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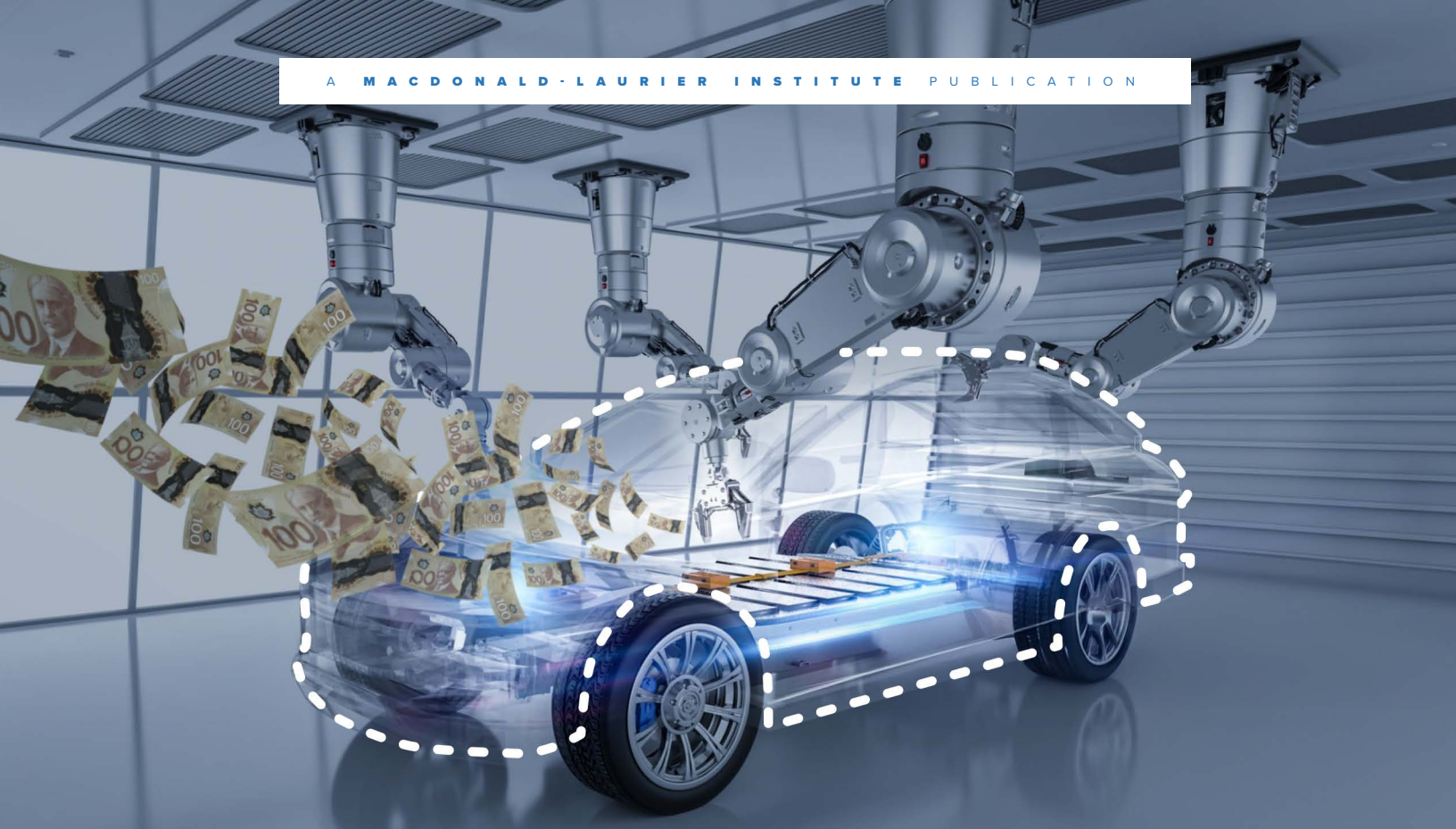

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SUBSIDIES without MARKETS

Canada's unravelling EV strategy

September 2025

15 MLI
TRUE NORTH
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Canada's $52-billion effort to build a domestic electric vehicle (EV) industry has so far failed to deliver on its promises. Designed as a bold plan to secure a full EV supply chain, from mining and processing to batteries and assembly, the strategy has stumbled under the weight of subsidy-driven, top-down industrial policy.

The federal, Ontario, and Quebec governments set out to transform Canada's auto sector, leveraging critical minerals and clean electricity. Large projects included Stellantis-LG's NextStar plant, Volkswagen's gigafactory, Honda's EV supply chain, and Northvolt's battery facility. Cathode and materials plants from Ford, GM, and Umicore were also part of this transition initiative, with bold job creation forecasts for 2030. Yet as of 2025, many projects have been delayed, downsized, or cancelled.

Northvolt's collapse cost Quebec over $300 million, Honda postponed its project by at least two years, and Lion Electric entered creditor protection. The Parliamentary Budget Office estimates that federal subsidies for major plants could take 20 years to break even, not the five years earlier promised. With public spending averaging $4.5 million per direct job, the fiscal returns are far weaker than advertised.

The EV market remains subsidy dependent. When federal and provincial purchase incentives were paused in 2025, sales dropped from 18.3 to 8.7 per cent of new registrations. Surveys show Canadians view EVs as unaffordable without rebates, raising doubts about mandates leading to rapid adoption. Ottawa has already delayed the 2026 zero-emission vehicle mandate by a year, acknowledging that sales cannot meet targets under current conditions.

North American battery production costs remain 20 per cent higher than China's, while global manufacturing capacity exceeds demand. As a late entrant, Canada lacks both cost advantages and scale. By tying its strategy to US incentives under the *Inflation Reduction Act*, it has exposed itself to foreseeable risks from policy reversals south of the borders.

Beyond subsidies, the plan ignored structural barriers. Mining projects critical to EV batteries remain stalled by permitting delays averaging nearly 18 years. Workforce shortages persist, while colleges are still trying to expand training programs. Governments

attempted to build the entire EV ecosystem at once rather than sequencing it around strengths. Politicians received immediate credit from headline announcements, while costs fell on taxpayers. Bureaucracies were rewarded for program size rather than outcomes, encouraging over-optimistic forecasts and weak accountability.

Early warning signs, such as sales collapses after rebate pauses, cancelled projects, mirror patterns from failed past industrial policies worldwide. Subsidies distorted market signals, encouraging investment driven by government support rather than consumer demand. Entering a mature industry already dominated by global incumbents, Canada positioned itself as a subsidy-dependent follower rather than a competitive leader.

A fundamental policy shift is needed. Instead of steering industries from the top down, governments should create conditions for competitive and self-sustaining investment. This means concentrating on a few priorities:

- Fix bottlenecks: Streamline permitting and approvals to shorten project timelines and create a level playing field.
- Build foundations: Invest in enabling infrastructure and workforce training that support productivity across multiple sectors.
- Foster innovation: Direct R&D support toward early-stage technologies, not subsidies tied to specific firms.
- Keep interventions disciplined: Use targeted, temporary measures only when foreign subsidies distort markets, with clear sunset clauses.

By moving away from subsidies and mandates toward enabling conditions and selective, time-limited interventions, Canada can encourage investment that is economically viable and more politically resilient. As it stands, its EV plan risks becoming a case study in how not to do industrial policy. **MLI**

Les 52 milliards de dollars investis *par le Canada en vue de développer une industrie des véhicules électriques n'ont pas encore répondu aux attentes. Le projet ambitieux de concevoir une chaîne d'approvisionnement intégrée – englobant l'extraction et le traitement des minerais, la fabrication de batteries et l'assemblage – vacille sous le poids d'une politique industrielle imposée d'en haut et tributaire des subventions.*

Ottawa et les gouvernements de l'Ontario et du Québec devaient transformer le secteur en tirant parti des minéraux critiques et de l'électricité propre. Parmi les grands projets, citons l'usine NextStar (Stellantis et LG), la « gigafactory *» de Volkswagen, la chaîne de Honda et l'usine de Northvolt (batteries). Les usines de cathodes et de matériel de Ford, GM et Umicore contribuent aussi à cette transition avec de vastes objectifs d'emplois pour 2030. Or, en 2025, il y a eu de multiples retards, restructurations ou annulations.*

La faillite de Northvolt a coûté plus de 300 millions de dollars au Québec, Honda a reporté son projet d'au moins deux ans et Lion Electric a demandé la protection contre ses créanciers. Selon le Bureau parlementaire du budget, les subventions accordées aux principales usines pourraient mettre 20 ans à devenir rentables, au lieu des cinq escomptés. Comme les dépenses publiques atteignent 4,5 millions de dollars par emploi direct créé, les retombées fiscales sont considérablement inférieures aux promesses.

Ce marché reste tributaire des subventions. En 2025, après la mise sur pause des incitations gouvernementales, les ventes sont passées de 18,3 % à 8,7 % des nouvelles immatriculations. Selon les sondages, les véhicules électriques sont inabordables sans rabais à l'achat – ce qui suscite des doutes quant à leur adoption rapide. Le reconnaissant, Ottawa a déjà reporté d'un an son mandat de 2026 sur les véhicules zéro émission.

Les batteries coûtent 20 % de plus qu'en Chine à produire, malgré la surcapacité mondiale. Le Canada, dernier venu sur ce marché, n'a donc bénéficié d'aucun avantage de coûts ou d'économies d'échelle. En liant sa stratégie aux incitations de la Loi sur la réduction de l'inflation américaine, il s'est exposé au risque d'un éventuel renversement de politique au sud.

L'objectif fait aussi abstraction des obstacles structurels : on accorde aux mines près de 18 ans pour soutenir la production de batteries, et la pénurie de main-d'œuvre persiste, tout comme les reports des programmes de formation. Les gouvernements ont tenté de bâtir l'écosystème d'un coup, plutôt que de le synchroniser avec les forces en place. Puis, on a immédiatement applaudi les annonces politiques, alors que les coûts incombent aux contribuables. Enfin, on a récompensé les bureaucraties pour la taille des programmes plutôt que pour leurs résultats – suscitant trop d'optimisme et pas suffisamment d'obligation redditionnelle.

L'effondrement des ventes et l'annulation des projets après la mise sur pause nous rappellent les échecs des politiques industrielles mondiales précédentes. Les subventions faussent les signaux du marché en favorisant les investissements motivés par le financement public plutôt que par la demande. En entrant dans un secteur mature déjà dominé par des acteurs mondiaux, le Canada est devenu un suiveur subventionné plutôt qu'un meneur concurrentiel.

La politique doit changer du tout au tout. Au lieu de diriger les industries, les gouvernements doivent favoriser les investissements concurrentiels et autosuffisants en se concentrant sur quelques priorités seulement :

- *Éliminer les goulots d'étranglement : rationaliser les processus d'approbation pour accélérer les projets et instaurer des règles du jeu équitables.*
- *Poser les fondations : investir dans les infrastructures et la formation aptes à stimuler la productivité multisectorielle.*
- *Promouvoir l'innovation : orienter la R&D de manière à appuyer des technologies émergentes et non pas des entreprises précises.*
- *Assurer la discipline des interventions : en usant de mesures ciblées*

temporaires – accompagnées de dispositions de caducité – uniquement pour les marchés distordus par des subventions étrangères.

En remplaçant les subventions et les mandats par des modalités et des interventions sélectives et limitées dans le temps, le Canada arrivera à favoriser des investissements économiquement viables et politiquement solides. Sinon, son plan actuel risque d'être un très mauvais exemple de politique industrielle. **MLI**

Introduction

Governments often seek to "build the industries of the future" through large-scale investments, incentives, and mandates. While some initiatives succeed, many fail because they back the wrong technologies, move at the wrong time, or misjudge market demand. Canada's ongoing attempt to develop an electric vehicle (EV) sector offers a clear case study of these risks.

Since 2019, federal and provincial governments have committed over $52 billion in subsidies, tax credits, and direct spending to create a full EV supply chain, from mining and battery production to vehicle assembly. Political leaders have framed the strategy as a national economic and environmental project, with Prime Minister Justin Trudeau promising to make Canada "a global leader on electric vehicles" (PMO 2023a) and Industry Minister François-Philippe Champagne calling it "a win for the economy, the environment and Canadian jobs" (ISED 2025).

Canada's troubled EV plan perfectly illustrates why industrial policies so often underperform, and what governments should do instead to support sustainable economic growth and innovation. While the program's full effects may not be clear until the late-2020s or later, early signs such as cost overruns, delays, and misaligned incentives were visible even before production began.

While the EV plan will have clear economic impacts, the policy behind it is driven by climate goals (i.e., reducing greenhouse gas emissions), along with a desire to maintain employment as the industry moves away from internal combustion-based vehicles. Its economic success, however, will ultimately determine whether Canada meets its transportation emission targets and manages a stable transition for the auto sector workforce.

Some defend EV industrial policy on national security grounds, arguing it reduces reliance on Chinese-dominated supply chains and strengthens economic resilience (Canada 2024; Donovan, Nikoladze, and de Kruijf 2025). That concern is reasonable. But an industry dependent on subsidies is not more secure. Resilience comes from being competitive – less exposed to any one player – and not reliant on government support.

It's important to note that electric vehicles represent an important technological shift with real potential to reduce emissions and drive innovation However, the flawed design and execution of Canada's industrial policy threatens to undermine the merits of the technology. The concern is that poorly structured subsidies and mandates risk sabotaging both economic competitiveness and the long-term adoption of EVs, rather than supporting them.

Canada's EV strategy: Ambition meets reality

The promise

Canada launched an ambitious EV strategy anchored by major projects in Ontario and Quebec: Stellantis–LG Energy's plant, Volkswagen's gigafactory, Northvolt's battery facility, Honda's supply chain, and cathode and materials plants from Ford–EcoPro–SK On, GM–POSCO, and Umicore. Smaller projects included Volta Energy, Lion Electric, and Nova Bus.

As shown in Table 1, the federal government, along with Ontario and Quebec, committed more than $52 billion in subsidies, tax credits, and related supports, alongside $3 billion in EV rebates, $1.2 billion for charging infrastructure (Clean Energy Canada 2025), and $6.8 billion[1] for mining projects, (partly for EV battery materials). The goal was to turn Canada into an EV "superpower," leveraging its minerals and clean electricity.

The estimated cost of the subsidies per direct job is roughly $4.5 million[2], in line with estimates of $4–5 million (Mintz 2024); (Hinton 2024). Projections for total employment (direct and indirect) ranged from 60,000 to 250,000 jobs by 2030 (Trillium Network and Clean Energy Canada 2022), a figure also cited in the federal government's Sustainable Jobs Plan (NRCan 2023a).

TABLE 1: Major announced projects and government support

Project / company	Government support[a] ($billions)	Estimated direct jobs created
Stellantis–LG (NextStar)	18.6	2,500
Volkswagen–PowerCo	16.7	3,000
Northvolt Battery Plant	8.3	3,000
Honda EV Supply Chain	5.0	1,000
Ford–EcoPro–SK On	0.6	345
GM–POSCO	0.3	200
Umicore Battery Materials	1.0	600
Volta Energy	0.2	260
Lion Electric Battery Assembly	0.1	285
Nova Bus[b]	~0.0	-[c]
Ford Oakville EV Retrofit	0.6	-[c]
Stellantis Assembly Retooling	1.0	-[c]
Totals	**52.4**	**11,190**

Notes and sources:
[a] Of the dollar total, 21 per cent is construction support, 5 per cent investment tax credits, and 74 per cent production subsidies. [b]Rounded – support was $30 million; [c]No direct job created numbers found.

Early outcomes

As of August 2025, results are falling short of the promises. A few facilities (e.g., Stellantis–LG's module line, Nova Bus) are operational, but most large plants are delayed. The Parliamentary Budget Office (PBO) estimates it could take 20 years for Ottawa to break even on key subsidies.

While it is still somewhat early, to date the government's EV strategy is underperforming, as shown in Table 2. Project execution is riskier than expected, fiscal payback has increased from 5 to 20 years, and promised new jobs are delayed. Consumer demand is fragile, tied to unstable government subsidies, while North American battery costs remain higher than global competitors in an already oversupplied market.

Project delays and failures

Despite significant pledged subsidies, several flagship EV projects have faltered. Announced facilities have been delayed, scaled back, or cancelled outright. These setbacks show the risks of subsidy-driven industrial policy (Table 3).

TABLE 2: Objectives vs. current outcomes

Metric	Government objective	Latest observation	Assessment
Public subsidies	Anchor EV supply chain with large, performance-based subsidies	PBO estimates $43.6B for three projects alone (over 2022–2033); total public support is over $52B[a]	High fiscal exposure. Transparency improved but still incomplete
Fiscal payback	Rapid fiscal payback (~5 years for VW).[b]	PBO: estimates ~20 years to break even on two key subsidies[b]	Off-track. Payback is long and sensitive to market conditions
Direct job creation	Thousands of "good jobs" per plant	Projects promise 3,000 (VW), 2,500 (Stellantis–LG), 600 Umicore, 1,000 Honda (postponed ~2 years)[c,d,e,f]	Promises exist, but timelines and risk have shifted materially
Project execution	On-time delivery of plants	Multiple projects (Honda, Umicore, GM, Ford) have experienced significant delays or strategy changes	Greater execution risk. Projects face delays
Consumer demand	Rising steadily to support domestic capacity	New registrations fell from 14.6% in 2024 to 8.7% in Q1 2025 after federal/provincial purchase incentives paused[g]	Demand is soft and very sensitive to incentives
Incentive policy stability	Consistent purchase incentives to support uptake	Federal and B.C. ZEV rebates paused for redesignh; Quebec has reduced and restructured its programsi, causing sales volatility	Incentives remain a critical but unstable driver of demand; policy changes have an immediate impact on market activity
Battery competitiveness	Cost parity with leading regions	North America's battery costs at $123/kWh are significantly higher than China's at $US94/kWh[j]	Structural cost gap. Subsidies bridge the gap but don't erase it
Global context	Capacity aligned with demand	2023: ~2.2–2.5 TWh manufacturing capacity vs ~0.75 TWh demand; announced capacity pipeline to > 9 TWh by 2030[k]	Overcapacity risk. Late-entry plants face margin pressure

Sources: *[a]PBO 2024; [b]PBO 2023; [c]PMO 2023b; [d] Canada 2023a; [e]ISED 2023c; [fHughes] 2025; [gStatsCan] 2025b; [h]Transport Canada 2025; British Columbia 2025; [i]Quebec 2025; [j]BloombergNEF 2024; [k]IEA 2024.*

Northvolt's collapse is especially telling. Once considered a cornerstone of Quebec's EV battery hub, the project has now been cancelled. The Quebec government has lost its $270 million equity investment and has recovered so far $200 million of a $260 million loan tied to the project.

TABLE 3: EV project delays and cancellations

Company / project	Issue	Timeline / status
Honda[a]	EV supply chain project delayed, May 2025	At least 2 years
Northvolt[b]	Quebec battery plant cancelled; $270 million provincial investment lost, $200 million of a $260 million loan has been recovered	Cancelled 2025
Umicore[c]	EV battery materials plant halted mid-2024	Indefinite
Ford[d e]	Cathode-materials plant delayed twice, most recently in Aug 2024; Oakville EV assembly plans also dropped in July 2024	Completion date moved from early 2026 to sometime in 2027
GM[f]	EV van production halted April 2025	Restart expected later in the year at lower volumes
Lion Electric[g]	Filed for creditor protection December 2024	Only school bus assembly and service for Quebec market

Sources: *[a]Hughes 2025; [b]Dion 2025a; [c]Stewart 2025; [d]Randall 2024; [e]Yakub 2024; [f]Canadian Manufacturing 2025; [g]Dion 2025b; Traugott 2025.*

Fiscal vs. economic cost of Canada's EV subsidy commitments

The fiscal cost, or direct budgetary outlay, of the governments' commitments is $52.4 billion. However, economists also calculate the economic cost, which includes foregone investment returns. At a 3 per cent return, this adds $7.1 billion, raising the total to $59.5 billion.

Assumed annual return	Fiscal outlay ($billions)	Opportunity cost (PV) ($billions)	Economic cost ($billions)
2%	52.4	5.1	57.5
3%	52.4	7.1	59.5
4%	52.4	8.9	61.3

Note: The opportunity cost is not an additional cash payment. It is the value of investment returns foregone if public funds are used for subsidies instead of debt reduction or other investments. See Appendix B for calculation detail.

EXAMPLES

Hospitals: At $300 million per medium-sized hospital, the $7.1 billion opportunity cost could fund about 24 such facilities across Canada.

Interest savings: Applied to reduce federal debt at a 3.5 per cent borrowing rate, it would save taxpayers about $249 million in annual interest costs.

WHY THIS MATTERS

These comparisons show the trade-offs of large subsidy commitments, costs that could otherwise fund major health infrastructure or reduce ongoing debt burdens.

These failures highlight the vulnerability of public subsidies when projects are subject to shifting market conditions, corporate bankruptcies, and changing EV demand. The September 2025 pause of the 2026 Zero-Emission Vehicle (ZEV)mandate reflects efforts to mitigate financial strain and industry pressure.

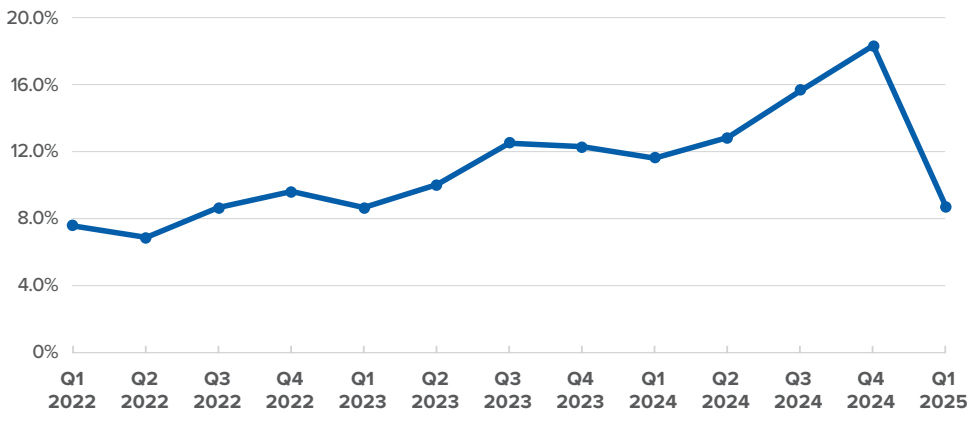
Demand and mandates

EV demand is highly sensitive to purchase incentives. Figure 1 shows when subsidies were paused, zero-emission vehicle (ZEV) sales fell from 18.3 per cent in late 2024, to 8.7 per cent in early 2025 (Statistics Canada 2025b).

Consumer surveys from Abacus, J.D. Power, and IPSOS confirm that Canadians are highly price-sensitive, with EVs priced much higher than internal combustion engine (ICE) vehicles (J.D. Power 2025; Braid 2025; Yakub 2025). Without incentives, many consumers view EVs as unaffordable. As one automotive analyst put it, "EVs are still much pricier than internal combustion engine vehicles…[and]…without those incentives, buying an EV is a far more expensive choice" (Hossain 2025).

Trends show that EV demand in Canada is not self-sustaining. This is troubling because the government's EV plan requires steady growth in sales to meet mandate targets and support large investments. Without cost-competitiveness, demand will remain dependent on subsidies and vulnerable to sharp declines. The September 2025 federal decision to waive the 2026 ZEV

FIGURE 1. Market share of ZEV to all light duty vehicles sold in Canada



Source: *Statistics Canada 2025a, Table 20-10-0025-01.*

mandate for one year acknowledges that current sales cannot meet regulatory targets without heavy reliance on subsidies.

Mandates and auto sector concerns

Only the federal, BC, and Quebec governments have EV sales mandates. Table 4 shows their relative targets, though definitions between the provinces differ. Quebec includes conventional hybrids towards its targets whereas BC and the federal government do not.

Table 4: Zero-Emission Vehicle (ZEV) sales mandates by jurisdiction

Jurisdiction	2026 target	2030 target	2035 target
British Columbia	26%	90%	100%
Quebec[a]	32%	85%	100%
Canada	20%[b]	60%	100%

Source: [a]*Jarratt 2025;* [b]*Update (September 5, 2025): The federal government delayed the 2026 ZEV mandate by one year and launched a 60-day review to "reduce costs."*

These mandates assume steady growth in consumer demand, yet recent sales declines following subsidy reductions suggest the targets are not aligned with market conditions. The temporary suspension of the federal 2026 target highlights this misalignment. Automakers and dealer groups warn that demand is not keeping pace (Blanchfield 2025). As the CEO of the Canadian Vehicle Manufacturer's Association noted: "The regulated targets [in BC] are already so unrealistic that dealerships are facing vehicle inventory restrictions" (Kingston 2025). High purchase prices and limited charging availability all add to the challenge.

The problem is made worse by recent US policy reversals. Washington has eliminated federal EV purchase subsidies and moved to block California's stricter mandate. As a result, Canada risks pursuing tougher requirements as its largest trading partner reverses course (Ford 2025). Rather than boosting competitiveness, Canada's mandate adds costs for automakers, forcing them either to buy credits from Tesla or cut back on gas-powered vehicle sales (Blanchfield 2025). This raises financial risks and concerns that industrial policy is relying on regulation instead of competitiveness.

Critical minerals bottlenecks

Despite billions committed to mining projects (NRCan 2023b), many projects remain years from production. According to S&P Global, average lead times from exploration to start-up in Canada are almost 18 years (Manalo 2023). Ontario's Ring of Fire deposits such as chromite, cobalt, and nickel, which are central to the strategy, are tied up in environmental assessments and Indigenous consultations more than a decade after discovery (Ross 2025).

Limited competitive advantage

Canada has not become a low-cost producer in any major EV component. Battery production costs remain about 20 per cent higher than leading Asian competitors (IEA 2025b), and announced facilities are aimed at North American supply, not for global export.[3]

Commitments alter behaviour even before spending occurs

While much of the $52 billion has not yet been disbursed due to delays and cancellations, the commitments themselves have already shaped decisions. Subsidy expectations distort price signals, change perceptions of risk, and redirect capital. Firms plan around government support rather than real market demand, leading to inefficient investment and rent-seeking as companies compete to be labelled "strategic." The commitments have changed economic decision-making regardless of whether the funds are spent.

In short, the warning signs are clear. Large projects have been delayed or cancelled, and demand falls when purchase subsidies pause. Together, these signal a strategy faltering on its own.

The international subsidy race and the case for acting

Supporters of Canada's EV subsidies argue that massive incentives offered by the United States, EU, and China left the country with little choice. Without matching them, Canada risked a sharp decline in auto production and losing its place in the EV supply chain. From this perspective, subsidies were a defensive move to keep manufacturing at home.

But resilience is more than having domestic production. It is whether that production can compete without ongoing support. Using that measure, the fiscal cost is steep. At $4.5 million per direct job, the subsidies could be considered a very expensive form of job insurance. It is fair to ask whether the same goal of industrial resilience could have been achieved at a lower cost.

Rebutting common counterarguments

Counterargument	Brief response	Key evidence
"It's too early to judge."	Early indicators – multi-quarter demand drops after incentives pauses and repeated project delays are strong indicators that often precedes underperformance.[a]	StatsCan ZEV sales decline; delays at Honda, Ford, Umicore.
"We had to match the US."	Matching US subsidies commits Canada to long fiscal exposure and ties outcomes to shifting US policy.	PBO breakeven ~20 years; Canada's exposure to IRA credit rule changes.
"Climate/security benefits justify it."	Benefits are less secure if demand is subsidy dependent; lasting gains require cost-competitive, self-sustaining production.	Consumer demand drops without incentives. Vulnerability to foreign policy and market shifts.

Sources: [a] *(Othman et al. 2018).*

Missing elements

What is striking is not just what went wrong, but what was not fixed from the start. Canada attempted to build the whole EV ecosystem simultaneously, without addressing fundamental constraints.

Permitting and approval

Mining projects still face long development timelines due to overlapping and complex regulations. In April 2025, Ontario Premier Doug Ford said, "right now it takes 15 years to open a new mine in Ontario" adding that "15 years of jumping through hoops ... these delays were never acceptable" (Rajagopal 2025). Likewise, as recently as June 2025, Reuters reported that mines and pipelines can take a decade or more to receive approval, though Ottawa has pledged to streamline reviews and cut timelines to two years for projects considered in the national interest (Reuters 2025). Formal efforts to streamline approvals are only now being put forward.

Skills and workforce

The strategy assumed skilled workers would be available, but shortages remain in battery chemistry, power electronics, and advanced manufacturing.

University and colleges are still developing relevant curricula. As late as 2024 Environmental Careers Organization wrote that, "the manufacture of the EV battery requires specialized skills for materials processing and cell assembly that are very difficult to find in Canada as this is not an industry that has previously existed in the country" (Eco Canada 2024).

Supply chain coordination

Rather than sequencing investments to build on Canada's existing strengths, governments tried to create all components at once – from mining and processing to battery processing and vehicle assembly – without ensuring each stage could support the next.

Why early warning signs were predictable

Canada's EV strategy shows early under performance that follows patterns seen in past industrial policy.

Misaligned incentives

In market economies, businesses risk their own capital and bear the consequences of failure. That discipline forces projects to be technically feasible, commercially competitive, and built on realistic assumptions about costs, timelines, and demand.

Governments face different incentives. Politicians gain immediate benefits from announcing multi-billion dollar "investments" tied to jobs and climate goals. The political payoff comes from the announcement, not the results. Bureaucratic rewards, such as career advancement, often come from managing large programs rather than delivering results.

Meanwhile, the costs are diffuse and backloaded. Taxpayers bear the financial risk, but it is spread across future budgets and millions of citizens. No single constituency feels the pain when projects fail, creating little political pressure for accountability.

Incomplete or overly optimistic demand expectations have reinforced these misalignments. Federal policy planning likely understated how sharply

EV sales would fall after incentives paused (as shown in Figure 1), despite clear evidence that demand is highly incentive-sensitive. As a result, ramp-up expectations for domestic EV plants were overstated, resting on demand that never materialized.

Market signal distortion

Subsidies, tax breaks, and mandates override the price signals that normally guide investment. In functioning markets, prices reflect relative scarcity and consumer willingness to pay, helping firms decide what to produce, and at what scale. Subsidies and mandates can make uneconomic projects appear viable and uncompetitive products seem affordable.

Canada's EV rebates demonstrate this problem. They artificially inflated demand, encouraging production investments based on subsidies rather than organic consumer preferences. When Ottawa, BC, and Quebec suspended EV purchase incentives, sales dropped, revealing that much of the "demand" was government induced.

Coordination challenges

Building an industrial ecosystem requires sequencing. Raw materials must come before processing, processing before battery plants, and batteries before vehicle assembly. Markets typically solve this through contracts and price signals, with companies investing gradually, learning and adjusting as they go.

Governments tried to subsidize all stages at once, producing a set of standalone projects rather than an integrated chain. The result was capacity mismatches and weak links between stages.

Tying outcomes to US policy

Much of Canada's industrial policy assumed long-term alignment with US incentives under the *Inflation Reduction Act* and related programs. That was a foreseeable risk, not hindsight. From 2020 onward there were clear signs that US support for green subsidies could weaken under a new administration or tighter fiscal conditions. Yet Canada committed over $50 billion assuming Washington would not change course.

That assumption was a strategic miscalculation. US incentives have tightened, and political support for green industrial spending has declined. Given Canada's reliance on the US market, some alignment is inevitable.

However, an EV strategy that cannot adapt to changes in US tax credits or sourcing rules leaves the sector highly exposed.

From a national-security perspective, an industry that cannot operate competitively without continued US purchase incentives, EV mandates, or compliance with Foreign Entity of Concern (FEOC) sourcing rules is vulnerable to disruption if those policies change.

These risks were evident at the time, but the political payoff from high-profile announcements outweighed more market-grounded policies. Canada now faces a difficult choice: retain mandates and subsidies independently or adjust course in line with shifting US policy.

A better approach: Create conditions for success

Industrial policy should not be about governments steering the economy from the top down. It should create conditions that let markets allocate capital efficiently, respond to real demand, and innovate.

Fix the fundamentals

Streamline permitting and approvals

Canada's permitting system is too slow. Major projects, from mines to manufacturing plants, face overlapping regulations and approvals that add years to timelines. Genuine reform is needed, not just more money thrown at the problem or more power from Cabinet to override rules.

Recent exemptions in federal and provincial legislation (Bill C-5, Bill 5 in Ontario, and Bill 15 in BC) may speed up individual projects, but if used as a substitute for broader reform, they risk creating an uneven playing field. When approvals depend on political discretion, government-backed projects are favoured over economically stronger ones. This can also foster lobbying advantages for large, well-connected firms (OECD 2017).

Fast-tracking also distorts investment decisions. Delays can make viable projects uneconomic, while expedited approvals can make marginal projects look attractive. Studies confirm that permitting timelines

significantly affect project economics (Dussud et al. 2023) (SNL Metals & Mining 2015). The solution is a streamlined, transparent process that works for all projects, creating a fair and competitive environment for building Canada's EV supply chain.

Invest in enabling infrastructure

Governments should prioritize infrastructure that serve multiple sectors: reliable power grids, efficient transportation, high-speed broadband, and modern trade corridors. These investments raise productivity across the economy rather than picking winners. While governments support some of this, it should be the central focus, rather than direct subsidies to specific firms.

Support pre-commercial research

Public R&D funding should target basic science and early stage technologies, where private markets may underinvest due to spillover effects. This includes support for universities, national labs, and shared scientific infrastructure. Funding should not be tied to specific firms or industry groups, which encourages rent-seeking and cronyism, and diverts resources from broadly-based innovation.

Create competitive conditions

Canada's EV strategy relied on subsidies to work around structural weaknesses instead of addressing them directly. Businesses need predictable rules, skilled labour, and efficient markets, none of which industrial policy alone can provide.

Governments should focus on the basics: stable tax policy, streamlined regulations, flexible labour markets, and strong capital markets. Removing barriers like restrictive zoning, fragmented permitting, and interprovincial trade frictions would not only support EV investment but strengthen many other sectors.

Targeted and temporary responses to foreign distortions

While markets generally allocate resources efficiently, foreign subsidies and trade distortions can create strategic vulnerabilities in areas like critical minerals and EV supply chains. In such cases, limited and temporary interventions may be justified, provided they are structured to restore competitive balance rather than become lasting burdens.

In Canada, critical minerals production is far below projected demand. Without new investment, output is projected to fall from $9.2 billion today to about $4 billion annually by 2040, while domestic demand grows to $16.2 billion (Canadian Climate Institute 2025). This $12.2 billion gap is both a lost economic opportunity and a strategic risk, as it would have to be filled by imports. At the same time, global competition from heavily subsidized producers threatens to crowd out nascent Canadian capacity before it gains traction (Reuters 2024).

Good policy must remain targeted. Temporary procurement commitments or transitional support can help establish domestic capacity without distorting long-term price signals, provided they include clear sunset clauses. Korea's Heavy-Chemical Industry Drive (1973–79) is one example, where focused, short-term intervention boosted downstream competitiveness that lasted beyond the end of government support (Lane 2025).

To work well, a few principles are key: set clear time limits, use performance-based exit criteria, build in regular reviews and transparency, and align them with broader economic fundamentals like permitting, infrastructure, and skills. With these safeguards, governments can address foreign distortions and strengthen supply chain resilience without drifting into permanent subsidies, political capture, or lasting market distortions.

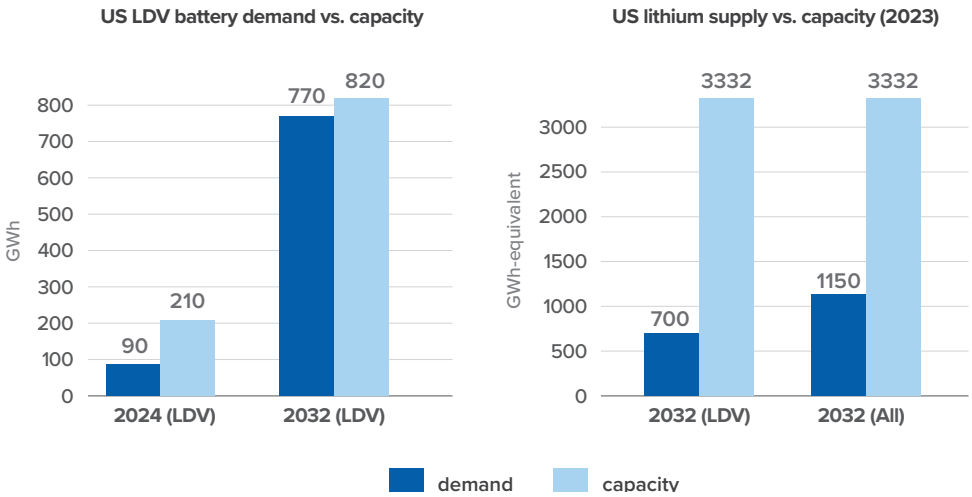
Choose the right timing

Industrial policy works best in emerging sectors, where supply chains are still forming and steep learning curves leave room for new entrants. Mature industries are dominated by entrenched players with established supply chains and large economies of scale that create high barriers to entry (Lee 2024) (IEA 2024). Historical examples such as South Korea's 1970s push into semiconductors (Kim 2024) and Brazil's early backing of Embraer (Vertesy and Szirmai 2010) show how well-timed interventions in emerging industries can yield lasting advantages.

Canada's EV strategy, though focused on the North American market, emerged when global battery manufacturing capacity already exceeded demand. In 2024, worldwide battery cell production capacity (EVs + storage) exceeded 3 TWh, roughly three times total battery demand of 1 TWh, 85 per cent of which came from EVs[4] (IEA 2025a).

As figures 2A and 2B show, the US is expected to balance battery demand

FIGURES 2A AND 2B. Downstream and upstream balance in the US EV battery supply chain



Sources: *(Shen, Slowik, and Beach 2024); (Bui, and Slowik 2025); author calculations (See Appendix C for LCE to GWh-eq conversion).*

with domestic production capacity downstream, while upstream lithium from domestic and partner countries is expected to far exceed US needs.

US supply–demand points to a timing problem. As Figure 2A shows, domestic US light-duty EV battery capacity already exceeds demand and is projected to remain higher through 2032 (Bui and Slowik 2025). Upstream, lithium from US and allied sources could support 2.2-4.7 TWh of battery production by 2032, compared with projected US demand of only 0.6-0.8 TWh for EVs and 1.0-1.3 TWh for all batteries (Shen, Slowik, and Beach 2024). Both downstream production and upstream raw materials appear set to exceed US needs. For Canada, this suggests North America already has abundant capacity, weakening the case for new, subsidy-dependent battery plants and strengthening the argument for enabling conditions and selective upstream advantages.[5]

By 2020–22, when Canada made its largest commitments, North America's industry structure was set, though capacity was still expanding to meet rising demand under EV mandates and new tax credit rules. Canada's approach was to attract incumbents such as Stellantis and Northvolt to build plants for the North American market. They invested because Canada matched

US subsidies, offered geographic diversification, and met IRA and CUSMA content rules.

This was still a late entry into a high-barrier segment dominated by incumbents. Canada lacked advantages in upstream supply, midstream processing, or subsidy scale, making its role dependent on continued government support and US policy alignment. As one industry analysis warns, "even those battery makers receiving generous support in the US and Europe are undercut by their Chinese rivals" (McKerracher 2024).

This suggests that matching subsidies may not be enough against competitors with greater scale and lower costs. Instead of directing its largest financial commitments toward emerging parts of the value chain such as critical mineral extraction and processing, where domestic capacity might be built, Canada committed billions to replicating mature downstream production. Compounding the challenge, China's global market leaders, BYD and CATL, "are behaving more like scrappy startups than bloated corporate fiefdoms" (McKerracher 2024) They continue to invest heavily in R&D, launch products rapidly, and defend market share aggressively, making it even harder for latecomers to gain ground.

While Canada's EV industrial policy is still in its early stages, its window for long-term success is narrowing. It is already emerging as a cautionary case of how complex and costly government-led interventions can struggle to succeed in mature industries.

Conclusion

Canada's EV industrial policy highlights the risks of large-scale government intervention in complex markets. Despite over $50 billion in commitments, the country has yet to establish a competitive position in any major segment of the EV supply chain. Projects have stalled or been cancelled, consumer demand remains dependent on subsidies, and no lasting comparative advantage has emerged. The federal government's suspension of the 2026 EV mandate exposes weak EV demand in Canada and casts doubt on the credibility of mandated targets.

These outcomes are not due to bad luck but to structural flaws: political incentives that reward announcements over outcomes, late entry into a mature industry dominated by global incumbents, and a top-down approach that inadequately addressed coordination, permitting, and workforce gaps. By tying its approach to unstable US policies, Canada increased its exposure to changes now underway in the US.

While foreign distortions may sometimes justify temporary, narrowly targeted intervention, these should remain the exception. The aim should be to create conditions for market-led investment, through streamlined permitting, competitive markets, modern infrastructure, and support for early stage research, rather than steering entire industries through mandates and subsidies. Canada's EV strategy may still be in its early stages, but its early missteps already offer a cautionary lesson in the limits of top-down industrial policy. MLI

About the author

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Endnotes

1 The $6.8 billion consists of $3.8 billion from the Canadian Critical Minerals Strategy, $1.5 billion from the Critical Minerals Infrastructure Fund and $1.5 billion from the Strategic Innovation Fund. Additional tax credits were offered, but their value is not included in the total figure.

2 The $4.5 million estimate is calculated by dividing the total value of government support for projects with stated direct job numbers by the number of those jobs: $50.8 billion ÷ 11,190 ≈ $4.5 million. This figure excludes temporary construction employment and indirect jobs, whereas the 60,000–250,000 estimate refers to direct-and-indirect jobs.

3 For example, the Stellantis–LG Energy Solution battery plant in Windsor, Ontario, is intended to supply Stellantis assembly plants in Windsor and across North America, not for global export (ISED 2022). Similarly, Volkswagen's battery gigafactory in St. Thomas, Ontario, will produce batteries for up to one million electric vehicles annually to meet North American market demand (PMO 2023b).

4 The demand side of the EV sector is still emerging, as market share for new zero emission vehicle sales are roughly 10 per cent in the United States, 21 per cent in Europe, and 20 per cent worldwide (IEA 2025a).

5 The downstream demand and production capacity figures (GWh) are drawn from the ICCT Jan 2025 working paper on U.S. light-duty EV battery manufacturing (Bui and Slowik 2025). The upstream lithium supply and demand estimates are from the ICCT Feb 2024 report (Shen, Slowik, and Beach 2024), which expresses units in kilotonnes per annum of lithium carbonate equivalent (ktpa LCE). These have been converted to GWh-equivalent for consistency with downstream figures; see Appendix C for the conversion method. Figure 2B uses midpoints for display.

APPENDIX A
Table sources and details

TABLE 1: Major announced projects and public support

Project / company	Location	Gov't support[a] ($billion)	Est. direct jobs created	Primary source
Stellantis–LG (NextStar)	Windsor, ON	18.6	2,500	Canada 2023[a]
Volkswagen–PowerCo	St. Thomas, ON	16.7	3,000	PMO 2023[b]
Northvolt Battery Plant	Saint-Basile-le-Grand, QC	8.3	3,000	PMO 2023[c]
Honda EV Supply Chain	Alliston, ON	5.0	1,000	Hughes 2025
Ford–EcoPro–SK On	Bécancour, QC	0.6	345	ISED 2023[a]
GM–POSCO	Bécancour, QC	0.3	200	ISED 2023[b]
Umicore Battery Materials	Loyalist Township, ON	1.0	600	ISED 2023[c]
Volta Energy	Granby, QC	0.2	260	Canada 2023[b]
Lion Electric Battery Assembly	Saint-Jérôme, QC	0.1	285	PMO 2021
Nova Bus	Saint-Eustache, QC	~0.0[b]	-[c]	
Ford Oakville EV Retrofit	Oakville, ON	0.6	-[c]	
Stellantis Assembly Retooling	Windsor/Brampton, ON	1.0	-[c]	
	Total	**52.4**	**11,190**	

[a] Of the total, 21 per cent is support for construction, 5 per cent are investment tax credits, and 74 per cent are production subsidies. [b]Rounded – support was $30 million. [c]No direct job created numbers found.

APPENDIX B
Opportunity-cost calculations

Variables and timing:

- Total EV-policy commitments: C$52.4 billion.
- Composition: 21 per cent construction, 5 per cent investment tax credits (ITCs), 74 per cent production subsidies.
- Timing assumption used in the paper: construction + ITCs are disbursed over Years 1–2; production subsidies are disbursed evenly over Years 1–10.
- Implied cash-outflow stream ($ billions, end-of-year)
- Years 1–2: (11.004/2) + (2.62/2) + (38.776/10) = 10.690 each year
- Years 3–10: 38.776/10 = 3.878 each year

Foregone return calculations:

C_t is the outlay at end of year t (t=1...10), and r the annual real return.

- Foregone growth by Year 10: $\sum_{t=1}^{10} C_t\left[1+r^{(10-t)}-1\right]$
- Present value (today) of the foregone growth: $\frac{\text{Foregone growth by Year 10}}{(1+r)^{10}}$

Assumed real return r	Foregone growth by Year 10 ($B)	Present value today ($B)
2%	6.181	5.071 ≈ 5.1
3%	9.570	7.121 ≈ 7.1
4%	13.173	8.899 ≈ 8.9

Medium-sized hospitals:

- Midrange value used of a cost per bed ranging between $500,000 to $1,500,000, for a 300-bed hospital (Collab n.d.).
- $7.1billion ÷ $0.300 billion = 23.68 ≈ about 24 medium-sized hospitals.

Annual interest savings from debt reduction:

- Apply the full $7.1billion to retire federal debt.
- 3.5% is used as an illustrative average borrowing rate, based on the Bank of Canada "Selected benchmark bond yields" showing the GoC 10-year at 3.43–3.42% in the week of Aug 22–28, 2025. (Bank of Canada 2025).
- Annual interest saved: $7.1 billion × 0.035 = $248.5 million/year (ongoing).

APPENDIX C
Converting lithium supply (ktpa LCE) into battery capacity (GWh-equivalent)

The ICCT February 2024 report (Shen, Slowik, and Beach 2024) estimates lithium supply available to the United States from domestic and allied partners in 2032 could range from 1,190 to 2,000 ktpa LCE. Converting these values with the chemistry-specific intensities used in the ICCT report gives a battery capacity range of about 2.2–4.7 TWh. The low case (1,190 ktpa LCE) uses 0.10 kg Li/kWh, while the high case (2,000 ktpa LCE) uses 0.08 kg Li/kWh. For illustration, applying a neutral intensity of 0.09 kg Li/kWh to the midpoint (1,595 ktpa LCE) yields ~3.33 TWh.

Definitions

- ktpa: kilotonnes per annum – thousands of metric tonnes per year.
- LCE (Lithium Carbonate Equivalent): Supply/demand expressed as if all lithium were in the form of Li_2CO_3.
- Note: LCE contains about 18.8 per cent lithium metal by weight (Gifford 2022).
- GWh (gigawatt-hour): Stored electrical energy capacity.
- GWh-equivalent (GWh-eq): Battery capacity that can be built from a given amount of lithium.
- Material intensity: Lithium required per kWh of battery capacity. The ICCT February 2024 report assumes about 0.08–0.10 kg Li per kWh, depending on chemistry.

Endpoint conversions (2032)

Step	Low supply case (1,190 ktpa LCE, @0.10 kg Li/kWh)	High supply case (2,000 ktpa LCE, @0.08 kg Li/kWh)
Convert LCE to lithium metal	1,190,000 t × 0.188 = 223,720 t Li (223,720,000 kg)	2,000,000 t × 0.188 = 376,000 t Li (376,000,000 kg)
Convert to capacity (kWh)	223,720,000÷0.10=2,237,200,000 kWh	376,000,000÷0.08=4,700,000,000 kWh
Express as GWh/TWh	2,237 GWh ≈ 2.2 TWh	4,700 GWh = 4.7 TWh

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– The Honourable **Jody Wilson-Raybould**

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– The Right Honourable **Stephen Harper**

May I congratulate **MLI** for a decade of exemplary leadership on national and international issues. Through high-quality research and analysis, **MLI** has made a significant contribution to Canadian public discourse and policy development. With the global resurgence of authoritarianism and illiberal populism, such work is as timely as it is important. I wish you continued success in the years to come.

– The Honourable **Irwin Cotler**

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