

# **Trade Disruptions and the EV Transition: Economic and Labour-Market Impacts on Canadian Automotive Manufacturing, 2026– 2040**

*An Economic and Labour Market Scenario Analysis*

**CSTEC — TRADE Auto Canada**

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# 1. Introduction

Canada's automotive manufacturing sector has long been embedded within a highly integrated North American production network defined by cross-border supply chains and just-in-time manufacturing. Trade agreements, from the 1965 Canada-U.S. Auto Pact through NAFTA and its successor CUSMA, provided a relatively stable framework for tariff-free automotive trade conditional on meeting the rules-of-origin requirements (Center for Automotive Research, 2017). That framework supported a Canadian production model in which assembly and parts operations were integrated across the Canada-U.S. border, exporting much of their output to the United States. With the United States as Canada's primary automotive trade partner and the destination for the majority of its domestically produced vehicles and parts, the sector became highly dependent on the U.S. market and correspondingly sensitive to shifts in U.S. trade policy.

Canada's automotive manufacturing sector remains one of the country's largest and most trade-exposed industries. It supports more than 200,000 workers across the broader supply chain, contributes upward of \$16 billion to GDP annually, and produced over 1.2 million passenger vehicles in 2025 (CSTEC, 2026a). Approximately 82% of Canadian vehicle production and 54% of motor vehicle parts production are exported to the United States, leaving the sector's output and employment closely tied to U.S. demand (CSTEC, 2026b). This integration with the U.S. automotive supply chain has become a liability under a shift in U.S. trade policy. Since April 2025, Canadian-made vehicles have faced a 25% U.S. tariff applied to their non-U.S. content, with the U.S.-content share of CUSMA-compliant vehicles exempt (Government of Canada, 2026a; Kitamura, 2025). Before these measures, non-qualifying automotive goods generally faced a Most Favoured Nation (MFN) rate of roughly 2.5%.

Alongside these trade pressures, the sector is being reshaped by a second factor, the transition to zero-emission vehicles. Until recently, Canadian policy was built around an accelerating path toward EV production, anchored by a regulated sales mandate and supported by a wave of EV and battery investment. That policy direction has since shifted. The federal government paused the Electric Vehicle Availability Standard for the 2026 model year in September 2025 and repealed it in February 2026, replacing the binding quota with emissions-based standards and consumer rebates (CBC News, 2026; Electric Autonomy, 2026). At the same time, EV and battery investment stalled, with several planned projects deferred or cancelled. The pace of electrification is now governed by market and trade conditions rather than by a regulatory mandate.

These two factors affecting the Canadian automotive manufacturing sector and its workforce need to be examined together. The first is the trade environment, where U.S. tariffs and the outcome of the CUSMA review determine the cost and competitiveness of Canadian automotive exports. The second is the EV transition, which is changing the product mix the sector builds and, with it, the supply chain and the distribution of domestic value across the industry. For this reason, the study models both factors jointly, across three scenarios that span the range of

possible trade and EV-transition outcomes from 2026 to 2040. The analysis uses these trade and production impacts to assess the effect on the sector's output, its labour market, and the wider Canadian economy.

## **2. Background**

### **2.1 Structure and economic weight of the sector**

Vehicle and parts manufacturing contributed roughly \$16 billion in value added in 2024 (CSTEC, 2026a). The two core industries directly employed between 118,000 and 124,000 people in 2023 and 2024, while the broader automotive supply chain, comprising roughly 1,100 facilities, supported on the order of 200,000 jobs (CSTEC, 2026b). Automotive exports ranged between about \$52 billion and \$81 billion over 2018 to 2024, reaching \$80.6 billion in 2023 before easing in 2024 (CSTEC, 2026a). Canadian assembly volumes have been volatile, fluctuating between 1.12 million vehicles in 2021 and 1.55 million in 2023 before settling at about 1.34 million in 2024, leaving Canada's share of North American production at 8.3% in 2024, down from a brief recovery to 9.3% in 2023 and below its pre-pandemic level (CSTEC, 2026b).

The sector is structurally concentrated in two respects. Geographically, it is overwhelmingly an Ontario industry, with the province accounting for about 84.6% of national employment in motor vehicle, body, trailer, and parts manufacturing in 2024 (Government of Canada, 2026b). Industrially, it spans a small number of assembly operations anchored by long-established automakers, a deep parts-supplier base of several hundred firms, and an emerging battery and EV supply chain. This structure is central to the impact modelling, since shocks to final assembly cascade through a dense domestic parts network, so the indirect and induced effects are large relative to the direct hit, and disruption to a small number of assembly plants propagates widely. The sector is also already under strain. Combined output of the two core industries fell from \$99.2 billion in 2023 to \$89.0 billion in 2024, with value added declining over the same period, as lower production volumes and plant retooling weighed on the sector even before the full effect of the tariff measures took hold (CSTEC, 2026b). The shocks modelled in this report therefore land on a sector that is contracting at the margin rather than expanding.

### **2.2 Export dependence and tariff exposure**

The vast majority of Canadian-made vehicles and parts are destined for the U.S. market, a product of decades of cross-border integration dating to the 1965 Auto Pact (Crane, 2006). In 2023, about 84% of domestically produced vehicles and 62% of motor vehicle parts output were exported, with roughly 82% of vehicle production, worth about \$49.9 billion, and about 54% of parts output, worth about \$19.5 billion, destined for the United States (CSTEC, 2026a). Exports to all markets other than the United States account for only a small share of output, leaving producers very limited ability to redirect production when U.S. market access is disrupted.

Exposure varies considerably within the sector. Finished vehicle and heavy-duty truck manufacturing export more than 79% of their output to the United States, and within parts, engine and engine-parts manufacturing is the most exposed, while seating and interior trim is the least exposed at about 19%, reflecting its proximity-driven production model (CSTEC, 2026a). This pattern matters for the results that follow, because the industries most exposed to U.S. demand are also, in several cases, the internal-combustion parts industries most exposed to the EV transition, so the two pressures compound on the same firms.

## **2.3 Investment and current strain**

Between 2020 and 2024, Canada attracted over \$46 billion in announced EV and battery supply-chain investment, part of an estimated \$100 billion in combined public and private commitments intended to position Canada as a North American EV hub (CSTEC, 2026a). Several of those projects have since been delayed, scaled back, or cancelled as U.S. tariff uncertainty and slowing EV demand eroded the business case (CSTEC, 2026b).

Recent announcements illustrate the strain across both assembly and the battery supply chain. Honda postponed its roughly \$15 billion EV investment at Alliston by about two years amid slowing EV demand (Hughes, 2025); the Northvolt battery project in Quebec collapsed following the parent company's insolvency, ending the partnership and a \$270 million provincial investment (CBC, 2025a); Umicore halted construction of its \$2.7 billion cathode-materials plant in eastern Ontario (CBC, 2024); Ford delayed EV production at its \$1.8 billion Oakville retooling from 2025 to 2027 and shifted the complex toward heavy-duty truck production (Nora, 2024); GM paused its battery joint venture at Bécancour, Quebec (CBC, 2025d); and Stellantis paused the retooling of its Brampton assembly plant following the end of Jeep Compass production there (Kennedy, 2026). Smaller firms are affected as well, with a 2025 survey finding that 49% of automotive SMEs in Ontario had paused or cancelled planned investment such as hiring, equipment upgrades, or expansion (CSTEC, 2026a).

## **3. Methodology**

The analysis is structured in two main stages. The first stage translates each scenario's tariff settings and powertrain-mix assumptions into industry-level output shocks for the automotive and battery manufacturing supply chains, using a custom-built industry model. The second stage runs those shocks through IMPLAN to estimate economy-wide effects (IMPLAN Group, 2025).

The first stage relies on two main elements: estimating trade impacts and modelling the cost structure of vehicle production. Trade responses are estimated using a linear variable-elasticity approach, in which each industry's export reduction is proportional to the tariff rate and scaled by a price elasticity anchored to the Bank of Canada's aggregate auto-sector estimate of 4.5 (Charbonneau & Landry, 2018) and varied by how exposed the industry is to U.S. domestic

substitution (U.S. Census Bureau, 2021; U.S. International Trade Commission). The cost structure of a Canadian-produced vehicle is built from the 2021 Statistics Canada input-output table, which resolves 235 industries and roughly 500 commodities, and is then adjusted to reflect the distinct component mix of internal-combustion, hybrid, plug-in hybrid, and battery-electric vehicles, including batteries, electric motors, inverters, and the removal of internal-combustion-specific content (Statistics Canada, 2023).

In the second stage, the resulting industry shocks are run through IMPLAN economic impact analysis on a national scope (IMPLAN Group, 2025). IMPLAN decomposes each shock into three channels: direct effects on the targeted industry, indirect effects transmitted through the supply chain, and induced effects generated as changes in household spending of wages and salaries. Results are produced for seven modelled years (2026, 2027, 2028, 2029, 2030, 2035, and 2040) and reported as the change in output, employment, value added, and labour income relative to a 2024 baseline.

The industries modelled span vehicle assembly (NAICS 336110 — Automobile and light-duty motor vehicle manufacturing, and NAICS 336120 — Heavy-duty truck manufacturing), the eight vehicle parts industries (NAICS 336310 to 336390), battery cell and module manufacturing (NAICS 335910 — Battery manufacturing), the upstream battery-materials chain (cathode, anode, and non-ferrous smelting and refining), and the relevant mining industries. The full mapping to input-output and IMPLAN codes is provided in Appendix C. In each scenario, the tariff impact is phased in gradually over three years. Trade and output baselines draw on data from Statistics Canada input-output tables and Industry Canada Trade Data Online (Statistics Canada, 2023; Industry Canada, 2025).

## 4. Scenario Design

The analysis is built around three scenarios that together span the range of plausible outcomes for trade policy and the EV transition over the forecast period. The range covered by the three scenarios is anchored by the joint review of CUSMA scheduled to begin on July 1, 2026, the outcome of which could see the agreement renewed for a further term or, at the other extreme, set on a path toward lapse.

The scenarios differ along four dimensions: the tariff applied to Canadian exports, the treatment of CUSMA compliance, the Section 232 rate on steel and aluminum, and the pace of the EV transition. In the first scenario, Minimal Disruption, the CUSMA agreement is renewed and tariffs are limited to the small share of parts and products that do not meet the agreement's rules-of-origin requirements, alongside an EV transition reaching about 22% (share of battery-electric vehicles) of Canadian production output by 2040. This scenario stays closest to current conditions, under which the 25% tariff the United States applies to vehicles and parts falls only on their non-U.S. content where they meet the rules-of-origin requirements, and on the full value of non-CUSMA-compliant products. In the second scenario, Partial Disruption, the agreement is

renewed but on less favourable terms, with a flat 10% tariff applied to all exports, while the EV transition follows the same path as in the first scenario. In the third scenario, Full Disruption, the agreement is assumed to have lapsed and preferential access is lost, a flat 25% tariff is applied to all exports, and the EV transition stalls at its 2025 mix.

The July 2026 review does not, in itself, bring the agreement to an end. Should the parties not agree to renew, the agreement would continue through a series of annual reviews lasting up to ten years, with termination possible only toward the end of that period, and a party could move to withdraw earlier only by giving formal notice. The scenarios in this analysis are therefore not intended as a forecast of when these outcomes would occur. Rather, for the purpose of comparison, each scenario is modelled as if its trade conditions were fully in effect as of 2026, so that the analysis isolates the economic consequences of each outcome rather than the timing of the process leading to it.

*Table 1. Defining assumptions of the three scenarios*

	<b>Sc 1 — Minimal Disruption</b>	<b>Sc 2 — Partial Disruption</b>	<b>Sc 3 — Full Disruption</b>
<b>U.S. tariff on exports</b>	Section 232 applies to non-compliant content only	10% on all exports	25% on all exports
<b>CUSMA compliance treatment</b>	≈99% of vehicles and ≈95% of parts treated as compliant	Compliance benefit eroded; flat tariff on all exports	Compliance benefit removed; agreement lapses
<b>Steel and aluminum (Section 232)</b>	25%	50%	50%
<b>EV transition trajectory</b>	Full transition (BEV ≈22% of output by 2040)	Same transition path as Sc 1	Flat relative to 2025 (ICEV-weighted mix)
<b>Interpretation</b>	Renewal, with residual metals-tariff drag	Negotiated partial disruption	Lapse of preferential market access

Taken together, the three scenarios are constructed so that the analysis can separate the effects of the two forces at work. Minimal Disruption represents the most favourable of the three outcomes, but it still carries costs, since even under a renewed agreement the Section 232 tariffs on steel and aluminum, imposed under a separate authority, are assumed to ease only to 25% rather than to disappear, and together with the gradual shift away from internal-combustion vehicle production they continue to weigh on output and employment. Because Partial Disruption assumes the same EV transition as Minimal Disruption and differs only in its trade terms, the contrast between the two scenarios isolates the effect of the trade channel on its own, with the pace of electrification held constant. In this scenario, as in Full Disruption, the metals tariffs are assumed to remain at their current 50% rather than easing, adding to the

burden imposed by the broader export tariff. Full Disruption is the only scenario in which both forces move against the sector at the same time, combining a full loss of preferential access with a stalled transition, and it is designed to capture the compounding effect that results.

Each scenario carries its own powertrain-mix trajectory, which determines the composition of vehicle-assembly output and, in turn, the pattern of demand placed on the rest of the supply chain. As production moves toward battery-electric vehicles, spending shifts away from the engines, transmissions, fuel systems, and exhaust components associated with internal-combustion vehicles and toward the batteries, electric motors, power electronics, and the cathode, anode, and mineral inputs that feed the battery supply chain. As a result, different transition rates support different sets of industries depending on how far the transition has progressed.

## **5. Production and Export Pathways**

Before the economic results are presented, it is necessary to set out how the scenario assumptions translate into the levels of vehicle and battery production that drive them. The tariffs described in each scenario raise the cost of Canadian vehicles and parts in the U.S. market and, through the trade response described in Section 3, reduce the quantity exported. Because the large majority of Canadian automotive output is destined for the United States, a reduction in exports translates directly into a reduction in domestic production. The pace of the EV transition, in turn, determines the powertrain composition of that production, shifting it over time away from internal-combustion vehicles and toward hybrids and battery-electric vehicles. The combination of these two assumptions, the level of production set by the trade outcome and its composition set by the transition, defines the production pathway that serves as the input to the economic impact analysis. The detailed year-by-year production composition and battery supply-chain assumptions that underpin this section are set out in full in Appendix A.

The resulting vehicle production volumes and powertrain mix are set out in Table 2 and shown in Figure 1. Under Minimal Disruption, production is only modestly reduced from the 2024 baseline of about 1.34 million vehicles, easing to roughly 1.23 million in 2026 before recovering to about 1.30 million by 2040 as the transition matures. Under Partial Disruption, the flat tariff applied to all exports reduces production more substantially, to about 1.01 million vehicles in 2026 and roughly 840,000 by 2040. Under Full Disruption, the combination of the highest tariff and a stalled transition reduces production furthest, to about 880,000 vehicles in 2026 and roughly 510,000 by 2040. In the first two scenarios the powertrain mix follows the same path, with battery-electric vehicles rising to about 23% of output by 2040, whereas under Full Disruption the transition stalls and production remains internal-combustion-weighted, with battery-electric vehicles reaching only about 8%.

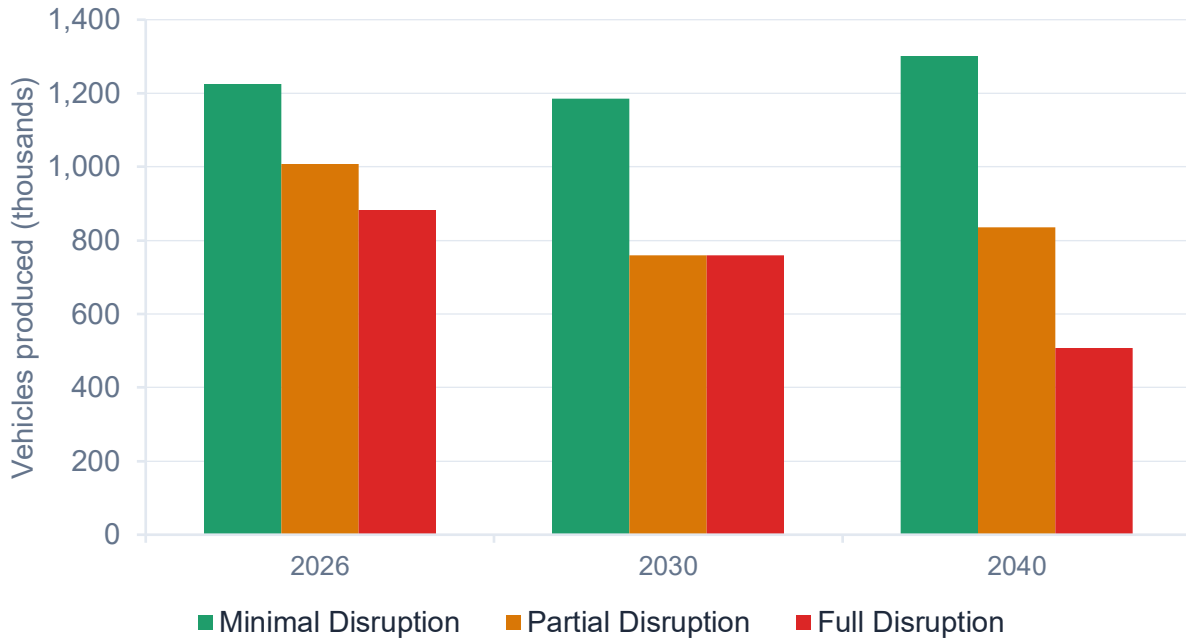


Figure 1. Assumed vehicle production by scenario, by modelled year (thousands of vehicles). For reference, total production in the 2024 baseline year was about 1.34 million vehicles. Source: TRADE Auto Canada modelling.

Table 2. Assumed vehicle production by scenario (thousands of vehicles)

	2026	2030	2040	BEV share, 2040
<b>Minimal Disruption</b>	1,225	1,185	1,301	23%
<b>Partial Disruption</b>	1,007	760	836	23%
<b>Full Disruption</b>	883	760	507	8%

The battery-manufacturing assumptions follow the same scenario logic, as set out in Table 3. Under Minimal Disruption, the three announced battery plants are assumed to proceed, namely NextStar in Windsor, VW PowerCo in St. Thomas, and Honda in Alliston, reaching a combined operational capacity of about 105 GWh by 2040. Under Partial Disruption, the Honda plant does not proceed and the remaining two plants ramp up more slowly, reaching about 56 GWh. Under Full Disruption, only the NextStar plant serves the automotive market, with the St. Thomas capacity redirected toward energy storage and the Honda plant cancelled, leaving about 20 GWh of automotive battery capacity. The degree to which the upstream supply chain is assumed to be located domestically, spanning cathode manufacturing, material processing, and mining, likewise declines across the scenarios, reflecting that a weaker transition supports less domestic investment in the battery supply chain.

Table 3. Assumed battery manufacturing and domestic supply-chain shares by 2040

	Minimal	Partial	Full

<b>Battery manufacturing capacity</b>	105 GWh	56 GWh	20 GWh
<b>Cathode manufacturing (domestic share)</b>	40%	20%	10%
<b>Material processing (domestic share)</b>	40%	30%	20%
<b>Mining (domestic share)</b>	25%	20%	15%

Taken together, these production and export pathways are what the economic impact analysis converts into the changes in output, employment, value added, and labour income reported in the following section.

## 6. Results

The results are reported as the modelled change in each indicator relative to the 2024 baseline, by scenario and year, and they reflect the combined effect of each scenario's tariff regime and its assumed pace of EV transition. The analysis reports the impact on employment, output, value added, and labour income. In all three scenarios, the sector experiences a net loss across all four indicators as a result of the trade pressures it faces and the shift in production. The dynamics behind these results, including the loss in exports, the contraction of internal-combustion engine manufacturing, and the expansion of battery production, are discussed in Section 7. The complete industry-level results underlying the figures in this section, reported for every modelled industry and year, are provided in Appendix B.

### 6.1 Employment

The change in employment over the forecast period is shown in Figure 2, and it follows the same broad pattern across the three scenarios. In each case the loss in employment deepens through 2028, the point at which the tariff schedule reaches its full phase-in, and then recovers to a degree that depends on how far the EV transition proceeds. At the 2028 trough, employment falls by roughly 54,000 jobs under Minimal Disruption, 140,000 under Partial Disruption, and 196,000 under Full Disruption. By 2040 the loss narrows to about 27,000 jobs under Minimal Disruption, and to about 123,500 under Partial Disruption, while under Full Disruption it remains close to its trough, at about 194,500, since the stalled transition provides little of the offsetting employment growth seen in the other two scenarios.

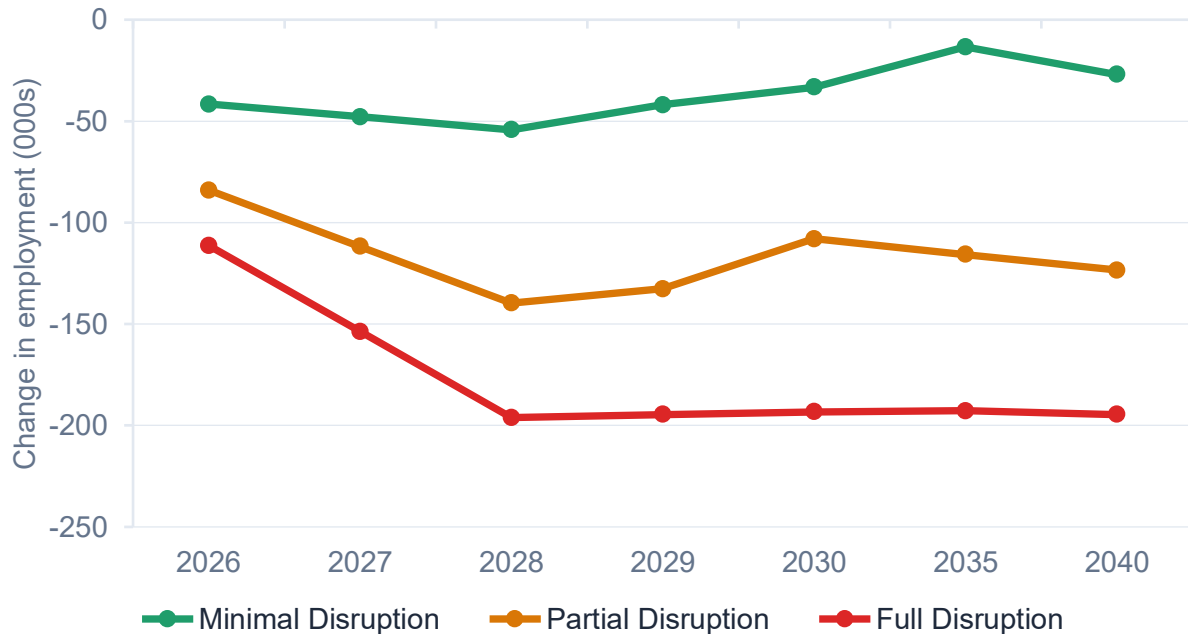


Figure 2. Change in total employment relative to the 2024 baseline, by scenario, 2026–2040. Source: TRADE Auto Canada modelling; IMPLAN.

The employment losses fall most directly on the two core automotive manufacturing industries, as shown in Figure 3. In motor vehicle manufacturing (NAICS 3361), which covers the assembly of light- and heavy-duty vehicles, employment declines by about 4,400 jobs by 2040 under Minimal Disruption, 18,400 under Partial Disruption, and 30,200 under Full Disruption. The composition of this loss shifts across the scenarios. Under Minimal Disruption, light-duty assembly is largely protected, as most of its output continues to qualify for tariff-free treatment under the renewed agreement, so that almost the entire loss in this group falls on heavy-duty truck assembly. Once a flat tariff applies to all exports, however, light-duty assembly bears the largest share of the loss, declining by roughly 12,300 jobs under Partial Disruption and 22,500 under Full Disruption, while heavy-duty assembly contracts more gradually, by between about 4,300 and 7,700 jobs across the three scenarios. In motor vehicle parts manufacturing (NAICS 3363), employment falls by about 4,400 jobs under Minimal Disruption, 16,300 under Partial Disruption, and 26,600 under Full Disruption, with gasoline-engine and engine-parts manufacturing the most exposed industry within the group, a pattern examined further in Section 7.

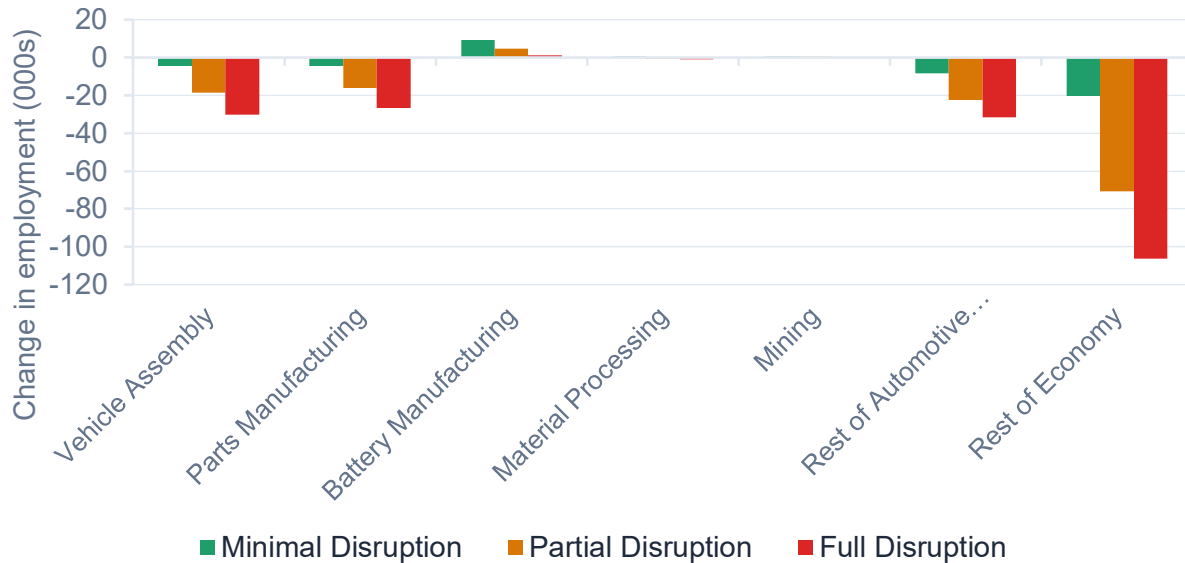


Figure 3. Employment impact by industry group in 2040, by scenario. Source: TRADE Auto Canada modelling; IMPLAN.

Beyond these two industries, the picture is more varied. Battery manufacturing is the only industry to gain employment in every scenario, adding about 9,200 jobs by 2040 under Minimal Disruption, although this gain falls to roughly 4,700 under Partial Disruption and 1,300 under Full Disruption as the slower transition reduces the demand for new battery capacity. The upstream material-processing and mining industries that supply the battery chain follow a similar pattern, registering modest gains under Minimal Disruption and modest losses under the more severe scenarios. The remainder of the automotive supply chain loses between about 8,300 and 31,500 jobs across the scenarios. The largest single share of the employment impact, however, falls outside the automotive sector altogether, in the rest of the economy, where employment declines by about 20,200 jobs under Minimal Disruption and by as much as 106,200 under Full Disruption, reflecting the induced effect of reduced household spending as wages and incomes contract. Because the sector is heavily concentrated in Ontario, which accounts for roughly 84.6% of national employment in the industry, these losses are felt in a relatively small number of communities (Government of Canada, 2026b).

## 6.2 Output

Figure 4 presents the change in output across the three scenarios over the forecast period. The trajectories share a common early phase, with the loss widening to a trough in 2028 as the tariff schedule reaches full effect. Under Minimal Disruption, output recovers steadily as battery production scales up, with the loss easing from about \$27 billion in 2028 to its narrowest point in the mid-2030s before settling near \$12 billion by 2040. Partial Disruption follows a shallower recovery from a deeper trough of roughly \$66 billion, levelling off at about \$56 billion. Full Disruption shows almost no recovery at all, with output falling to roughly \$90 billion by 2028 and

remaining there through to 2040, ending near \$89 billion, as a stalled transition leaves little to offset the loss of export revenue.

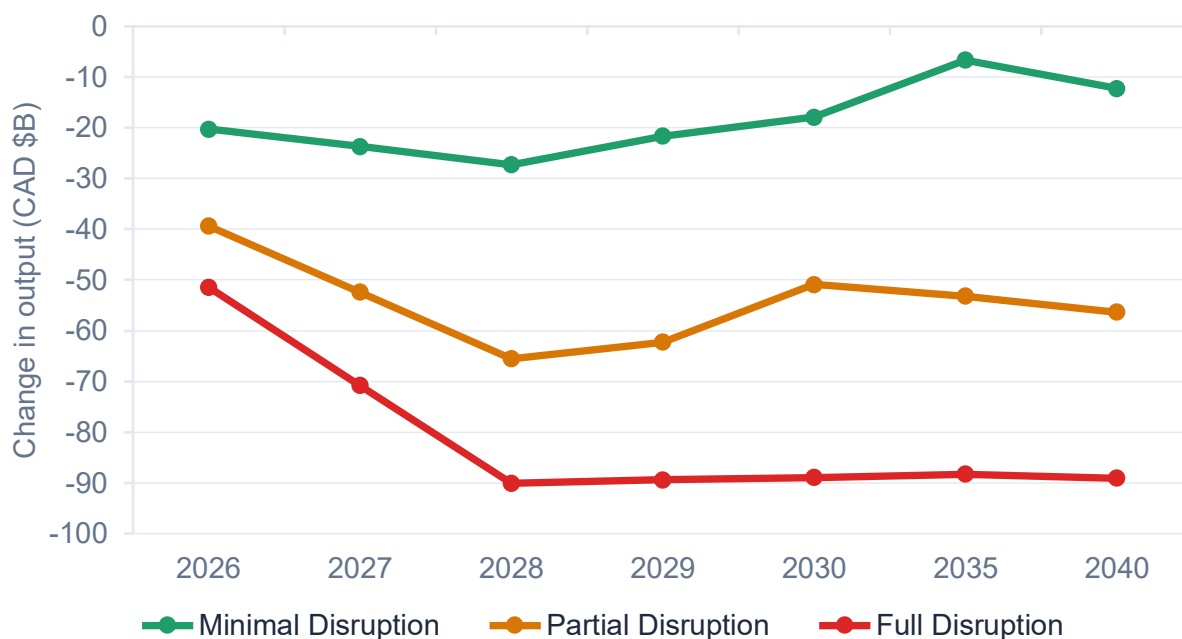


Figure 4. Change in total output relative to the 2024 baseline, by scenario, 2026–2040. Source: TRADE Auto Canada modelling; IMPLAN.

The composition of the output loss differs in an important respect from that of employment. Whereas the employment impact is dominated by induced losses spread across the wider economy, the loss in output is concentrated more heavily in the automotive manufacturing industries directly exposed to the tariffs, and within those, in vehicle assembly above all, as shown in Figure 5 and reported in Table 4. By 2040, motor vehicle manufacturing (NAICS 3361) accounts for the single largest share of the loss in the more severe scenarios, with output falling by about \$19.3 billion under Partial Disruption and \$33.6 billion under Full Disruption, against a much smaller decline of roughly \$2.4 billion under Minimal Disruption. The sensitivity of this group to the trade outcome lies in light-duty vehicle assembly, whose output is almost entirely shielded under a renewed agreement but becomes the largest single source of losses once a flat tariff is applied to all exports, falling from a negligible amount under Minimal Disruption to about \$16 billion under Partial Disruption and \$29 billion under Full Disruption. Heavy-duty truck assembly, which exports a smaller and steadier share of its output, declines more modestly, by between about \$2.3 billion and \$4.1 billion across the scenarios. The parts industries (NAICS 3363) follow assembly downward, with output falling by about \$2.4 billion, \$8.6 billion, and \$14.1 billion respectively.

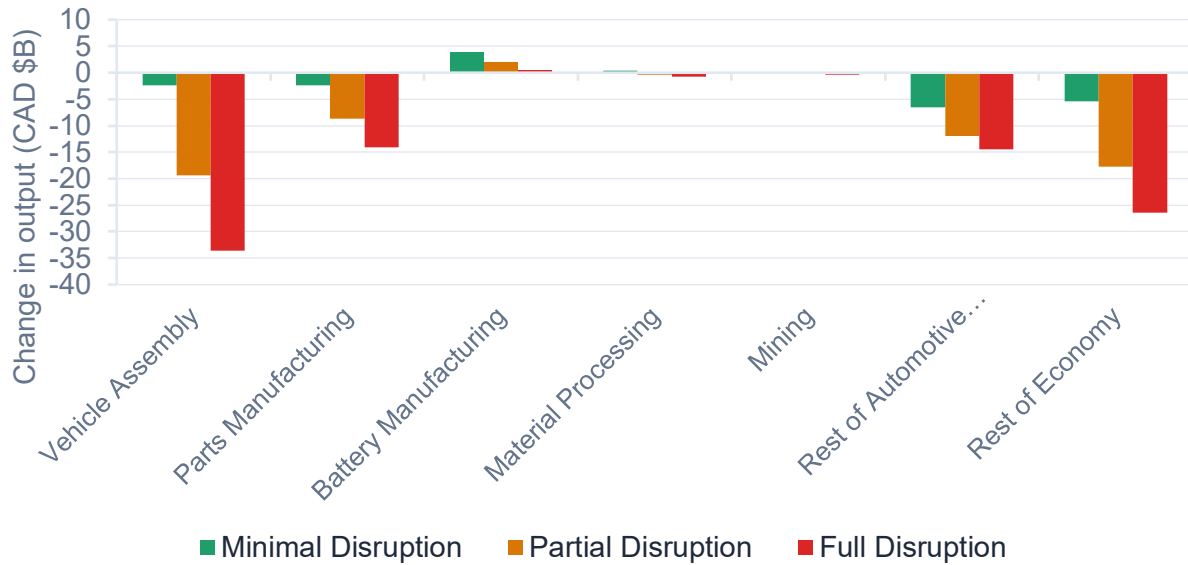


Figure 5. Output impact by industry group in 2040, by scenario. Source: TRADE Auto Canada modelling; IMPLAN.

Table 4. Output impact by industry group in 2040, by scenario (\$ billions, change vs 2024 base)

Industry group	Minimal	Partial	Full
Light-duty assembly	-0.1	-16.1	-29.5
Heavy-duty assembly	-2.3	-3.2	-4.1
Vehicle parts (3363)	-2.4	-8.6	-14.1
Battery	+3.9	+2.0	+0.5
Materials	+0.4	-0.4	-0.8
Mining	+0.2	-0.2	-0.4
Rest of auto supply chain	-6.5	-12.0	-14.4
Rest of economy	-5.4	-17.7	-26.4
<b>Total</b>	<b>-12.2</b>	<b>-56.4</b>	<b>-89.0</b>

Working against these losses is the expansion of battery manufacturing, the one industry whose output rises in every scenario. Its contribution is largest under Minimal Disruption, where it adds about \$3.9 billion by 2040, and it diminishes as the transition slows, to roughly \$2.0 billion under Partial Disruption and just \$0.5 billion under Full Disruption. The upstream material-processing and mining industries that feed the battery chain add modestly to output under Minimal Disruption but turn slightly negative under the more severe scenarios, as weaker battery demand outweighs their gains. The wider automotive supply chain loses between about \$6.5 billion and \$14.4 billion, and the rest of the economy a further \$5.4 billion to \$26.4 billion, the latter arising through the induced effect of reduced spending. Although the rest of the economy accounts for a smaller share of the output loss than it does of the employment loss, since vehicle assembly generates considerably more output per worker than most other industries, its

decline nonetheless confirms that the effects of the tariff extend well beyond the automotive sector itself.

### 6.3 Value added

Value added captures the share of the sector’s activity that accrues to the domestic economy, once the cost of imported parts, materials, and services is removed. By 2040, the domestic value added lost to the trade disruption amounts to about \$4.7 billion under Minimal Disruption, \$18.3 billion under Partial Disruption, and \$27.8 billion under Full Disruption, equivalent to roughly a third of the corresponding loss in output (Figure 6). That the value-added loss is smaller than the output loss reflects the import-intensity of vehicle production, in which a substantial portion of each dollar of output flows back out of the country to pay for foreign content.

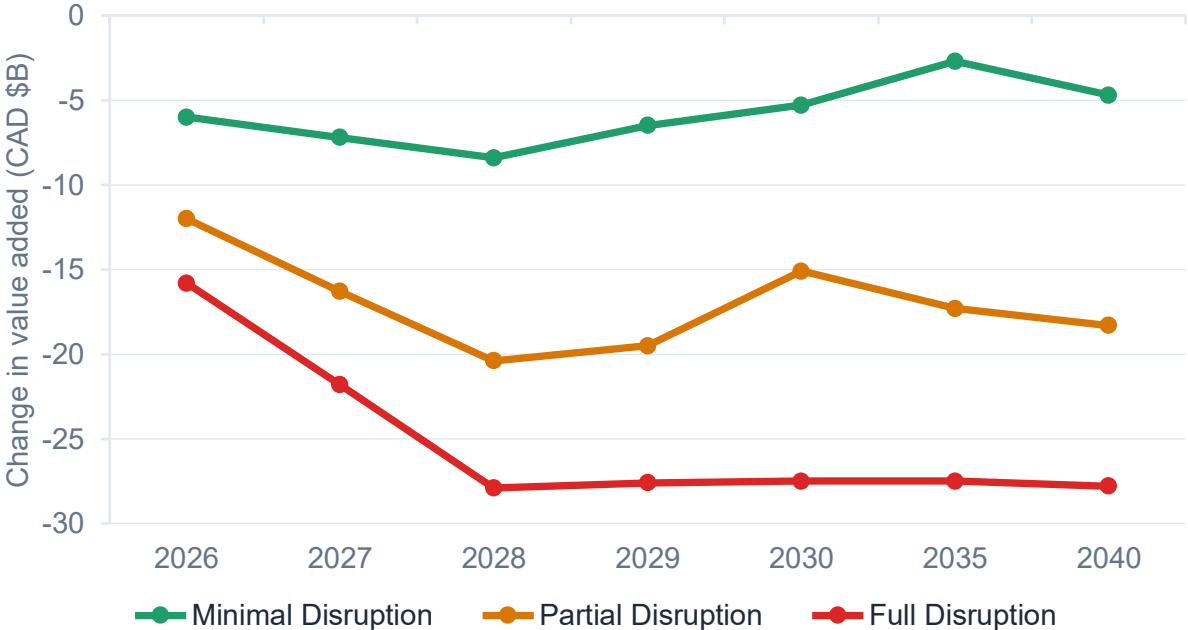


Figure 6. Change in value added (GDP contribution) relative to the 2024 baseline, by scenario, 2026–2040. Source: TRADE Auto Canada modelling; IMPLAN.

As with the other indicators, the reduction in value added falls largely outside the directly affected manufacturing industries, with the greatest share arising in the rest of the economy through the indirect and induced effects of reduced production and household spending (Figure 7). Because value added removes the imported content embodied in production, it offers a more precise measure of the sector’s contribution to the domestic economy than output alone, and it confirms that the economic cost of the trade disruption extends well beyond the automotive industries themselves.

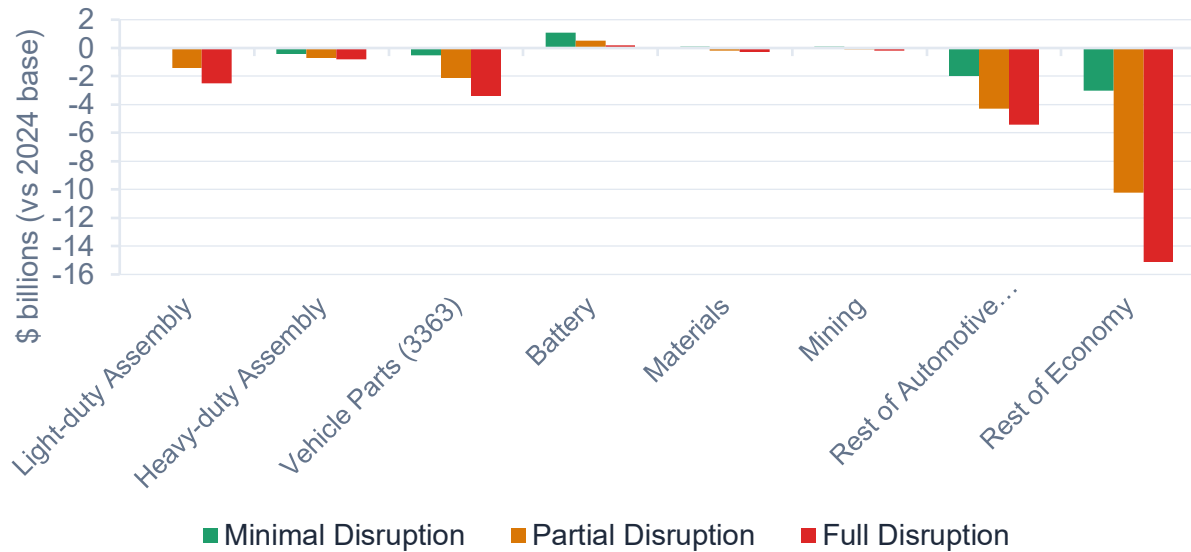


Figure 7. Value-added impact by industry group in 2040, by scenario. Source: TRADE Auto Canada modelling; IMPLAN.

## 6.4 Labour income

Labour income places a monetary value on the workforce impact, capturing the wages, salaries, and employer contributions withdrawn from households as employment contracts. It is the indicator that connects the job losses most directly to their consequences for workers and the communities that depend on them. By 2040, the labour income lost to the trade disruption reaches about \$2.0 billion under Minimal Disruption, \$9.9 billion under Partial Disruption, and \$15.8 billion under Full Disruption (Figure 8). Set against the loss in employment, these figures imply an average of roughly \$75,000 to \$80,000 in lost income per job affected, a reflection of the relatively high wages that prevail in automotive manufacturing and the supply chain that surrounds it.

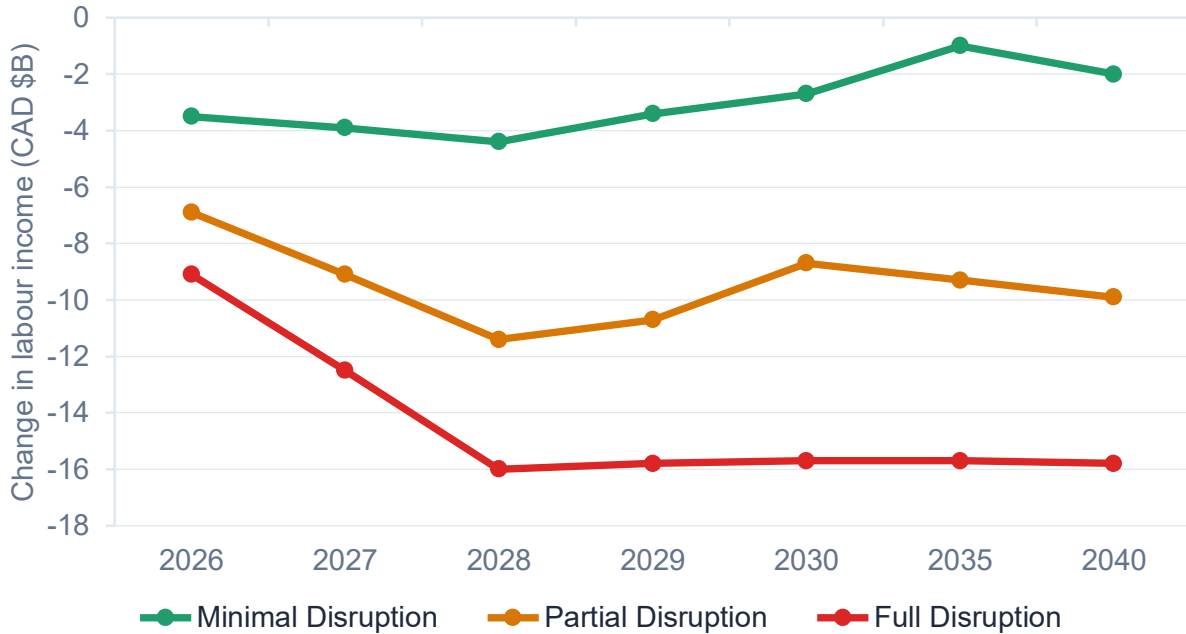


Figure 8. Change in labour income relative to the 2024 baseline, by scenario, 2026–2040. Source: TRADE Auto Canada modelling; IMPLAN.

Across the scenarios, labour income accounts for a substantial part of the total reduction in value added, ranging from roughly 40% under Minimal Disruption to close to 60% under Full Disruption, which reflects how much of the sector’s contribution to the economy takes the form of wages. The distribution of the loss by industry, shown in Figure 9, follows that of employment, falling most heavily on the rest of the economy and the wider automotive supply chain, while battery manufacturing is the only segment to add to labour income.

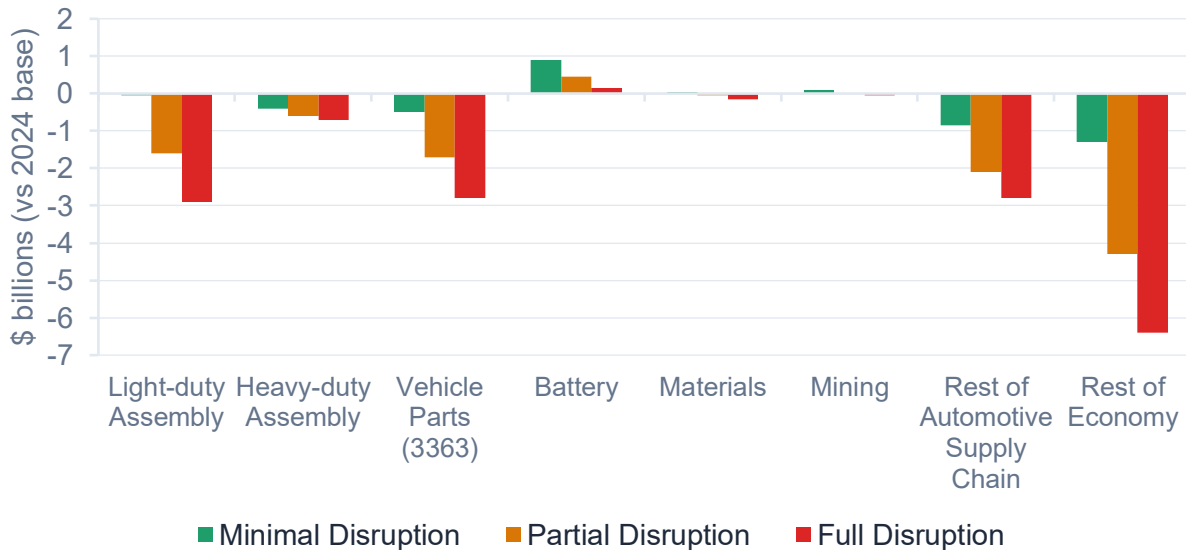


Figure 9. Labour-income impact by industry group in 2040, by scenario. Source: TRADE Auto Canada modelling; IMPLAN.

## 7. Discussion

The results set out in the preceding section describe a sector that experiences losses under every scenario, but losses that differ enormously in scale according to the trade outcome. Moving from Minimal Disruption to Full Disruption multiplies the projected loss in output, employment, value added, and labour income by roughly seven times, and the greater part of that difference is attributable not to the pace of the EV transition, which is held constant across the first two scenarios, but to whether Canada retains preferential access to the U.S. market. Under a renewed agreement the tariff reaches only the small share of trade that falls outside the rules of origin, whereas under a negotiated deterioration or a lapse a flat tariff applies to all exports regardless of compliance. The trade channel is therefore the principal determinant of the outcome, while the EV transition operates as a secondary force that either moderates the losses or, where it stalls, deepens them.

### **Export reduction and the most trade-exposed industries**

The disruption operates first and most directly through the sector's exports. Because the large majority of Canadian automotive output is sold into the United States, a tariff that raises the price of Canadian vehicles and parts in that market reduces the quantity demanded, and the scale of that reduction in each industry depends on how heavily it relies on U.S. sales and on how readily American buyers can turn to domestic supply in its place. The industries that export the greatest share of their output are therefore those that absorb the largest direct losses. Finished vehicle and heavy-duty truck assembly, which send more than 79% of their output to the United States, and engine and engine-parts manufacturing, the most export-dependent of the parts industries, bear the heaviest direct reductions, while industries built around a more proximity-driven model that is less reliant on exports, such as seating and interior trim, are comparatively insulated (Section 2.2). This concentration of the direct impact in the most trade-exposed industries also explains the pattern observed across the scenarios. Under Minimal Disruption the rules-of-origin exemption continues to shield most assembly output from the tariff, so the direct losses remain contained, but once a flat tariff applies to all exports under Partial and Full Disruption, the industries most dependent on the U.S. market, and light-duty vehicle assembly above all, account for the largest direct reductions in output and employment.

### **The contraction of internal-combustion manufacturing**

The industries most exposed to the disruption are those tied to internal-combustion production, and they are exposed from two directions at once. The shift toward electric vehicles reduces domestic demand for engines, transmissions, and the components that surround them, while the tariffs erode the U.S. market that absorbs most of their output. The clearest illustration is gasoline-engine and engine-parts manufacturing, where employment falls by roughly 8% of its 2024 base under Minimal Disruption but by more than half under Full Disruption. This contrast captures the compounding logic that runs through the analysis, since a contraction driven

mainly by the transition under a renewed agreement becomes a far steeper one once the loss of preferential access is added to it. Vehicle assembly follows a related pattern, with light-duty assembly largely shielded under renewal, as most of its output continues to qualify for tariff-free treatment, but becoming the single largest source of losses once a flat tariff is applied to all exports.

### The expansion of EV and battery manufacturing

Working in the opposite direction is the growth of battery manufacturing, which is the one industry to expand under every scenario and the principal reason the losses recover at all. The expansion is anchored in the cell, module, and materials plants that have already been announced, together with the upstream mining and refining projects intended to supply them, and it adds output and employment that partly offset the contraction elsewhere. The scale of that offset, however, depends on how far the transition proceeds, as shown in Figure 10. Under Minimal Disruption the build-out recovers a meaningful share of the gross losses, whereas under Full Disruption it recovers very little, since a stalled transition leaves fewer plants reaching capacity and weaker demand for domestically produced battery materials. The cushion that the EV build-out provides is therefore weakest in precisely the scenario in which it is most needed, because the same conditions that accompany a severe trade outcome, namely weak demand and stalled investment, are also the conditions that prevent the battery industry from reaching the scale required to offset the shock.

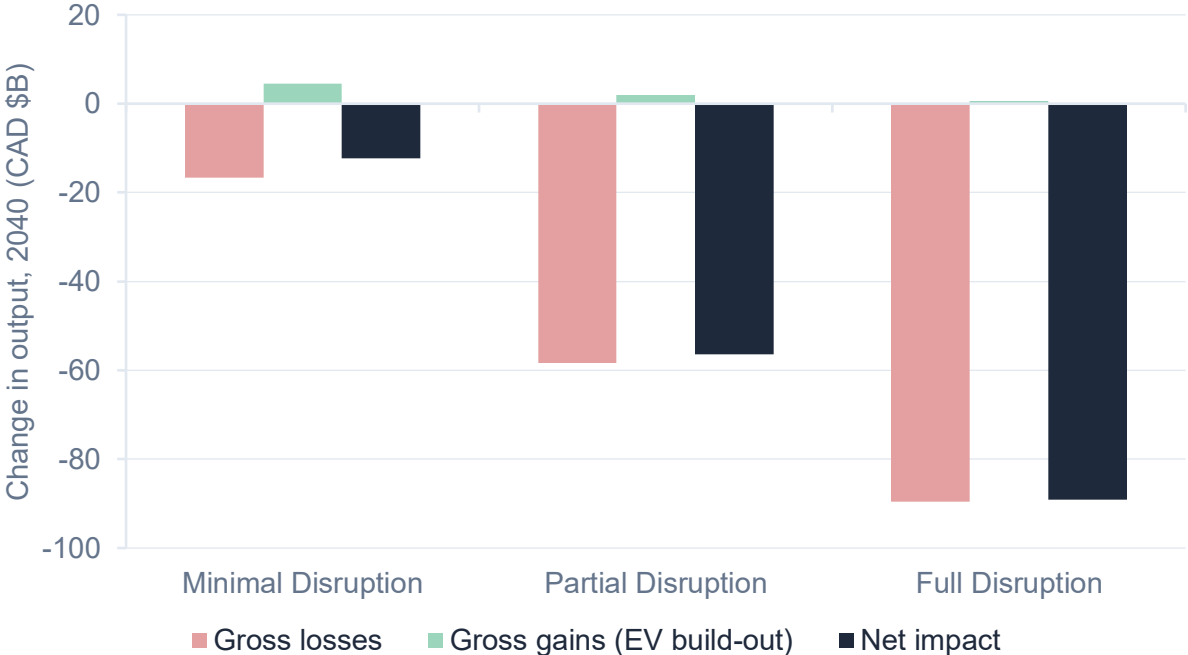


Figure 10. The battery and materials offset as a share of gross losses (the cushion ratio), by scenario. Source: TRADE Auto Canada modelling; IMPLAN.

### The wider economic impact

A further feature of the results is that the consequences of the disruption are not contained within the automotive sector. In every scenario the largest single share of the loss in employment and labour income arises outside automotive manufacturing altogether, in the rest of the economy, as the reduction in wages and production works its way through household spending and the broader supply chain. This pattern is more pronounced for employment and labour income than for output, which remains concentrated in the directly tariffed manufacturing industries, and the difference reflects the high output per worker of vehicle assembly relative to most other industries. The effect of a tariff shock to a sector of this size is thus transmitted well beyond the firms that are tariffed, reaching workers and businesses across the wider economy.

## **Implications for the workforce**

Because the central concern of this study is the labour market, the most important implication of these results lies in what they mean for workers. The transition and the trade disruption together describe a reallocation of work rather than a straightforward replacement of one set of jobs with another, and that reallocation is unlikely to be smooth. The roles created in battery and materials manufacturing draw on electrical, electrochemical, and process skills that differ markedly from the mechanical trades that predominate in engine and transmission work, so that workers displaced from the contracting industries cannot readily move into the growing ones without retraining. The losses are also concentrated geographically, falling on a relatively small number of communities in which automotive employment and spending make up a substantial part of the local economy, predominantly in Ontario. Taken together, these findings indicate that targeted reskilling, upskilling, and placement support, guided by tools such as skills-transferability matrices, will be central to limiting the human cost of the period ahead, particularly for the gasoline-engine and powertrain workforce, where the combined effect of the transition and the tariffs is most severe (FOCAL Initiative, 2024). The scale of the exposure and its concentration in particular regions are ultimately what make the trade and electrification outcomes examined in this report a question about the workforce as much as about the broader economy.

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# Appendix A. Vehicle Production and Battery Supply-Chain Assumptions

This appendix sets out the underlying vehicle-production and battery supply-chain assumptions that drive the scenario results reported in the main text. The figures show the assumed composition of vehicle-assembly output by powertrain over the forecast period, and the tables summarise the corresponding battery-manufacturing and domestic supply-chain assumptions, in each case distinguished across the three scenarios.

## A.1 Vehicle production composition by scenario

Figures A1 to A3 show the assumed annual composition of Canadian vehicle production by powertrain, separating internal-combustion (ICEV), hybrid (HEV), plug-in hybrid (PHEV), and battery-electric (BEV) vehicles, for each of the three scenarios over 2026 to 2040. The total height of each band gives total assembled volume, while the shares indicate the pace at which the powertrain mix shifts toward electrified vehicles. Under Minimal and Partial Disruption the mix follows the same electrification path, reaching a battery-electric share of about 23% by 2040, whereas under Full Disruption the transition stalls and production remains internal-combustion-weighted.

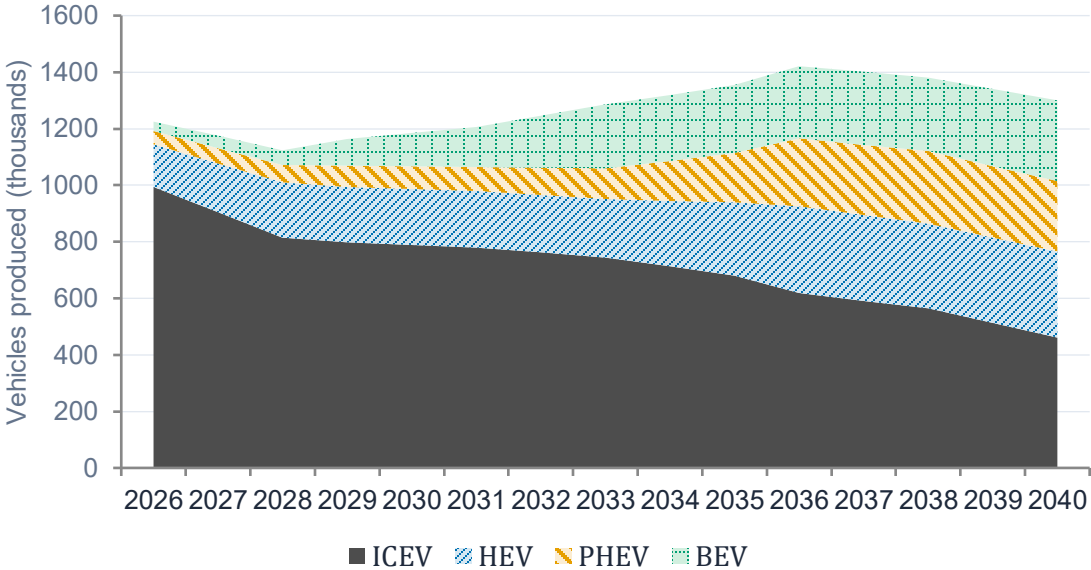


Figure A1. Assumed vehicle production composition by powertrain, Scenario 1 (Minimal Disruption), 2026–2040 (thousands of vehicles). Source: TRADE Auto Canada modelling.

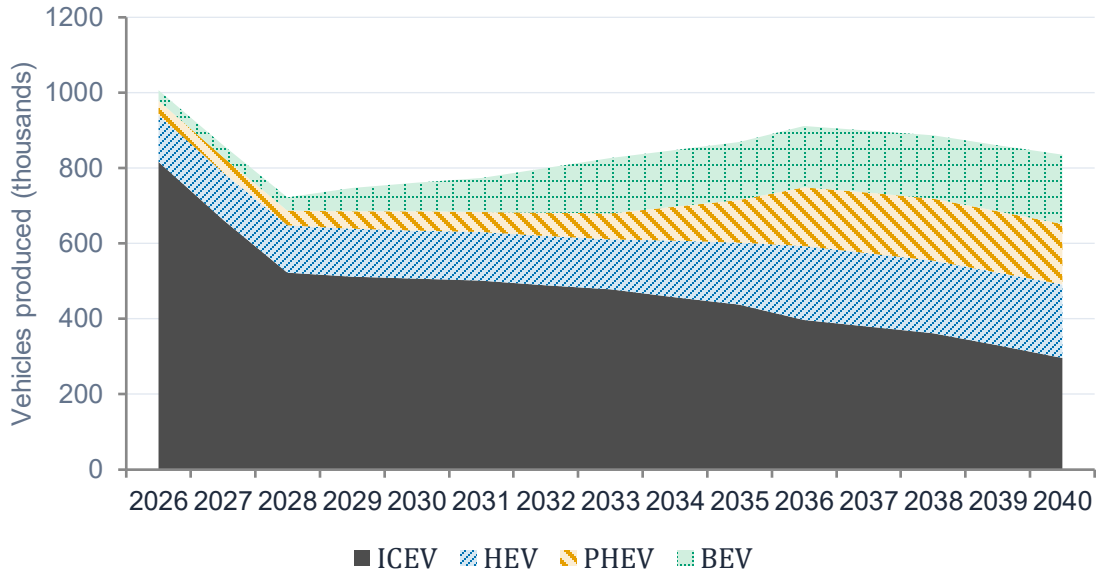


Figure A2. Assumed vehicle production composition by powertrain, Scenario 2 (Partial Disruption), 2026–2040 (thousands of vehicles). Source: TRADE Auto Canada modelling.

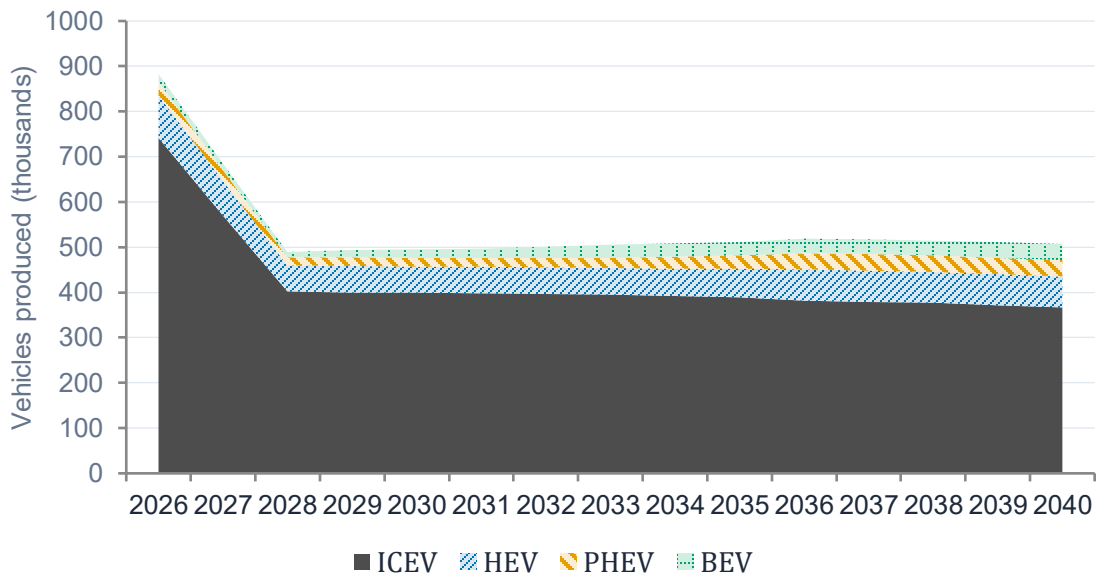


Figure A3. Assumed vehicle production composition by powertrain, Scenario 3 (Full Disruption), 2026–2040 (thousands of vehicles). Source: TRADE Auto Canada modelling.

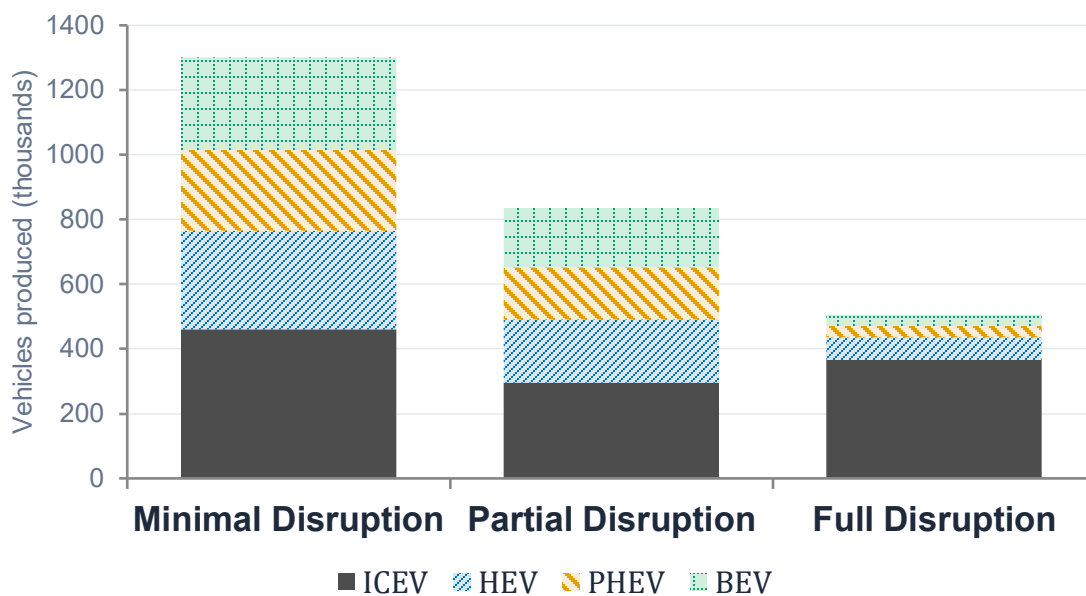


Figure A4. Vehicle production and powertrain mix by scenario in 2040 (thousands of vehicles). Source: TRADE Auto Canada modelling.

## A.2 Battery manufacturing assumptions

Table A1 sets out the announced battery-cell manufacturing plants assumed to proceed under each scenario, together with their nameplate capacity, assumed start year, and ramp-up profile. Under Minimal Disruption all three announced plants proceed; under Partial Disruption the Honda Alliston plant is cancelled and the remaining two ramp more slowly; and under Full Disruption only the NextStar Windsor plant serves the automotive market, with the St. Thomas capacity redirected to energy storage.

Battery plant	Scenario 1 — Minimal	Scenario 2 — Partial	Scenario 3 — Full
<b>NextStar, Windsor</b>	49.5 GWh; start 2026; 5-yr ramp to 60% peak	49.5 GWh; start 2026; 5-yr ramp to 40% peak	49.5 GWh; start 2026; 5-yr ramp to 40% peak
<b>VW PowerCo, St. Thomas</b>	90.0 GWh; start 2027; 5-yr ramp to 60% peak	90.0 GWh; start 2027; 5-yr ramp to 40% peak	Redirected to energy-storage market
<b>Honda, Alliston</b>	36.0 GWh; start 2030; 5-yr ramp to 60% peak	Cancelled	Cancelled

Table A1. Announced battery-cell manufacturing plants and assumed ramp-up profiles by scenario. Source: TRADE Auto Canada modelling.

## A.3 Domestic battery supply-chain shares

Table A2 summarises the assumed degree to which the battery supply chain is located domestically by 2040, spanning installed battery-manufacturing capacity and the domestic share of cathode manufacturing, material processing, and mining. These shares decline across the

scenarios, reflecting that a weaker transition supports less domestic investment in the upstream supply chain.

Supply-chain segment	Scenario 1 — Minimal	Scenario 2 — Partial	Scenario 3 — Full
<b>Battery manufacturing (operational capacity by 2040)</b>	105 GWh	56 GWh	20 GWh
<b>Cathode manufacturing (domestic share)</b>	40%	20%	10%
<b>Material processing (domestic share)</b>	40%	30%	20%
<b>Mining (domestic share)</b>	25%	20%	15%

*Table A2. Assumed battery manufacturing capacity and domestic supply-chain shares by 2040, by scenario. Source: TRADE Auto Canada modelling.*

## Appendix B. Detailed Modelling Results by Scenario

This appendix reports the full industry-level modelling results underlying the figures in Section 6. For each scenario, the change in output (relative to the 2024 baseline, in millions of Canadian dollars) and the change in employment (in jobs) are reported for every modelled industry and subtotal across the seven modelled years. Output values are expressed in millions of dollars; employment values are expressed in jobs. All values represent the modelled change relative to the 2024 baseline, and negative values denote reductions.

### B.1 Scenario 1 — Minimal Disruption: change in output (\$ millions)

Industry	2026	2027	2028	2029	2030	2035	2040
Automobile and light-duty motor vehicle manufacturing	-5,970	-7,494	-9,029	-7,066	-6,143	1,280	-108
Heavy-duty truck manufacturing	-2,398	-2,214	-2,206	-2,189	-2,212	-2,222	-2,259
Gasoline engine and engine parts manufacturing	-265	-362	-459	-459	-460	-454	-466
Electrical and electronic equipment manufacturing	-52	-67	-84	-55	-41	73	102
Steering and suspension components manufacturing	-174	-212	-250	-234	-226	-159	-171
Brake system manufacturing	-6	-9	-11	-11	-11	-11	-11
Transmission and power train parts manufacturing	-309	-410	-517	-503	-498	-428	-455
Seating and interior trim manufacturing	-649	-733	-823	-761	-730	-470	-552
Motor vehicle metal stamping	-374	-442	-511	-487	-475	-379	-397
Other motor vehicle parts manufacturing	-524	-628	-736	-693	-673	-486	-457
<b>Total Vehicle Parts Manufacturing</b>	<b>-2,353</b>	<b>-2,863</b>	<b>-3,390</b>	<b>-3,204</b>	<b>-3,115</b>	<b>-2,314</b>	<b>-2,408</b>
Other electrical equipment and component manufacturing	448	1,837	3,322	4,715	5,907	5,330	3,862
<b>Total Battery Manufacturing</b>	<b>448</b>	<b>1,837</b>	<b>3,322</b>	<b>4,715</b>	<b>5,907</b>	<b>5,330</b>	<b>3,862</b>
Basic chemical manufacturing	-4	130	284	450	593	532	351
Non-metallic mineral product manufacturing	-25	-0	32	63	153	178	83
Non-ferrous metal production and processing	-57	-54	-54	-42	-2	0	-24
<b>Total Material Processing</b>	<b>-87</b>	<b>76</b>	<b>262</b>	<b>471</b>	<b>744</b>	<b>709</b>	<b>409</b>
Iron ore mining	-147	-216	-284	-283	-282	-276	-277
Copper, nickel, lead and zinc ore mining	13	68	130	189	240	215	153
Other metal ore mining	28	108	197	277	346	310	225
Other non-metallic mineral mining and quarrying	4	32	65	96	124	110	76

Industry	2026	2027	2028	2029	2030	2035	2040
<b>Total Mining</b>	<b>-103</b>	<b>-7</b>	<b>108</b>	<b>280</b>	<b>428</b>	<b>359</b>	<b>177</b>
<b>Total Rest of Automotive Supply Chain</b>	<b>-4,115</b>	<b>-6,004</b>	<b>-7,913</b>	<b>-7,521</b>	<b>-7,297</b>	<b>-6,139</b>	<b>-6,528</b>
<b>Total Rest of Economy</b>	<b>-5,662</b>	<b>-7,022</b>	<b>-8,451</b>	<b>-7,123</b>	<b>-6,245</b>	<b>-3,671</b>	<b>-5,373</b>
<b>Total (all industries)</b>	<b>-20,240</b>	<b>-23,691</b>	<b>-27,297</b>	<b>-21,637</b>	<b>-17,932</b>	<b>-6,669</b>	<b>-12,228</b>

Table B1. Scenario 1 — Minimal Disruption — change in output by industry relative to the 2024 baseline (\$ millions), 2026–2040. Source: TRADE Auto Canada modelling; IMPLAN.

## B.2 Scenario 1 — Minimal Disruption: change in employment (jobs)

Industry	2026	2027	2028	2029	2030	2035	2040
Automobile and light-duty motor vehicle manufacturing	-4,563	-5,727	-6,900	-5,400	-4,695	977	-83
Heavy-duty truck manufacturing	-4,553	-4,203	-4,190	-4,157	-4,199	-4,220	-4,290
Gasoline engine and engine parts manufacturing	-324	-442	-560	-561	-561	-554	-569
Electrical and electronic equipment manufacturing	-119	-154	-191	-126	-94	166	231
Steering and suspension components manufacturing	-301	-366	-431	-404	-391	-275	-296
Brake system manufacturing	-23	-35	-46	-46	-46	-46	-46
Transmission and power train parts manufacturing	-703	-932	-1,174	-1,144	-1,132	-973	-1,034
Seating and interior trim manufacturing	-1,067	-1,205	-1,352	-1,250	-1,200	-773	-908
Motor vehicle metal stamping	-854	-1,010	-1,167	-1,112	-1,084	-865	-907
Other motor vehicle parts manufacturing	-1,016	-1,217	-1,426	-1,344	-1,305	-942	-886
<b>Total Vehicle Parts Manufacturing</b>	<b>-4,407</b>	<b>-5,361</b>	<b>-6,347</b>	<b>-5,987</b>	<b>-5,813</b>	<b>-4,262</b>	<b>-4,415</b>
Other electrical equipment and component manufacturing	1,073	4,397	7,953	11,290	14,142	12,760	9,247
<b>Total Battery Manufacturing</b>	<b>1,073</b>	<b>4,397</b>	<b>7,953</b>	<b>11,290</b>	<b>14,142</b>	<b>12,760</b>	<b>9,247</b>
Basic chemical manufacturing	-3	73	160	254	334	300	198
Non-metallic mineral product manufacturing	-68	-1	85	168	409	474	221
Non-ferrous metal production and processing	-13	-12	-12	-10	-1	0	-6
<b>Total Material Processing</b>	<b>-84</b>	<b>60</b>	<b>233</b>	<b>412</b>	<b>742</b>	<b>774</b>	<b>413</b>
Iron ore mining	-84	-123	-162	-161	-160	-157	-158
Copper, nickel, lead and zinc ore mining	12	69	132	192	244	218	155
Other metal ore mining	51	198	364	511	639	572	415

Industry	2026	2027	2028	2029	2030	2035	2040
Other non-metallic mineral mining and quarrying	11	83	166	248	319	283	195
<b>Total Mining</b>	<b>-10</b>	<b>227</b>	<b>500</b>	<b>790</b>	<b>1,042</b>	<b>916</b>	<b>607</b>
<b>Total Rest of Automotive Supply Chain</b>	<b>-6,733</b>	<b>-9,610</b>	<b>-12,550</b>	<b>-11,332</b>	<b>-10,640</b>	<b>-7,023</b>	<b>-8,264</b>
<b>Total Rest of Economy</b>	<b>-22,422</b>	<b>-27,580</b>	<b>-33,015</b>	<b>-27,524</b>	<b>-23,887</b>	<b>-13,276</b>	<b>-20,241</b>
<b>Total (all industries)</b>	<b>-41,699</b>	<b>-47,797</b>	<b>-54,316</b>	<b>-41,908</b>	<b>-33,308</b>	<b>-13,354</b>	<b>-27,026</b>

Table B2. Scenario 1 — Minimal Disruption — change in employment by industry relative to the 2024 baseline (jobs), 2026–2040. Source: TRADE Auto Canada modelling; IMPLAN.

### B.3 Scenario 2 — Partial Disruption: change in output (\$ millions)

Industry	2026	2027	2028	2029	2030	2035	2040
Automobile and light-duty motor vehicle manufacturing	-12,906	-17,511	-21,862	-20,602	-20,004	-15,244	-16,135
Heavy-duty truck manufacturing	-2,845	-2,936	-3,174	-3,163	-3,178	-3,185	-3,208
Gasoline engine and engine parts manufacturing	-994	-1,453	-1,911	-1,911	-1,911	-1,908	-1,916
Electrical and electronic equipment manufacturing	-130	-182	-235	-217	-207	-134	-116
Steering and suspension components manufacturing	-312	-415	-515	-505	-500	-457	-465
Brake system manufacturing	-36	-55	-73	-73	-73	-73	-73
Transmission and power train parts manufacturing	-805	-1,150	-1,495	-1,486	-1,482	-1,438	-1,455
Seating and interior trim manufacturing	-1,021	-1,273	-1,515	-1,475	-1,455	-1,289	-1,342
Motor vehicle metal stamping	-1,170	-1,631	-2,089	-2,074	-2,049	-2,004	-2,016
Other motor vehicle parts manufacturing	-880	-1,160	-1,441	-1,414	-1,394	-1,280	-1,262
<b>Total Vehicle Parts Manufacturing</b>	<b>-5,349</b>	<b>-7,319</b>	<b>-9,274</b>	<b>-9,155</b>	<b>-9,071</b>	<b>-8,583</b>	<b>-8,644</b>
Other electrical equipment and component manufacturing	195	1,111	1,910	2,638	3,268	2,740	1,960
<b>Total Battery Manufacturing</b>	<b>195</b>	<b>1,111</b>	<b>1,910</b>	<b>2,638</b>	<b>3,268</b>	<b>2,740</b>	<b>1,960</b>
Basic chemical manufacturing	-81	-62	-52	1	183	16	-45
Non-metallic mineral product manufacturing	-126	-172	-216	-191	-149	-154	-196
Non-ferrous metal production and processing	-102	-84	-161	-152	-93	-141	-148
<b>Total Material Processing</b>	<b>-309</b>	<b>-318</b>	<b>-430</b>	<b>-341</b>	<b>-59</b>	<b>-278</b>	<b>-388</b>
Iron ore mining	-195	-287	-379	-378	187	-373	-374
Copper, nickel, lead and zinc ore mining	-2	34	55	83	115	87	57

Industry	2026	2027	2028	2029	2030	2035	2040
Other metal ore mining	8	43	69	95	120	98	69
Other non-metallic mineral mining and quarrying	-5	7	16	29	44	31	17
<b>Total Mining</b>	<b>-194</b>	<b>-203</b>	<b>-238</b>	<b>-170</b>	<b>466</b>	<b>-157</b>	<b>-231</b>
<b>Total Rest of Automotive Supply Chain</b>	<b>-6,661</b>	<b>-9,772</b>	<b>-12,863</b>	<b>-12,625</b>	<b>-7,499</b>	<b>-11,749</b>	<b>-11,987</b>
<b>Total Rest of Economy</b>	<b>-11,315</b>	<b>-15,445</b>	<b>-19,605</b>	<b>-18,848</b>	<b>-14,782</b>	<b>-16,737</b>	<b>-17,734</b>
<b>Total (all industries)</b>	<b>-39,383</b>	<b>-52,393</b>	<b>-65,537</b>	<b>-62,266</b>	<b>-50,860</b>	<b>-53,193</b>	<b>-56,367</b>

Table B3. Scenario 2 — Partial Disruption — change in output by industry relative to the 2024 baseline (\$ millions), 2026–2040. Source: TRADE Auto Canada modelling; IMPLAN.

## B.4 Scenario 2 — Partial Disruption: change in employment (jobs)

Industry	2026	2027	2028	2029	2030	2035	2040
Automobile and light-duty motor vehicle manufacturing	-9,863	-13,381	-16,707	-15,743	-15,287	-11,649	-12,330
Heavy-duty truck manufacturing	-5,402	-5,575	-6,027	-6,007	-6,033	-6,047	-6,091
Gasoline engine and engine parts manufacturing	-1,213	-1,773	-2,332	-2,332	-2,332	-2,327	-2,337
Electrical and electronic equipment manufacturing	-295	-415	-535	-493	-472	-306	-264
Steering and suspension components manufacturing	-538	-715	-888	-870	-861	-788	-801
Brake system manufacturing	-145	-217	-289	-289	-289	-289	-289
Transmission and power train parts manufacturing	-1,831	-2,613	-3,397	-3,378	-3,368	-3,268	-3,307
Seating and interior trim manufacturing	-1,678	-2,091	-2,489	-2,424	-2,390	-2,118	-2,204
Motor vehicle metal stamping	-2,672	-3,724	-4,769	-4,734	-4,678	-4,575	-4,602
Other motor vehicle parts manufacturing	-1,706	-2,249	-2,794	-2,741	-2,703	-2,483	-2,447
<b>Total Vehicle Parts Manufacturing</b>	<b>-10,078</b>	<b>-13,797</b>	<b>-17,493</b>	<b>-17,261</b>	<b>-17,093</b>	<b>-16,154</b>	<b>-16,251</b>
Other electrical equipment and component manufacturing	467	2,659	4,574	6,316	7,823	6,560	4,693
<b>Total Battery Manufacturing</b>	<b>467</b>	<b>2,659</b>	<b>4,574</b>	<b>6,316</b>	<b>7,823</b>	<b>6,560</b>	<b>4,693</b>
Basic chemical manufacturing	-46	-36	-30	0	103	9	-26
Non-metallic mineral product manufacturing	-336	-459	-578	-511	-399	-410	-522
Non-ferrous metal production and processing	-23	-19	-36	-33	-21	-31	-33
<b>Total Material Processing</b>	<b>-405</b>	<b>-514</b>	<b>-644</b>	<b>-544</b>	<b>-317</b>	<b>-432</b>	<b>-581</b>
Iron ore mining	-111	-163	-215	-215	105	-212	-213

Industry	2026	2027	2028	2029	2030	2035	2040
Copper, nickel, lead and zinc ore mining	-3	34	55	84	116	88	57
Other metal ore mining	15	78	127	176	222	181	128
Other non-metallic mineral mining and quarrying	-13	17	41	75	114	80	42
<b>Total Mining</b>	<b>-112</b>	<b>-34</b>	<b>8</b>	<b>120</b>	<b>557</b>	<b>137</b>	<b>14</b>
<b>Total Rest of Automotive Supply Chain</b>	<b>-13,235</b>	<b>-19,201</b>	<b>-25,100</b>	<b>-24,361</b>	<b>-17,457</b>	<b>-21,626</b>	<b>-22,384</b>
<b>Total Rest of Economy</b>	<b>-45,389</b>	<b>-61,836</b>	<b>-78,344</b>	<b>-75,212</b>	<b>-60,162</b>	<b>-66,496</b>	<b>-70,577</b>
<b>Total (all industries)</b>	<b>-84,017</b>	<b>-111,679</b>	<b>-139,733</b>	<b>-132,692</b>	<b>-107,969</b>	<b>-115,707</b>	<b>-123,507</b>

Table B4. Scenario 2 — Partial Disruption — change in employment by industry relative to the 2024 baseline (jobs), 2026–2040. Source: TRADE Auto Canada modelling; IMPLAN.

### B.5 Scenario 3 — Full Disruption: change in output (\$ millions)

Industry	2026	2027	2028	2029	2030	2035	2040
Automobile and light-duty motor vehicle manufacturing	-17,391	-23,914	-30,325	-30,135	-30,048	-29,332	-29,485
Heavy-duty truck manufacturing	-3,423	-3,721	-4,051	-4,050	-4,053	-4,058	-4,064
Gasoline engine and engine parts manufacturing	-1,598	-2,357	-3,116	-3,116	-3,116	-3,115	-3,117
Electrical and electronic equipment manufacturing	-198	-283	-368	-365	-364	-353	-350
Steering and suspension components manufacturing	-433	-593	-752	-751	-750	-744	-745
Brake system manufacturing	-61	-91	-122	-122	-122	-122	-122
Transmission and power train parts manufacturing	-1,250	-1,809	-2,368	-2,366	-2,366	-2,359	-2,362
Seating and interior trim manufacturing	-1,278	-1,640	-1,999	-1,993	-1,990	-1,964	-1,972
Motor vehicle metal stamping	-1,761	-2,511	-3,261	-3,258	-3,257	-3,247	-3,249
Other motor vehicle parts manufacturing	-1,252	-1,714	-2,176	-2,172	-2,170	-2,151	-2,148
<b>Total Vehicle Parts Manufacturing</b>	<b>-7,830</b>	<b>-11,000</b>	<b>-14,161</b>	<b>-14,143</b>	<b>-14,135</b>	<b>-14,055</b>	<b>-14,064</b>
Other electrical equipment and component manufacturing	181	481	742	983	1,189	819	544
<b>Total Battery Manufacturing</b>	<b>181</b>	<b>481</b>	<b>742</b>	<b>983</b>	<b>1,189</b>	<b>819</b>	<b>544</b>
Basic chemical manufacturing	-111	-157	-204	-198	-192	-201	-209
Non-metallic mineral product manufacturing	-182	-267	-351	-348	-346	-344	-350
Non-ferrous metal production and processing	-120	-166	-212	-211	-210	-210	-210
<b>Total Material Processing</b>	<b>-413</b>	<b>-590</b>	<b>-767</b>	<b>-757</b>	<b>-748</b>	<b>-754</b>	<b>-768</b>

Industry	2026	2027	2028	2029	2030	2035	2040
Iron ore mining	-198	-290	-383	-383	-383	-383	-383
Copper, nickel, lead and zinc ore mining	-7	-3	-1	7	14	1	-8
Other metal ore mining	4	10	15	21	26	17	10
Other non-metallic mineral mining and quarrying	-7	-9	-12	-9	-6	-11	-14
<b>Total Mining</b>	<b>-208</b>	<b>-293</b>	<b>-381</b>	<b>-364</b>	<b>-350</b>	<b>-375</b>	<b>-395</b>
<b>Total Rest of Automotive Supply Chain</b>	<b>-7,549</b>	<b>-11,062</b>	<b>-14,566</b>	<b>-14,522</b>	<b>-14,496</b>	<b>-14,398</b>	<b>-14,442</b>
<b>Total Rest of Economy</b>	<b>-14,794</b>	<b>-20,700</b>	<b>-26,576</b>	<b>-26,415</b>	<b>-26,307</b>	<b>-26,157</b>	<b>-26,368</b>
<b>Total (all industries)</b>	<b>-51,427</b>	<b>-70,800</b>	<b>-90,084</b>	<b>-89,403</b>	<b>-88,948</b>	<b>-88,310</b>	<b>-89,043</b>

Table B5. Scenario 3 — Full Disruption — change in output by industry relative to the 2024 baseline (\$ millions), 2026–2040. Source: TRADE Auto Canada modelling; IMPLAN.

## B.6 Scenario 3 — Full Disruption: change in employment (jobs)

Industry	2026	2027	2028	2029	2030	2035	2040
Automobile and light-duty motor vehicle manufacturing	-13,289	-18,274	-23,173	-23,028	-22,962	-22,414	-22,532
Heavy-duty truck manufacturing	-6,500	-7,066	-7,691	-7,690	-7,696	-7,705	-7,717
Gasoline engine and engine parts manufacturing	-1,949	-2,876	-3,802	-3,802	-3,802	-3,801	-3,802
Electrical and electronic equipment manufacturing	-450	-644	-837	-831	-828	-802	-795
Steering and suspension components manufacturing	-747	-1,023	-1,297	-1,295	-1,293	-1,282	-1,284
Brake system manufacturing	-241	-361	-481	-481	-481	-481	-481
Transmission and power train parts manufacturing	-2,840	-4,112	-5,380	-5,378	-5,377	-5,361	-5,367
Seating and interior trim manufacturing	-2,100	-2,695	-3,284	-3,274	-3,270	-3,227	-3,240
Motor vehicle metal stamping	-4,020	-5,733	-7,443	-7,437	-7,435	-7,413	-7,417
Other motor vehicle parts manufacturing	-2,428	-3,324	-4,218	-4,210	-4,206	-4,170	-4,164
<b>Total Vehicle Parts Manufacturing</b>	<b>-14,775</b>	<b>-20,768</b>	<b>-26,742</b>	<b>-26,708</b>	<b>-26,692</b>	<b>-26,537</b>	<b>-26,550</b>
Other electrical equipment and component manufacturing	433	1,152	1,776	2,352	2,845	1,961	1,301
<b>Total Battery Manufacturing</b>	<b>433</b>	<b>1,152</b>	<b>1,776</b>	<b>2,352</b>	<b>2,845</b>	<b>1,961</b>	<b>1,301</b>
Basic chemical manufacturing	-63	-89	-116	-112	-109	-114	-118
Non-metallic mineral product manufacturing	-485	-713	-938	-929	-923	-918	-934
Non-ferrous metal production and processing	-27	-37	-46	-46	-46	-46	-46

Industry	2026	2027	2028	2029	2030	2035	2040
<b>Total Material Processing</b>	<b>-575</b>	<b>-839</b>	<b>-1,100</b>	<b>-1,087</b>	<b>-1,078</b>	<b>-1,078</b>	<b>-1,098</b>
Iron ore mining	-113	-165	-218	-218	-218	-218	-218
Copper, nickel, lead and zinc ore mining	-7	-4	-2	7	14	1	-9
Other metal ore mining	6	18	27	38	48	30	18
Other non-metallic mineral mining and quarrying	-20	-24	-30	-23	-17	-28	-36
<b>Total Mining</b>	<b>-134</b>	<b>-175</b>	<b>-223</b>	<b>-196</b>	<b>-173</b>	<b>-215</b>	<b>-245</b>
<b>Total Rest of Automotive Supply Chain</b>	<b>-16,730</b>	<b>-24,306</b>	<b>-31,843</b>	<b>-31,710</b>	<b>-31,632</b>	<b>-31,319</b>	<b>-31,457</b>
<b>Total Rest of Economy</b>	<b>-59,713</b>	<b>-83,455</b>	<b>-107,074</b>	<b>-106,407</b>	<b>-105,959</b>	<b>-105,346</b>	<b>-106,214</b>
<b>Total (all industries)</b>	<b>-111,283</b>	<b>-153,731</b>	<b>-196,070</b>	<b>-194,474</b>	<b>-193,347</b>	<b>-192,653</b>	<b>-194,512</b>

Table B6. Scenario 3 — Full Disruption — change in employment by industry relative to the 2024 baseline (jobs), 2026–2040. Source: TRADE Auto Canada modelling; IMPLAN.

## Appendix C. Mapping of Modelled Industries to Input-Output and IMPLAN Codes

This appendix provides the mapping between the industries modelled in the analysis and their corresponding IMPLAN sector codes, as referenced in Section 3. The directly modelled industries span vehicle assembly, the vehicle parts industries, the battery-manufacturing and upstream battery-materials industries, and the relevant mining industries. Economy-wide indirect and induced effects are captured through the full IMPLAN national model and are not enumerated individually here.

Modelled group	IMPLAN code	IMPLAN industry description
<b>Vehicle assembly</b>	99	Automobile and light-duty motor vehicle manufacturing
	100	Heavy-duty truck manufacturing
<b>Vehicle parts</b>	102	Motor vehicle gasoline engine and engine parts manufacturing
	103	Motor vehicle electrical and electronic equipment manufacturing
	104	Motor vehicle steering and suspension components (except spring) manufacturing
	105	Motor vehicle brake system manufacturing
	106	Motor vehicle transmission and power train parts manufacturing
	107	Motor vehicle seating and interior trim manufacturing
	108	Motor vehicle metal stamping
	109	Other motor vehicle parts manufacturing
<b>Battery manufacturing</b>	98	Other electrical equipment and component manufacturing
<b>Material processing</b>	60	Basic chemical manufacturing
	69	Non-metallic mineral product manufacturing (except cement and concrete products)
	74	Non-ferrous metal (except aluminum) production and processing
<b>Mining</b>	14	Iron ore mining
	16	Copper, nickel, lead and zinc ore mining
	17	Other metal ore mining
	21	Other non-metallic mineral mining and quarrying (except diamond and potash)

Table C1. Mapping of directly modelled industries to IMPLAN sector codes. Economy-wide indirect and induced effects are captured through the full IMPLAN national model. Source: TRADE Auto Canada modelling; IMPLAN.