to produce and sell lower-cost EV models, giving Canadians access to vehicles with substantially lower fuel and maintenance costs.

Globally, EVs are increasingly available to consumers at prices below $40,000.[12] In Canada, however, the average EV price remains around $65,000, limiting access to more affordable options.[13] The Electric Vehicle Affordability Program helps reduce upfront costs for consumers, however, stronger VES targets encourage automakers to produce and sell lower-cost EV models, helping drive the average price below $45,000 by 2035 (Figure 2). For example, under the 30 g/mile scenario, the average EV price in 2035 is projected to be just over $40,000, compared to just over $46,000 under the 74 g/mile scenario, a difference of around 12% per vehicle. While declining EV prices are largely driven by external factors such as global battery cost reductions, more stringent VES targets can contribute to additional price declines as automakers adjust pricing strategies and expand the availability of lower-cost EV models.

[10] Clean Energy Canada, "Gas tax cut will save a typical driver $17 a month for five months. EVs save $250 a month indefinitely," April 14, 2026. https://cleanenergycanada.org/gas-tax-cut-will-save-a-typical-driver-17-a-month-for-five-months-evs-save-250-a-month-indefinitely/

[11] Government of Canada, "Canada Gazette, Part I, Volume 160, Number 33: Regulations Amending the Passenger Automobile and Light Truck Greenhouse Gas Emission Regulations," August 15, 2026. https://gazette.gc.ca/rp-pr/p1/2026/2026-08-15/html/reg2-eng.html

[12] IEA, "Global EV Outlook 2025," https://www.iea.org/reports/global-ev-outlook-2025/trends-in-electric-car-affordability

[13] AutoTrader.ca, "2026 Q1 Price Index." https://www.autotrader.ca/editorial/price-index/

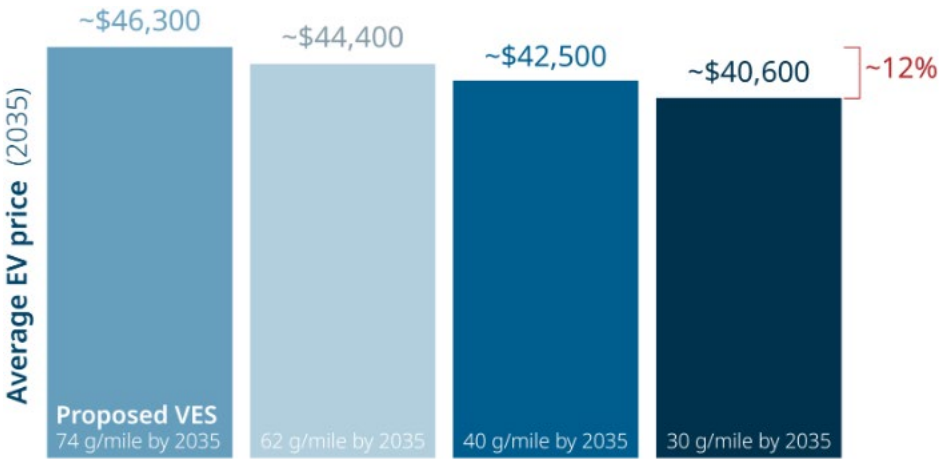


Figure 2. Projected average EV prices in 2035 under different VES scenarios

Recommendations

Develop a clear and credible pathway to meeting EV sales targets and growing Canada's EV market

Our modelling of the stringency needed to meet the government's 2035 EV sales target was based on a business-as-usual case that included all federal incentives in place at the time. Under these conditions, the target was achievable, and automakers were well positioned to meet the standard. The government's decision to pause the VES for four years has fundamentally changed that trajectory. Rolling back a policy that regulates vehicle emissions removes the regulatory pressure on automakers to bring cleaner vehicles to the Canadian market and the long-term mechanism to make sure there are more options for consumers. To make up for lost ground, the government must develop a clear and credible pathway for how it will build domestic demand to meet its sales target. A plan to grow Canada's EV market should include additional measures to increase competition among automakers and give Canadians more access to EVs.

Purchase incentives and investments in manufacturing are welcome, but the status quo has yet to yield lasting results, and by greatly reducing the ambition of the VES, the government will need to do more. In addition to maintaining the EV purchase incentives and continuing to invest in charging infrastructure and manufacturing, the government should complete an ambitious national charging infrastructure strategy so that Canadians across the country can have access to reliable charging. Canada should also expand access to globally available, lower-priced EVs. The February auto strategy outlined recent steps in this direction, opening up the market to a small percentage of Chinese-made EVs. We should build on this momentum by recognizing European safety and environmental standards, so that models already approved for European markets can be sold in Canada more easily.

The federal government has invested billions of dollars in EV and battery manufacturing, but because demand has been uncertain, facilities have closed and projects have been scaled back or cancelled. Purchase incentives and investment in charging alone cannot carry out the transformation needed to electrify our vehicles; they should work alongside a regulatory standard. However, because the VES is on pause until 2030, the government needs to pull additional levers to fill the gap. The federal government has committed to electrification. Now industries and Canadians need a credible plan to build a domestic EV market so that public investments deliver real benefits for workers, communities, and consumers.

Implement a single fleet-wide VES target for passenger vehicles to incentivize vehicle downsizing

The growing global market share of large, heavy sport utility vehicles (SUVs) and other light-duty trucks is increasing the carbon and energy intensity of new passenger vehicles. This trend is offsetting some of the benefits of efficiency improvements, including electrification (Figure 3). Existing GHG regulations can inadvertently reinforce this trend. In particular, attribute-based vehicle emissions standards, such as those currently used in Canada, typically set less stringent requirements for larger vehicles.

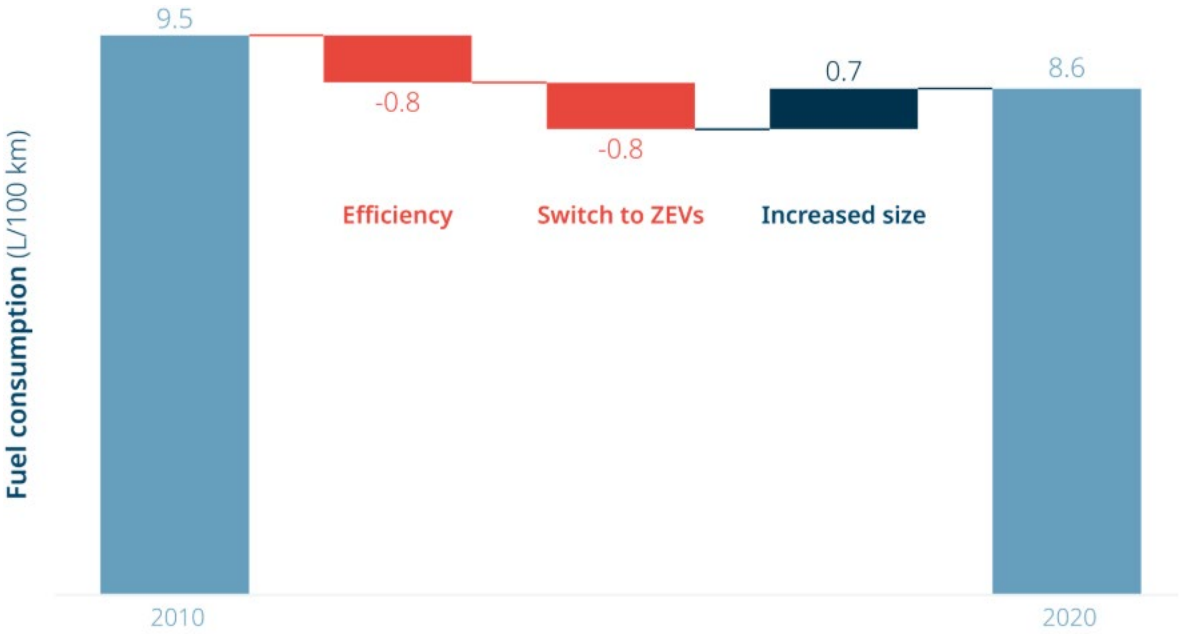


Figure 3. Fuel consumption trends for new light-duty passenger vehicles sold in Canada

Data source: Axsen and Bhardwaj (2026)

A revised VES should incentivize vehicle downsizing, or at a minimum slow or reverse the rapid growth in vehicle size. Our research, conducted in collaboration with Simon Fraser University,

shows that a neutral fleet-wide VES can deliver more emissions reductions than attribute-based standards can, while slowing the shift toward larger, heavier vehicles.[14]

In Canada, a single fleet-wide VES target would be more effective at reducing emissions than maintaining separate targets for passenger cars and light trucks, as is currently the case. The government does not need to wait until 2030 to make these changes and can take steps to implement a single fleet-wide VES now.

Set a stringency of 40-62 g/mile or lower in 2035 and 100-105 g/mile in 2030 to meet the 75% EV sales target

As noted, the enhanced vehicle emissions standard is intended to put Canada on track to achieve 75% EV sales by 2035. Given the pause, the government should provide certainty for automakers and charging providers and set the stringency for years 2030–2035. Our modelling indicates that to achieve the 75% goal by 2035 with high confidence, the VES target would need to be 40 g/mile or lower with an interim 2030 target of 100–105 g/mile or lower (Figure 4)**.** More stringent targets encourage EV uptake and limit compliance pathways that allow continued sales of higher-emitting vehicles.

By contrast, a VES target of 74 g/mile is projected to result in less than 50% battery EV sales by 2035. Even when plug-in hybrid vehicles are included, total zero-emission vehicle (ZEV) market share would reach only 64%, well below the 75% target for 2035. If plug-in hybrid vehicles (and not just battery EVs) are included, the VES target needs to be 62 g/mile (or lower) to have a reasonable chance of approaching the goal of 75% ZEV share by 2035.[15] While plug-in hybrid vehicles can play a constructive role earlier in the transition, they are a bridge technology rather than a zero-emission end state. Battery electric vehicles should remain the focus of the transition to decarbonizing the light-duty vehicle sector.

This distinction reflects both confidence and long-term direction. At 40 g/mile, the modelling shows near certainty of achieving 75% sales, consisting of fully electric vehicles, and provides a clear signal that vehicles with tailpipe emissions, including plug-in hybrids, must phase out as the market matures. At 62 g/mile, the probability of reaching 75% sales falls to roughly 60%, as compliance pathways remain that could delay a full shift to electric vehicles.

---

[14] Jonn Axsen and Chandan Bhardwaj, "Policy can downsize passenger vehicles and cut climate emissions," *Environmental Research Letters* (2026). https://iopscience.iop.org/article/10.1088/1748-9326/ae41d0

[15] The uncertainty in this case stems from the fact that different combinations of plug-in hybrid electric vehicle and battery electric vehicle market share could be used to achieve the 75% target. Automakers can choose different mixes of technologies (battery electric vehicles, plug-in hybrid electric vehicles, hybrid electric vehicles and internal combustion engine vehicles) to comply with the VES targets that are set. For example, a 62 g/mile target can be achieved with 40% battery electric vehicles and 35% plug-in hybrids. A more stringent (lower) VES target will encourage more EV sales.

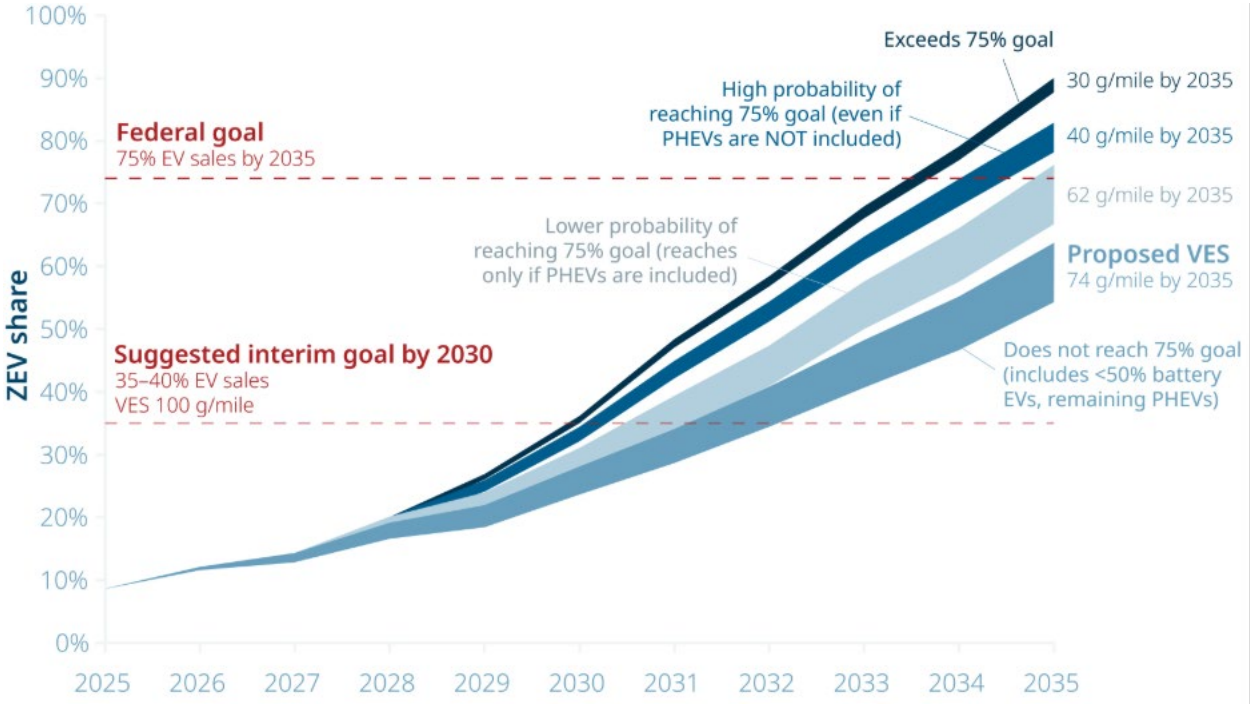


Figure 4. Projected zero-emission vehicle uptake under various emission scenarios

Canada's auto industry can meet a strong regulation

The VES offers automakers greater flexibility to reduce emissions in the most cost-effective pathway. This could be through improving fuel economy in internal combustion engines, redesigning components (e.g., refrigeration equipment or air conditioning systems), or increasing sales of zero-emission vehicles like battery electric or plug-in hybrid electric models.[16] The key questions are therefore not only if the VES offers adequate flexibility that Canada's auto industry can comply with the emissions regulation proposed, but whether that regulations emissions trajectory is ambitious enough to achieve the policy's stated electrification and climate objectives.

A common concern with any policy change in this area is its impact on automakers. Our analysis shows that automakers can easily meet a 2030 standard of 120 g/mile by continuing to make improvements at the same pace as the last decade and using compliance flexibilities that are currently available under the VES regulations.[17] This means that automakers are on track to achieve 30% EV sales by 2030, which is in line with global trends. Our analysis also shows that

[16] The regulations allow companies to report 0 g/mile for electric vehicles, fuel cell vehicles, and the electric portion of plug-in hybrid vehicles (PHEVs) (when PHEVs operate as electric vehicles).

[17] Chandan Bhardwaj, *Is the Auto Industry on Track?: Examining auto sector compliance pathways for achieving the 2030 vehicle emissions target*. (Pembina Institute, 2026). https://www.pembina.org/pub/auto-industry-track

with a modest increase in EV sales achieving 35% sales by 2030, or selling more smaller cars, automakers can meet a more stringent standard of 100–105 g/mile in 2030, a critical interim milestone for reaching the government's 75% EV sales target by 2035. However, with the government's recent announcement to freeze the standard at 172 g/mile from now until model year 2029, without additional measures to increase EV uptake, it will be very challenging for automakers to meet the 2030 and 2035 standards that will be needed.

Conclusion

The Pembina Institute appreciates the opportunity to provide written comments on the proposed regulations. We look forward to continued engagement with the federal government to ensure that future regulations are an effective driver of affordability, competitiveness and emissions reductions.