ELECTRIC MOBILITY CANADA
ACCELERATING ELECTRIC TRANSPORTATION

MOBILITÉ ÉLECTRIQUE CANADA
ACCÉLÉRER L'ÉLECTRIFICATION DES TRANSPORTS

EY
Shape the future with confidence

ELECTRIFYING PROGRESS: A COMPLETE ECONOMIC OUTLOOK OF THE CANADIAN EV INDUSTRY

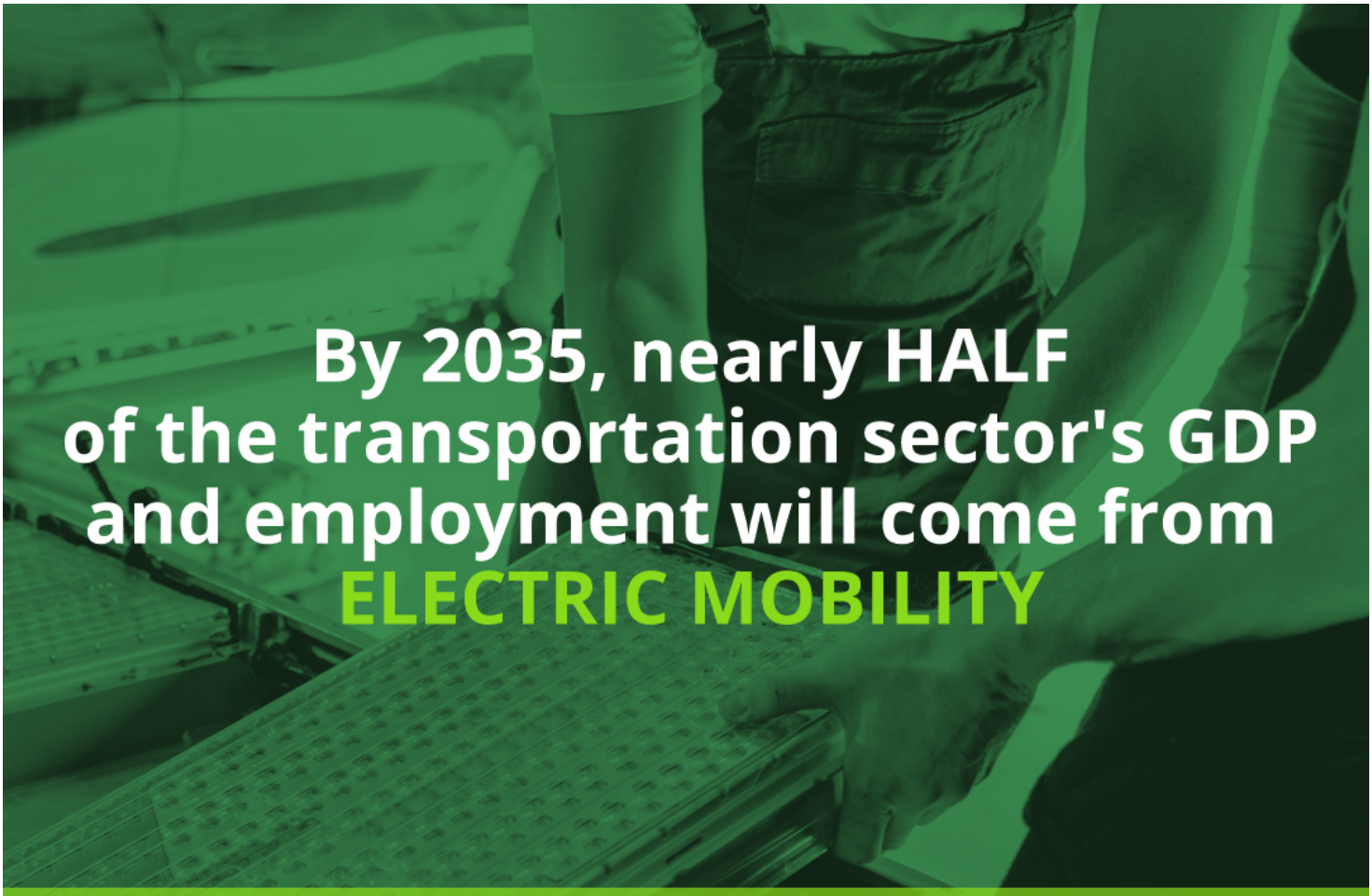
Electric Mobility Canada

April 10, 2025

Disclaimer

Ernst & Young LLP (EY) was engaged by Electric Mobility Canada to conduct an economic outlook study focusing on estimating the impacts of the transition to electrification on economic activity and jobs in the Canadian mobility sector. In preparing this document (Report), EY relied upon unaudited data and information from Statistics Canada, Canada Energy Regulator, industry stakeholders, and other third party sources (collectively, the Supporting Information). EY reserves the right to revise any analyses, observations or comments referred to in this Report, if additional Supporting Information becomes available to us subsequent to the release of this Report. EY has assumed the Supporting Information to be accurate, complete and appropriate for the purposes of the Report. EY did not audit or independently verify the accuracy or completeness of the Supporting Information. Accordingly, EY expresses no opinion or other forms of assurance in respect of the Supporting Information and does not accept any responsibility for errors or omissions, or any loss or damage as a result of any persons relying on this Report for any purpose other than that for which it has been prepared.

Table of Contents



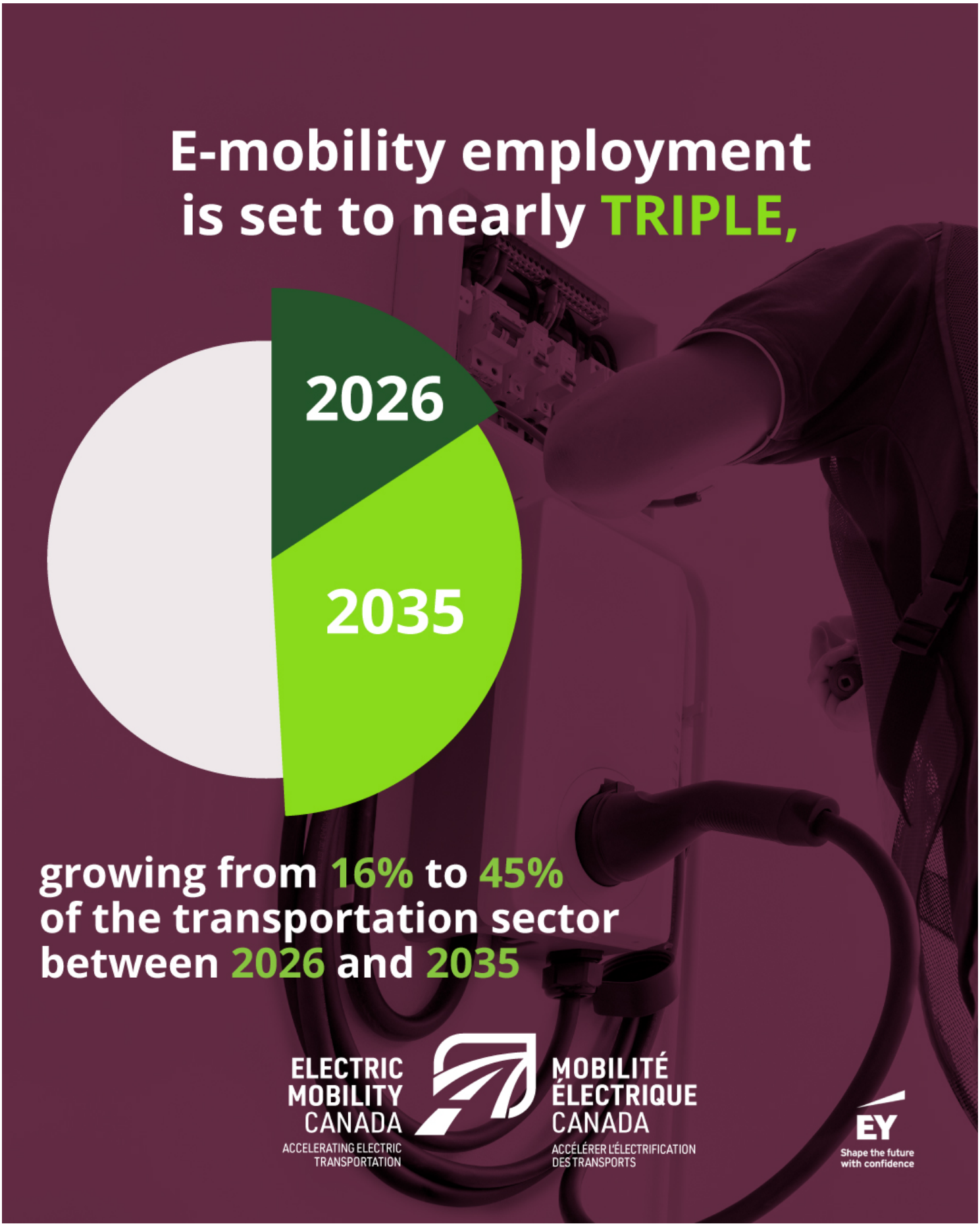
By 2035, nearly HALF of the transportation sector's GDP and employment will come from ELECTRIC MOBILITY

45%

ELECTRIC MOBILITY CANADA
ACCELERATING ELECTRIC TRANSPORTATION

MOBILITÉ ÉLECTRIQUE CANADA
ACCÉLÉRER L'ÉLECTRIFICATION DES TRANSPORTS

EY
Shape the future with confidence


E-mobility employment
is set to nearly TRIPLE,
2026
2035
growing from 16% to 45%
of the transportation sector
between 2026 and 2035
ELECTRIC MOBILITY CANADA
ACCELERATING ELECTRIC TRANSPORTATION
MOBILITÉ ÉLECTRIQUE CANADA
ACCÉLÉRER L'ÉLECTRIFICATION DES TRANSPORTS
EY
Shape the future with confidence

Glossary and definitions

Term	Definition
Core mobility sector	Core mobility industries represent those which all or most of their output is directly related to activities in the mobility sector.
Direct impact	Direct impacts include the economic effects generated directly by the capital and operational expenditures associated with vehicle production. Operational expenditure encompasses funds spent on the normal operations of manufacturing, including sourcing materials, employee wages, contracting services for maintenance, and equipment running costs. Capital expenditure includes investments in the acquisition of manufacturing plants, office facilities, charging infrastructure, and other related infrastructure costs.
Electrification	The electrification process refers to the transition from systems and technologies that rely on fossil fuels or non-electric sources of energy to those that utilize electricity as the primary energy source.
eMobility	eMobility encompasses electric vehicles.
Gross domestic product (GDP)	The total unduplicated value of the goods and services produced in the economic territory of a country or region during a given period. A valuation expressed in terms of the prices actually paid by the purchaser after all applicable taxes and/or subsidies.
Indirect impact	Indirect impacts in the mobility sector refer to secondary economic activities that arise from initial spending. For example, suppliers of mobility components, such as steel and electronic parts, will experience increased demand due to the production and assembly of vehicles, as well as the development of related infrastructure, such as charging stations and manufacturing facilities for electric vehicles.
Induced impact	Induced impacts refer to additional economic activities that arise when employees benefiting from the direct and indirect economic activities associated with the mobility sector spend their increased wages and salaries on consumer goods and services. For example, employees working in manufacturing plants, as well as those employed by suppliers and service providers, may spend a portion of their additional income at local retail stores, restaurants, and cafes. This spending further stimulates the retail trade and the accommodation and food services industries.
Input Output Model	An Input-Output (I-O) Model is an economic tool that represents the interdependencies between different sectors of an economy. It illustrates how the output from one industry serves as an input to another, capturing the flow of goods and services among industries.
Mobility	Mobility encompasses both eMobility and traditional mobility.
Supporting mobility sector	Supporting mobility industries provide value to the total mobility sector directly and indirectly across the value chain and ecosystem.
Traditional mobility	Traditional mobility includes vehicles powered by internal combustion engines.
Vehicles	The economic impact model is based on road motor vehicle registrations, including passenger cars, multi-purpose vehicles, pickup trucks, vans, and buses. This definition excludes e-micro-mobility and specialty vehicles, such as trailers and off-road categories like snowmobiles, golf carts, boats, ships, etc.

Project overview

- The report showcases the impact of the electrification transition on the Canadian economy. The study quantifies the current impact on key economic outcomes, including jobs and gross domestic product (GDP). The study also assesses how these indicators change under future scenarios associated with the transition to electrification.
- **Traditional mobility** includes vehicles powered by internal combustion engines, **eMobility** captures electric vehicles (including passenger cars, multi-purpose vehicles, pickup trucks, medium and heavy-duty trucks, vans, and buses), and **mobility** encompasses both eMobility and traditional mobility.

Project overview		
Mobility sector research	**Economic modelling**	**Case studies and broader benefits**
Value chain mapping • Conduct a value chain mapping of the traditional mobility and eMobility sectors, encompassing upstream and downstream industries such as mining, raw materials, auto parts, automotive manufacturing, infrastructure, maintenance, and utilities, among others. **Industry data collection** • Gather existing research and sectoral data on the Canadian mobility markets. • Conduct a survey of EMC members, non-EMC members, and other industry associations representing key sectors in eMobility.	**Macroeconomic model development and estimation of economic impacts** • Define the model structure and outline the relationships between variables, using statistical approach and assumptions to estimate parameters. • Employ economic modeling tools to illustrate interdependencies between sectors and the effects of changes across sectors. • Conduct a comprehensive analysis of the economic impacts of the EV transition, including direct, indirect, and induced effects on key indicators (GDP and employment).	**Case studies** Research and present case studies of eMobility initiatives in Canada and their associated economic impacts. • Identify projects related to upstream and downstream industries within traditional mobility and eMobility that may be impacted by the transition to electrification. **Broader benefits** • Describe benefits linked to health and environmental dimensions caused by the electrification transition.
Project outcomes		
Current state assessment and key data inputs for economic modelling	**Model output estimates across key industries in the eMobility value chain**	**Case studies and broader industry impacts**

OVERVIEW OF MACROECONOMIC MODEL DEVELOPMENT

Outlined below is an overview of the macroeconomic model development in its three main stages: model inputs, tools used for analysis, and outputs.

Model inputs	Tools for analysis	Model outputs
• National economic accounts • Supply and use tables & input-output tables • Labour force and employment data	**Value chain mapping**	**Industry output** • Industries related to vehicle electrification will develop, generating increased output • Traditional mobility industries may experience a reduction in their output
• Forecasts of EV production • Public company announcements • Annual company reports	**Input output model**	**Job creation** • Vehicle electrification contributes to the productive process, changing labour dynamics • The substitution from traditional mobility may change employment requirements
• Outlook for the market • Industry experience and knowledge • Potential policy changes	**Statistical methods**	**GDP** • The value chain behind eMobility manufacturing employs different industries, including materials and services, generating value added in other areas of the economy
• Investment trends • Job creation plans • Outlook for medium and long-term	**Market outlook**	**There are 3 scenarios that reflect different assumptions on the adoption of EVs and sector development: Low, medium and high.**

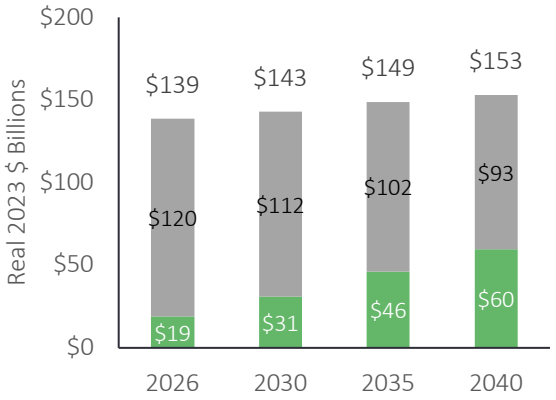
Executive summary

EMOBILITY FORECAST – LOW SCENARIO

GDP: eMobility is expected to grow from **14% to 39%** of mobility share between 2026 to 2040.
JOBS: eMobility employment is expected to grow from **12% to 37%** of mobility share between 2026 to 2040.

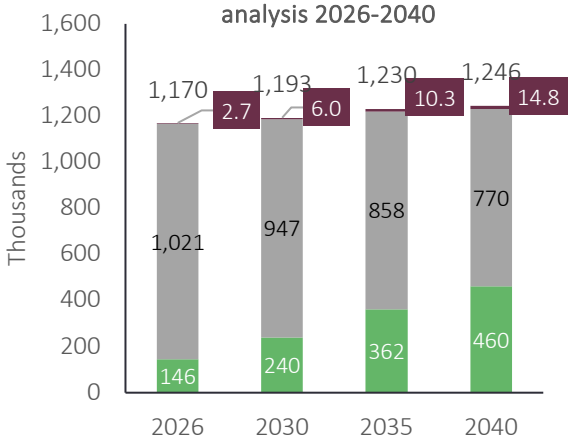
GDP contributions

Figure 1: GDP – Low scenario analysis 2026-2040



Employment contributions

Figure 2: Employment – Low scenario analysis 2026-2040



eMobility share | Traditional mobility share | Transition workers

Key takeaways

- **It is expected that in the low scenario, eMobility GDP and employment will grow 2.5 times between 2026 and 2035.**
- It is expected that in 2026, the mobility sector will support over **$138.6 billion of Canada's GDP**, while **total employment contributions** currently are estimated to be just over **1,170,000 nation-wide**.
- In the low scenario, the mobility segment is projected to grow at a compound annual growth rate (CAGR) of 0.6% from 2023 to 2040.
- **By 2040**, it is estimated that for this year **39% of GDP contributions can be attributed to eMobility,** while **37% of employment contributions can be attributed to eMobility.**

Scenario assumptions

- **Lasting negative U.S. tariffs on automotive industry:** Tariffs imposed by the U.S. increase manufacturing costs for automakers, leading to higher vehicle prices (ICE & electric) supply chain disruptions that hinder production.
- **Minimal government support:** Withdrawal of existing measures leads to minimal government incentives and regulations for promoting EV adoption.
- **Low public awareness:** Low public awareness of the benefits of EVs, with prevailing skepticism about their practicality
- **Slow progress in battery technology:** Slow progress in battery technology and EV performance, leading to higher costs and lower consumer interest
- **Limited charging infrastructure:** Limited charging infrastructure leading to charging anxiety among consumers, decreasing their willingness to adopt EVs
- **Lack of competitive pricing:** Fewer EV models available with limited choices for consumers, leading to a lack of competitive pricing

Note: Transition workers represent a subset of the labour force reallocating from the traditional mobility sector, driven by the transition to electrification. Their transition to alternative industries will be contingent upon the interdependencies within the economic system, particularly the market frictions encountered, and the compatibility of their existing skill sets as inputs with the requirements of new roles in the output sectors.

Source: Statistics Canada and EY analysis.

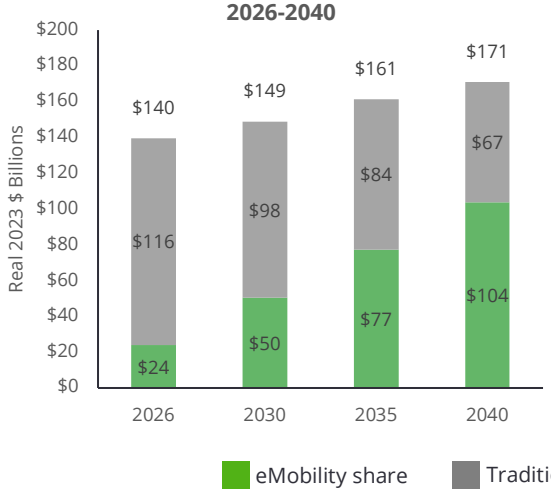
Note: Figures include direct, indirect and induced contributions.

EMOBILITY FORECAST – MEDIUM SCENARIO

GDP: eMobility is expected to grow from **17% to 61%** of mobility share between 2026 to 2040.
JOBS: eMobility employment is expected to grow from **16% to 58%** of mobility share between 2026 to 2040.

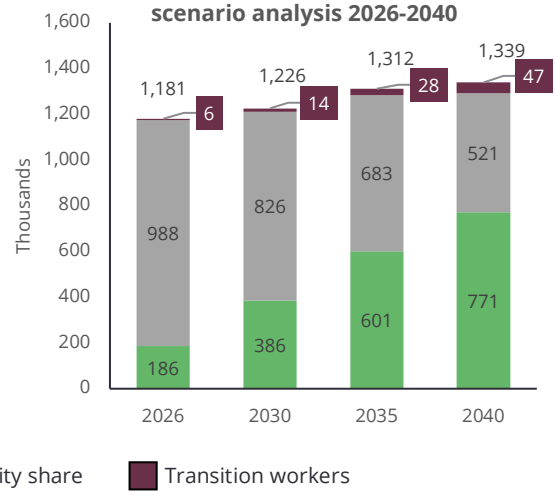
GDP contributions

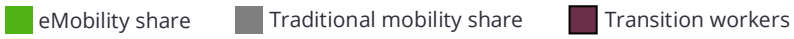
Figure 3: GDP – Medium scenario analysis 2026-2040



Employment contributions

Figure 4: Employment – Medium scenario analysis 2026-2040





Key takeaways

- **It is expected that, in the medium scenario, eMobility GDP and employment will grow more than 3 times between 2026 and 2035.**
- This scenario is a balanced view of future outcomes, and is the expected outlook based on conditions currently seen.
- **By 2040, It is estimated that 60% of GDP and 58% of employment contributions in the general mobility sector can be attributed to eMobility.**

Scenario assumptions

- **Moderate economic uncertainty:** Overall growth in the EV market but limited by economic uncertainty, and manufacturers face challenges in scaling production
- **Moderate government support:** Some incentives for EV purchases and regulations aimed at reducing emissions
- **Moderate public awareness:** Increased public awareness of EV benefits, with a growing number of consumers considering EVs as viable options
- **Steady improvements in battery technology:** Steady improvements in battery technology and EV features, making them more appealing but still facing challenges in cost and performance
- **Steady growing infrastructure:** Growing network of charging stations, but still not sufficient to fully alleviate range anxiety

- **Moderate pricing dynamics:** Moderate variety of EV models available, leads to competitive pricing and more choices, but still limited compared to traditional vehicles

Note: Transition workers represent a subset of the labour force reallocating from the traditional mobility sector, driven by the transition to electrification. Their transition to alternative industries will be contingent upon the interdependencies within the economic system, particularly the market frictions encountered, and the compatibility of their existing skill sets as inputs with the requirements of new roles in the output sectors.

Source: Statistics Canada and EY analysis.

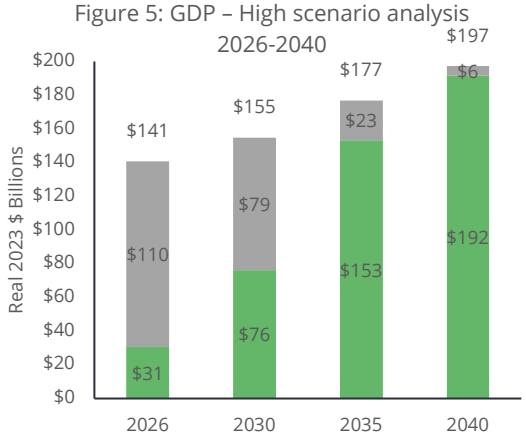
Note: Figures include direct, indirect and induced contributions.

EMOBILITY FORECAST – HIGH SCENARIO

GDP: eMobility is expected to grow from **22% to 97% of** mobility share between 2026 to 2040.
JOBS: eMobility employment is expected to grow from **20% to 89%** of mobility share between 2026 to 2040.

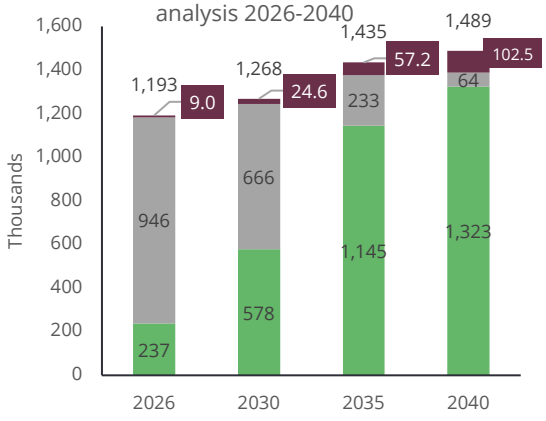
GDP contributions

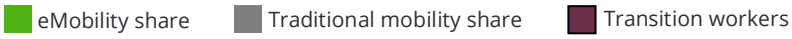
Figure 5: GDP – High scenario analysis 2026-2040



Employment contributions

Figure 6: Employment –High scenario analysis 2026-2040





Key takeaways

- **It is expected that, in the high scenario, eMobility GDP and employment will grow more than 6 times between 2026 and 2035.**
- **By 2040,** the size of total GDP contributions in the overall mobility sector for the **high scenario will be 15% larger than the medium scenario.** Under this scenario, it is assumed that the market evolves in nearly ideal conditions, enabling an estimate of the potential for the eMobility market.
- **By 2040, it is estimated that 97% of GDP and 89% of employment contributions can be attributed to eMobility.**

Scenario assumptions

- **Stable economic environment:** Consumers are confident and the supply chain faces no major constraints
- **Strong government support:** Aggressive policies promoting eMobility, including substantial subsidies and more stringent emissions regulations
- **High public awareness and positive attitude:** Widespread acceptance of EVs driven by environmental concerns and positive user experiences

- **Significant breakthroughs in battery technology:** Breakthroughs in battery technology reduce costs, extended ranges, and improved charging times, making EVs more appealing to consumers
- **Extensive and accessible charging infrastructure:** Fast chargers and widespread availability eliminates range anxiety and encourages widespread adoption
- **Competitive market prices:** A wide variety of competitively priced EV models meets diverse consumer preferences, fostering a robust and expanding market.

Note: Transition workers represent a subset of the labour force reallocating from the traditional mobility sector, driven by the transition to electrification. Their transition to alternative industries will be contingent upon the interdependencies within the economic system, particularly the market frictions encountered, and the compatibility of their existing skill sets as inputs with the requirements of new roles in the output sectors.

Source: Statistics Canada and EY analysis.

Note: Figures include direct, indirect and induced contributions.

OVERVIEW OF KEY FINDINGS

Mobility in the current state	The future of mobility	Broader mobility benefits
Current state trends	**Mobility in the future depends on the outcome of key drivers such as:**	**In addition to the economic benefits seen through jobs and GDP growth, there are broader benefits that the eMobility sector contributes to, including:**
• **Technological advancements and consumer awareness:** Research & development and education are enhancing demand and supply for EVs • **Infrastructure needs:** The growth of charging infrastructure is crucial for supporting EV adoption and improving user experience • **Market influences:** The EV market is affected by pricing, supply chain dependencies, political uncertainties, and government policies	• **Economic environment** • **Government policy and initiatives** • **Consumer adoption** • **Technology advancements** • **Charging infrastructure** • **Market competition**	• **Health benefits:** Such as noise and pollution reduction • **Environmental benefits:** Including reduced GHG emissions and improved air quality • **Technological innovation:** Such as advancements in battery and smart grid technology
Key insights **$138b** Mobility GDP contributions in Canada **7%** Contributions of eMobility GDP to total mobility **1.16m** Mobility employment contributions in Canada **6%** Contributions of eMobility jobs to total mobility	**Key results by 2040 – medium scenario** **$171b** Mobility GDP contributions in Canada **61%** Contributions of eMobility GDP to total mobility **1.34m** Mobility employment contributions in Canada **58%** Contributions of eMobility jobs to total mobility	**Examples of leading projects in the eMobility space in Canada include:** • Volt-Age electrification research program • BC Hydro's development of public EV charging infrastructure • Neo's silicon anode manufacturing facility
It is expected that under all scenarios, total mobility and eMobility will grow until 2040.		

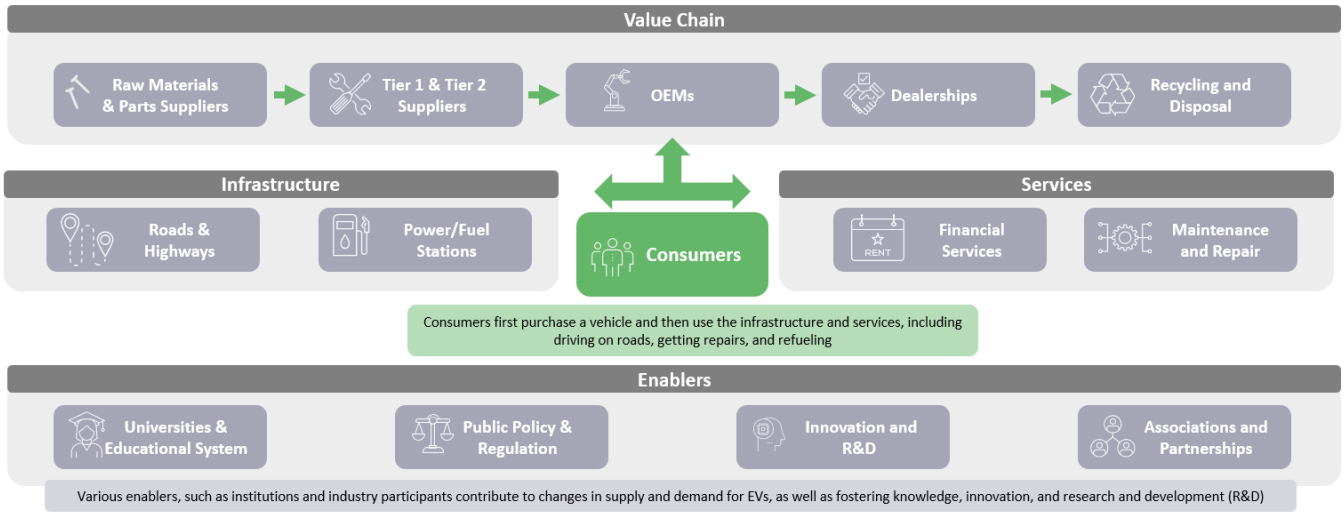
Overview of the ecosystem

MOBILITY ECOSYSTEM

The mobility ecosystem encompasses the entire manufacturing value chain of a vehicle, including related infrastructure during use, as well as the services associated with purchase and repair.

The manufacturing value chain includes sourcing of raw materials and components, assembling parts on the production line, and distributing completed vehicles to dealerships. After use, vehicles undergo recycling and disposal to reclaim materials.

Drivers rely on various infrastructure and services, including roads, fueling stations and electric charging points. Maintenance and repair services ensure vehicles remain safe and efficient, while financial services like loans and insurance facilitate car purchases and help manage ownership costs.

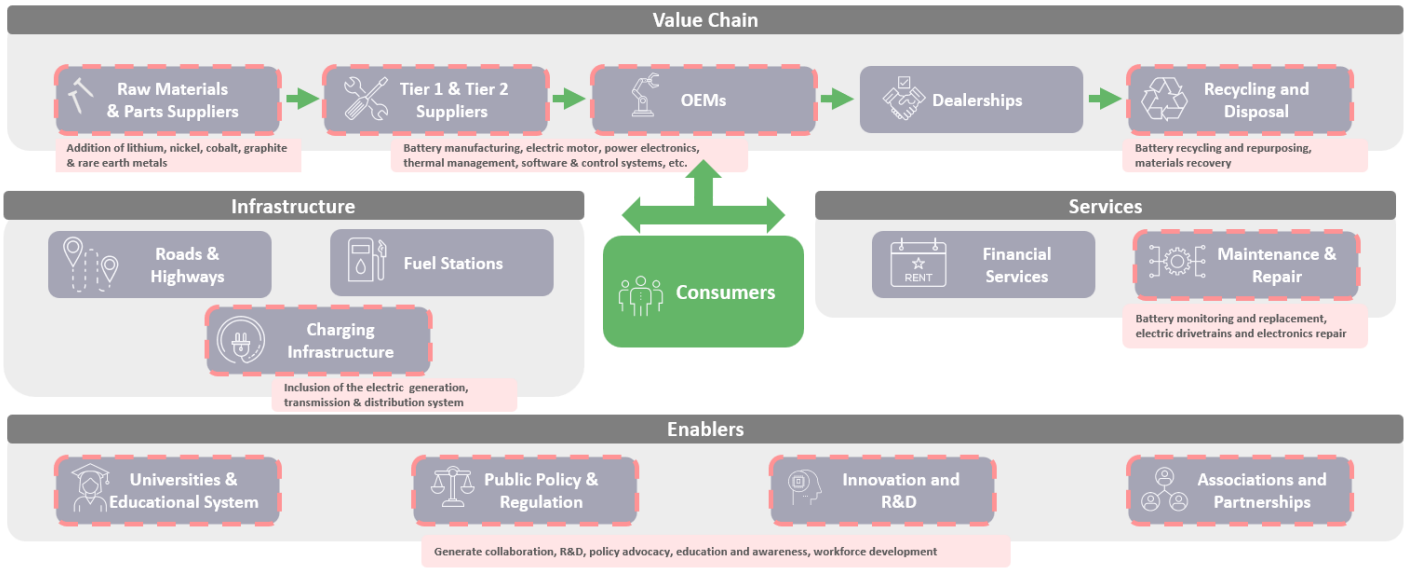


Legend: → Manufacturing flow

TRANSITION TO ELECTRIFICATION

The electrification transition in the mobility ecosystem generates changes through all processes in the ecosystem, including:

- Manufacturing value chain;
- Development of infrastructure; and
- Services



Legend: Key changes due to EV transition → Manufacturing flow

KEY TRENDS IN THE TRANSITION TO ELECTRIFICATION

Below is an overview of the most prominent trends observed during the transition to electrification:

Consumer's adoption rate	Policy environment	Charging infrastructure	Role of enablers
Upfront price is crucial Purchase decisions are informed by retail price, subsidies, and lifetime operating costs, but the upfront price is an important factor	**International dependence on supply chain** There is significant economic interdependence of mobility supply chains, particularly with China (minerals and electronic devices)	**Growth rates** Charging infrastructure growth is adapting to meet the increasing demands of EVs	**Research and development** Drives technological advancements, making EVs more appealing to manufacturers
EV sticker price remains higher than traditional vehicles[1] EVs are becoming more affordable given lower battery prices and a comparable cost of ownership, yet the upfront costs remain higher for now	**Political and economic uncertainty** There is uncertainty regarding the United States, particularly related to the impact of potential tariffs in the mobility value chain, which could alter the structure of the sector	**Private infrastructure promotion** Most charging currently takes place in private settings, highlighting the need for infrastructure in shared housing	**Education and awareness** Increases consumer demand by highlighting the benefits of EVs, including environmental impacts, health benefits, and cost savings
Large-sized vehicles increase the price Emphasis on larger and premium models increases the price, while the lack of used models still limits access for mass-market consumers	**Government initiatives** Governments have considerable influence over demand incentives, and policies tend to have regional effects due to the current government structure	**Public infrastructure promotion** To align with consumer expectations, the user experience is trending towards a quick and uniform charging process, similar or better than what is seen in gas stations	**Policy & regulation** Promotes favorable policies and incentives for EV adoption
Range and charging concerns As EV pricing continues to decline, consumer perception of battery replacement cost, public charging (speed and payment) and range are still a concern			**Industry collaboration** Partnerships foster innovation and new EV models, addressing industry challenges

1. IEA (2024) 'Global EV Outlook 2024", https://www.iea.org/reports/global-ev-outlook-2024

Current state assessment

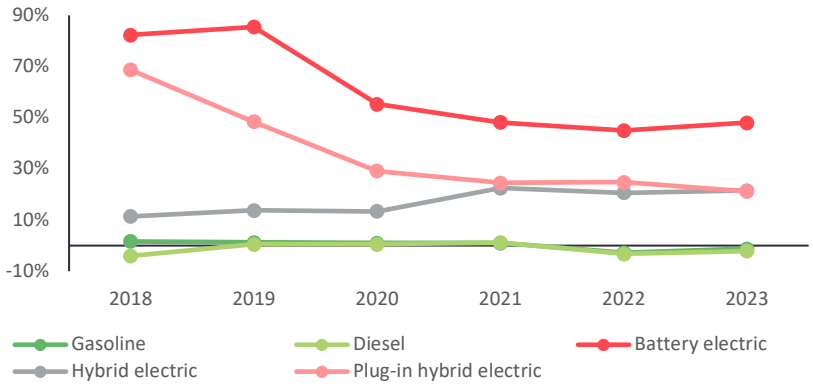
CONSUMERS ADOPTION - SALES

Key observations

- While traditional vehicles still account for the largest share of the overall vehicle stock, the market for hybrids and EVs has witnessed remarkable growth rates since 2018.
- In 2023, electric vehicle registrations grew by 48% and hybrid models by 21%. In contrast, the sales of traditional gasoline and diesel fuel vehicles experienced a decline of around 2% (Figures 7 & 8).
- It is expected that EVs, as a share of vehicles on the road, will increase substantially after 2030, representing between 21% (Nunavut) and 75% (Quebec) of the light-duty fleet by 2035 (Figure 9).
- ZEV MHDVs are forecasted to follow similar trend as the light-duty vehicle market, reaching 50% of overall MHDV sales by 2035 (Figure 10).

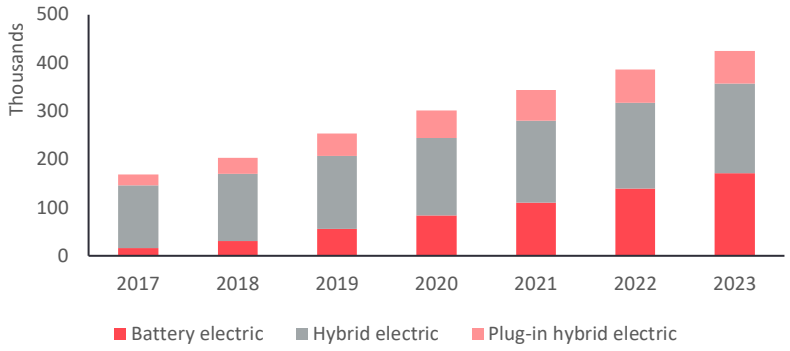
Adoption of electric vehicles in Canada

Figure 7: Vehicle registrations growth



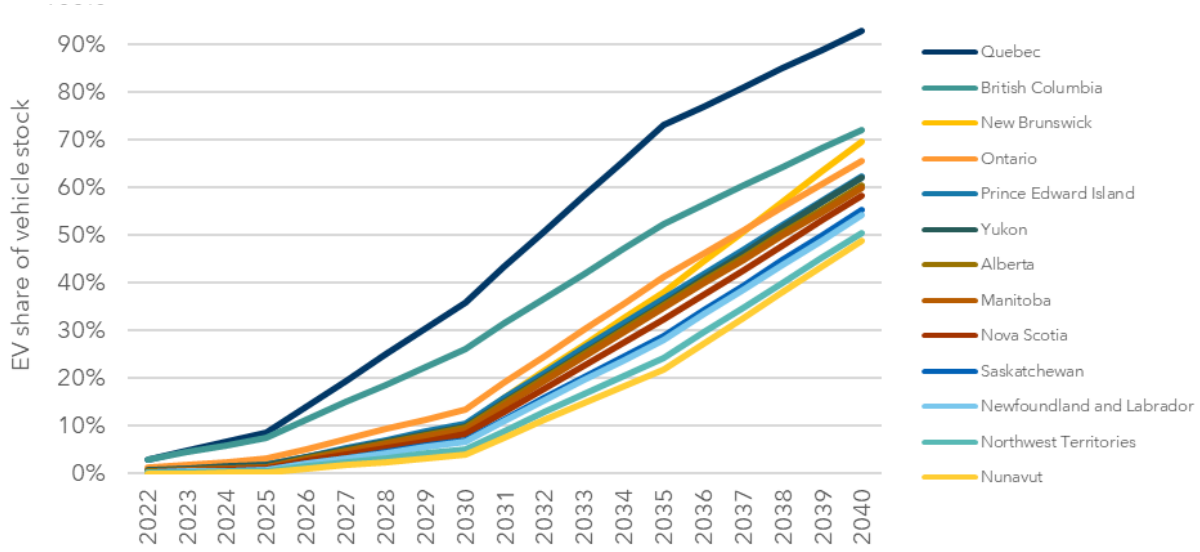
Source: Statistics Canada (2025). Table 23-10-0308-01 Vehicle registrations, by type of vehicle and fuel type.

Figure 8: Hybrid and electric vehicle registrations



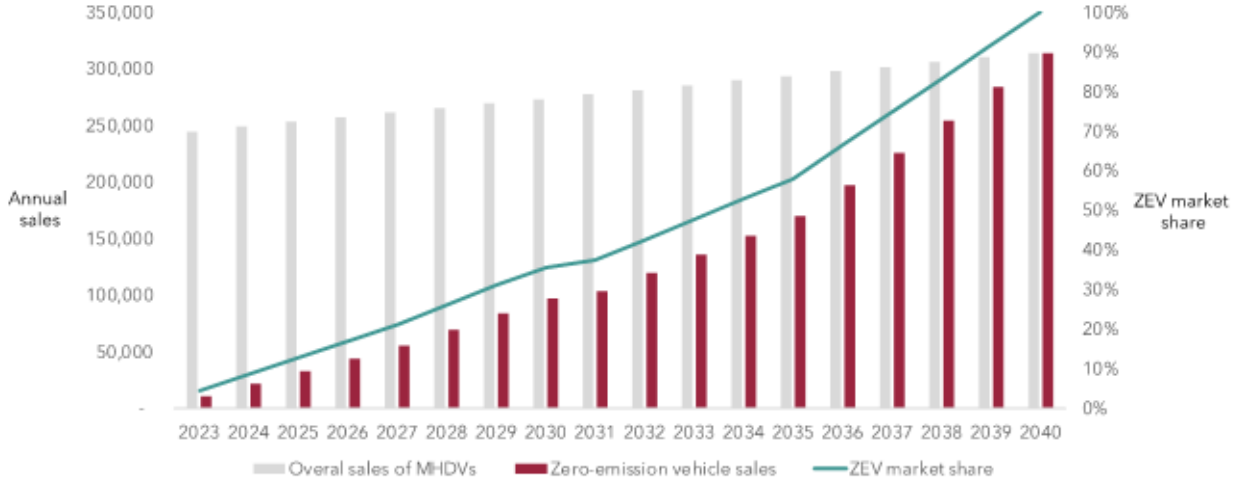
Source: Statistics Canada (2025). Table 23-10-0308-01 Vehicle registrations, by type of vehicle and fuel type.

Figure 9: Electric vehicles as a share of the total light duty vehicle stock by province and territory, 2022-2040



Source: Natural Resources Canada (2024), Figure 2 from Electric Vehicle Charging Infrastructure for Canada

Figure 10: Total sales and zero-emission (battery electric) vehicle sales forecasts within the MHDV fleet for the policy reference scenario (100% by 2040, 35% by 2030)



Source: Natural Resources Canada (2024), Figure 16 from Electric Vehicle Charging Infrastructure for Canada

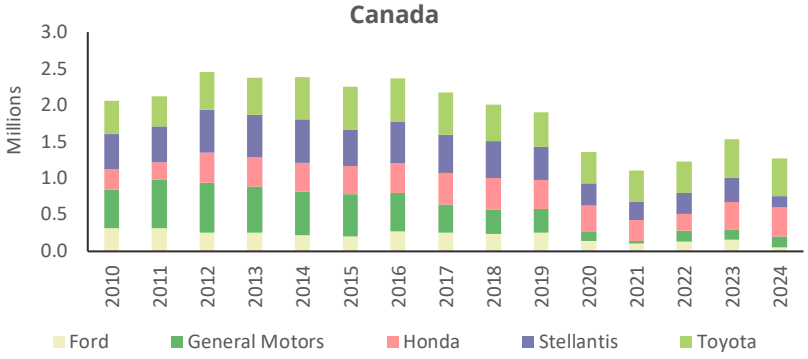
MANUFACTURING – PRODUCTION & INVESTMENTS

Key observations

- Canada is home to 7 OEMs that are actively engaged in passenger car and passenger light-duty truck production and making significant strides towards the electrification of their fleets.
- As of April 2025, OEMs such as Stellantis, General Motors, VW, Tesla etc. are producing EVs and EV related components such as anode, cathodes, battery packs, machinery, etc.
- Most of the installations for assembly are in the process of re-accommodating their existing facilities to support EV production. At the same time, OEMs are developing battery technology and manufacturing.
- As a result, the EV industry is expected to increase production over the next 5 years (Figure 14).
- Stellantis, Toyota, and Honda are expected to lead the way in EV production during the transition to electrification (Figure 14).
- Uncertainty generated by lasting U.S. tariffs may affect supply chains, production and investment flows in the future.

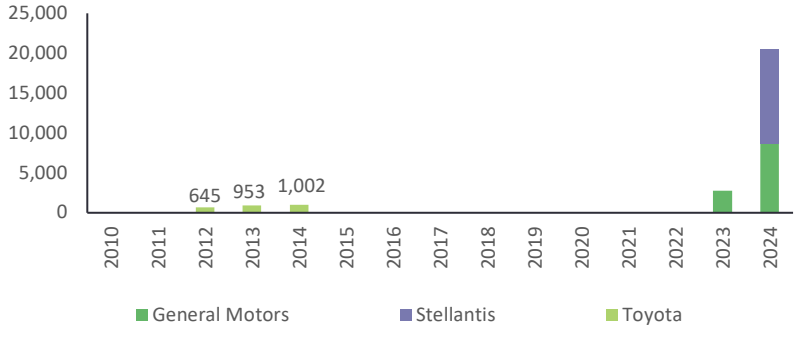
Production of ICE vehicles and EVs in Canada

Figure 11: Cars and trucks produced in Canada



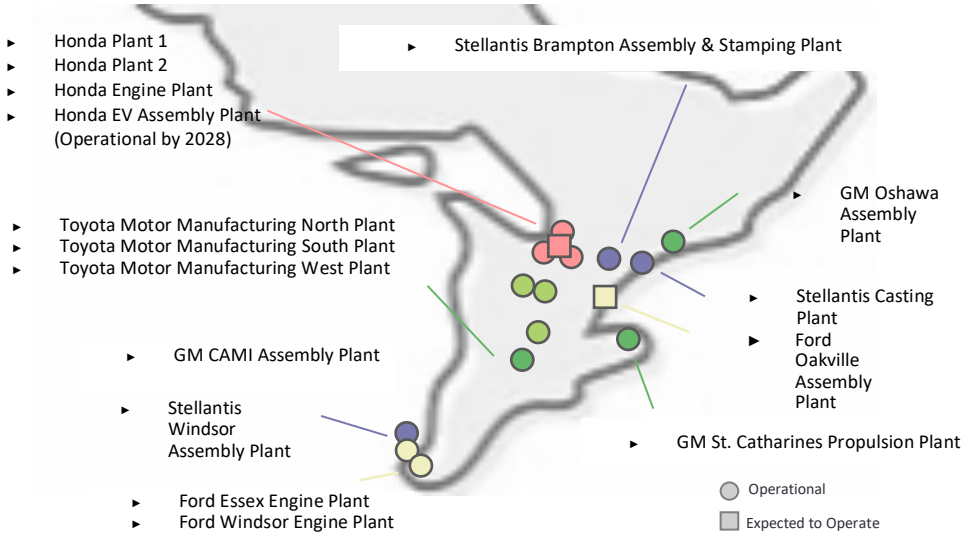
Source: E-Propulsion Forecast (2024).

Figure 12: Produced electric cars and trucks in Canada



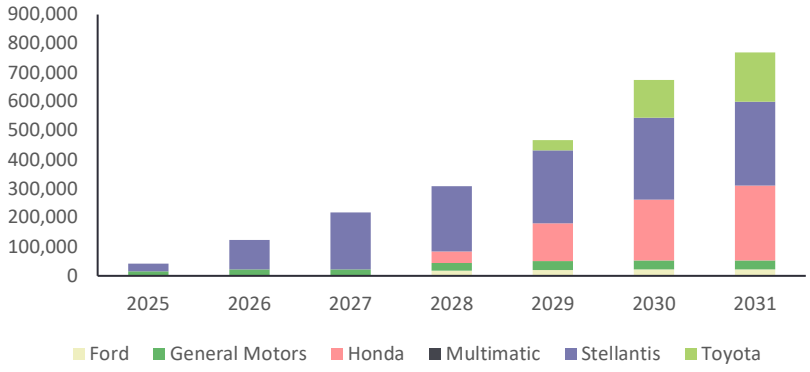
Source: E-Propulsion Forecast (2024).

Figure 13: Operational and expected plants in Ontario



Source: OCI (2024). Ontario's Automotive Sector: Economic Contribution and Key Players.

Figure 14: Expected produced electric cars and trucks in Canada



Source: E-Propulsion Forecast (2024).

MANUFACTURING – PRODUCTION & INVESTMENTS

Key observations

- The manufacture of medium- and heavy-duty vehicles and buses is characterized by a specialization among various brands that cater to specific market needs (Table 1).
- While there is significant development within Canada, there have been instances of manufacturing facilities moving to the United States (such as GreenPower Motor Company) while others invest more in Canada (Nova Bus).
- In relation to public transport, the transition to electrification involves collaboration and funding among municipal, provincial and federal governments.
- Most public transport municipal authorities have established long-term strategies and are consequently implementing the purchase of new electric battery fleets in the upcoming years (Figure 15).

Production of electric medium-, heavy-duty trucks, transit buses and school buses in Canada[1]

Table 1: Medium- and heavy-duty vehicle OEMs

Company	Type of vehicle	Headquarter location	Manufacturing facilities
Nova Bus (Volvo Group)[2]	Transit bus	Saint-Eustache, Quebec	Saint-Eustache & Saint-François-du-Lac, Quebec
Prevost (Volvo Group)[3]	Coach and RV	Sainte-Claire, Quebec	Sainte-Claire, Quebec
New Flyer (NFI Group)[4]	Transit Bus	Winnipeg, Manitoba	Winnipeg Manitoba & Arnprior Ontario
Motor Coach Industry (NFI Group)[5]	Coach		
Peterbilt (PACCAR)[6]	Class 6 and 7	Denton, Texas	Sainte-Thérèse, Quebec
Kenworth (PACCAR)[7]	Class 8, Class 5–7	Kirkland, Washington	
Girardin Blue Bird[8]	Minibus	Drummondville, Quebec	Drummondville, Quebec
MicroBird (Girardin Blue Bird)[9]	School buses		
Lion Electric Company[10]	School buses & trucks	Saint-Jérôme, Quebec	Saint-Jérôme, Quebec
GreenPower Motor Company[11]	Transit buses & school buses	Vancouver, British Columbia	Porterville, California, Charleston, West Virginia
Letenda[12]	Transit buses	Longueuil, Québec	Longueuil, Québec

Figure 15: Examples of recent acquisitions of electric public fleets [13,14,15,16]

TORONTO TRANSIT COMMISSION

- 2018: 60 battery electric buses in the fleet
- 2023-2024: 336 hybrid-electric buses purchased from Nova Bus and New Flyer
- 2023-2025: Recommended purchase of 340 battery electric buses

ARTM Autorité régionale de transport métropolitain

- 2024: 42 battery electric buses in the fleet
- 2023-2025: 46 electric buses added
- 2026: 140 electric buses expected to be added

HALIFAX

- 2022: 60 battery electric buses purchased from Nova Bus (Only 1 arrived in 2023 and was used for training)
- December 2024: Arrival of remaining 59 buses

metrovancouver
SERVICES AND SOLUTIONS FOR A LIVABLE REGION

- 2021: 4 battery-electric buses
- 2023: 15 battery electric buses, 262 fully electric trolleybuses
- 2030: Expected to have 400 new additions

OC Transpo

- 2024: 6 electric battery buses from New Flyer
- 2025: 49 new electric battery buses, 4 from Nova Bus and 45 from New Flyer
- 2026: 47 new buses from Nova Bus

ATUQ
ASSOCIATION DU TRANSPORT URBAIN DU QUÉBEC

- 2023: 1,129 transit buses for different cities in Quebec from Nova Bus by 2030

1. Medium-duty vehicles have a gross vehicle weight rating (GVWR) between 4,536 kg and 11,793 kg, including classes 3, 4, 5 and 6. Heavy-duty vehicles have a GVWR of 11,794 kg or more, including classes 7 and 8. Bus registrations cover various types of buses, including school buses, urban transit buses, interurban passenger buses, coaches, minibuses, and others.
2. Nova Bus (2025). Accessed 2/10/2025. URL: https://novabus.com/en/about-us/
3. Prevost (2025). Accessed 2/10/2025. URL:https://prevostcar.com/
4. New Flyer (2025). Accessed 2/10/2025. URL: https://www.newflyer.com/
5. Motor Coach Industry (2025). Accessed 2/10/2025. URL: https://www.mcicoach.com/
6. Peterbilt (2025). Accessed 2/10/2025. URL: https://www.peterbilt.com/
7. Kenworth (2025). Accessed 2/10/2025. URL: https://www.kenworth.com/about-us/
8. Girardin Blue Bird (2025). Accessed 2/10/2025. URL: https://www.girardinbluebird.com/en/about
9. MicroBird (2025). Accessed 2/10/2025. URL: https://www.microbird.com/about-us
10. Lion Electric Company (2025). Accessed 2/10/2025. URL: https://thelionelectric.com
11. GreenPower Motor Company (2025). Accessed 2/10/2025. URL: https://greenpowermotor.com/
12. Letenda (2025). Accessed 2/10/2025. URL: https://letenda.com/en/
13. TTC (2023). TTC adds 336 new hybrid-electric buses to its fleet. Accessed 2/10/2025. URL: https://www.ttc.ca/en/news/2023/April/TTC-adds-336-new-hybrid-electric-buses-to-its-fleet
14. Société de transport de Montréal (2025). Electric Buses. Accessed 2/10/2025. URL: https://www.stm.info/en/about/major_projects/major-bus-projects/bus-network-electrification/electric-bus
15. Halifax Transit (2025). Zero Emission Bus Project. Accessed 2/10/2025. URL: https://www.halifax.ca/transportation/halifax-transit/zero-emission-bus-project
16. Translink (2025). "TransLink begins battery-electric bus fleet expansion"
17. City News (2024). Accessed 2/10/2025. URL: https://ottawa.citynews.ca/2024/10/10/oc-transpo-adding-more-electric-buses-to-its-fleet-next-year/
18. Atuq: https://atuq.com/fr/acquisition-de-1229-autobus-urbain-100-electriques/

MANUFACTURING – PRODUCTION & INVESTMENTS

Key observations

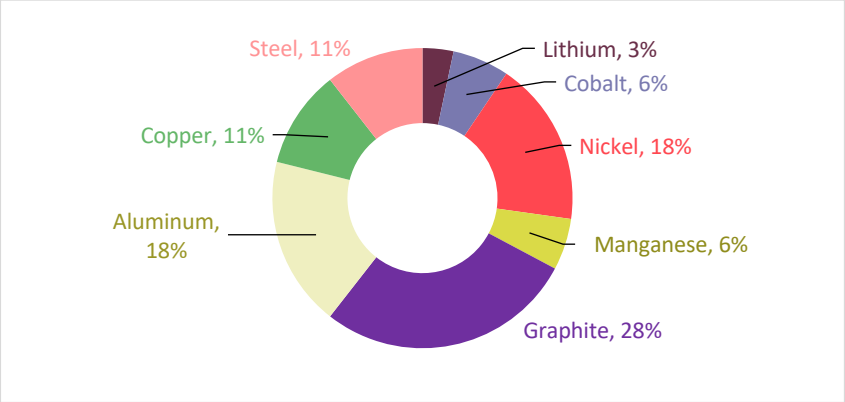
- In addition to their efforts in vehicle production, OEMs and other industry stakeholders are actively engaged in the establishment of manufacturing facilities in Canada specifically for battery and battery component production.
- Several projects are currently underway in Ontario and Quebec, focusing on various aspects of battery manufacturing.
- Given that in many ways electrification represents new technology, much of the construction and fabrication is being developed from the ground up, in contrast to EV vehicle assembly, which can leverage existing facilities developed for traditional vehicles.
- Most of these plants were expected to be completed by 2026-2028. However, some projects are currently being delayed.

Production of electric batteries in Canada

Table 2: EV battery facility announcements in Ontario and Quebec

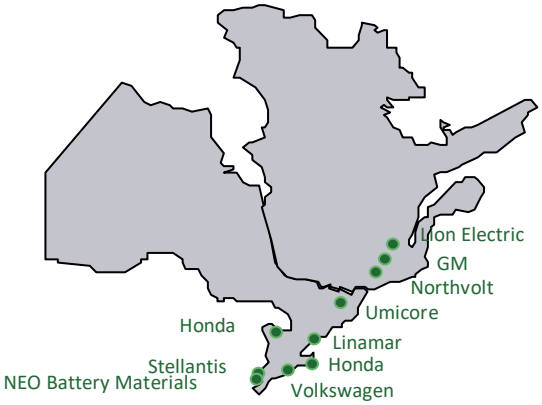
Company / Partnership	Location	Project description	Initial operational year	Battery production capacity (annual)
Honda/Posco Chemical[1,2]	Alliston, Ontario	Cathode materials production	2028	N/A
Honda/Asahi Kasei[1,2]	Port Colborne Ontario	EV battery separator plant	2027	N/A
Honda[1.2]	Alliston, Ontario	EV battery manufacturing plant	2028	36 GW of batteries
Umicore[3]	Loyalist Township, Ontario	Battery components plant for EVs	2026 (Delayed)	583,333
Volkswagen/PowerCo[5]	St. Thomas, Ontario	$7-billion EV battery plant	2027	1.5M
Stellantis/LG Energy Solution[6]	Windsor, Ontario	Large-scale EV battery plant (Lithium-ion)	2025	750,000
General Motors/Posco Chemical[7]	Bécancour, Quebec	Plant for EV battery components	First half of 2025	360,000
NEO Battery Materials[8]	Windsor, Ontario	$69-million CAD, silicon anode manufacturing facility	End 2026	5,000-ton Anode
Linamar Corporation[9]	Guelph, Ontario	$1-billion EV parts & battery manufacturing plant	2028	N/A

Figure 16: Mineral composition of an NMC battery



Source: Visual Capitalist (2022). "The Key Minerals in an EV Battery". Accessed 2/3/2025.

Figure 17: Proposed EV battery related plants



Source: EY analysis based on review of publicly available information.
Note: Some projects include other manufacturing processes besides batteries, for example Linamar's project.

1. Electric Autonomy (2024). "EV & Charging Expo exclusive: Honda Canada CEO Jean Marc Leclerc on Canada's EV advantages". Accessed 1/31/2025.
2. Global Honda (2024). Honda Plans to Establish Comprehensive Electric Vehicle Value Chain in Ontario, Canada | Honda Global Corporate Website
3. Umicore (2025). Accessed 1/31/2025. URL: Umicore confirms expansion of its EV battery materials production footprint with CAM and pCAM plant in Ontario, Canada | Umicore
4. CBC News (2024). "Northvolt's EV battery plant in Quebec could be delayed up to 18 months". Accessed 1/31/2025. URL: Northvolt's EV battery plant in Quebec could be delayed up to 18 months | CBC News
5. Volkswagen (2023). Accessed 1/31/2025. URL: St. Thomas Battery Cell Gigafactory | Volkswagen Canada
6. Stellantis (2022). Accessed 1/31/2025. URL: Stellantis and LG Energy Solution to Invest Over $5 Billion CAD in Joint Venture for First Large Scale Lithium-Ion Battery Production Plant in Canada | Stellantis
7. CBC News (2022). "GM and POSCO to build plant in Quebec to produce battery material". Accessed 1/31/2025. URL: GM and POSCO to build plant in Quebec to produce battery material | CBC News
8. NeoBattery (2025). Accessed 1/31/2025. URL: NEO Battery Materials Provides Commercialization Update on Windsor Silicon Anode Manufacturing Plant | NEO Battery Materials
9. Linamar announces $1.1B project to support automotive market | Financial Post

RAW MATERIALS – IMPACT OF EV

The raw materials extraction industry for vehicle manufacturing in Canada is currently experiencing significant growth and transformation, driven by the increasing demand for EVs.

Impact of EVs on mining sector

Government support and strategies	• The Canadian government has implemented the Canadian Critical Minerals Strategy to boost the exploration, extraction, processing, and recycling of critical minerals. • This strategy aims to position Canada as a global leader in the supply of these essential materials.
Increased demand for critical minerals	• The demand for lithium, cobalt, nickel, iron, phosphate and graphite is rising due to their essential role in EV battery production. • This has led to increased exploration and extraction activities.
Technological advancements	• Companies are investing in advanced technologies to improve the efficiency and sustainability of mining operations. This includes the use of automation, AI, and environmentally friendly extraction methods.
Partnerships with automotive companies	• Canada has formed strategic partnerships with major automotive companies like Mercedes-Benz and Volkswagen to secure sustainable sources of raw materials. • These partnerships are crucial for ensuring a stable supply chain and reducing reliance on longer supply chains.
Supply chain development	• Canada needs to enhance its mining, refining, and production capabilities. • Ensuring that the initial steps of extraction and refining are handled locally will streamline the subsequent stages of production, benefiting from Canada's robust manufacturing supply chains.

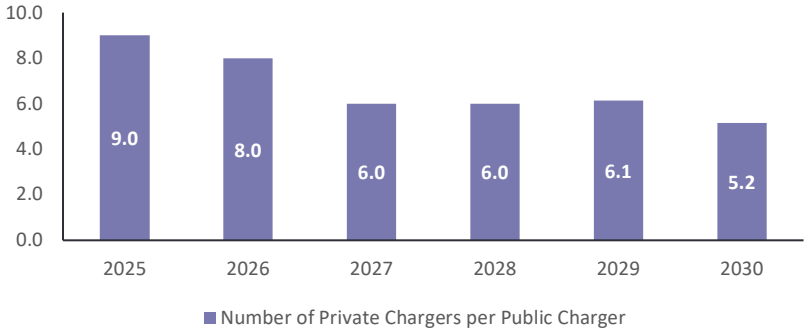
INFRASTRUCTURE - CHARGING STATIONS

Key observations

- EVs are charged with public and private infrastructure, with the majority taking place in private settings (Figure 18).
- Private installations are typically found in garages or designated parking spaces, allowing owners to charge their vehicles overnight, which usually takes between 4 to 12 hours.[1]
- Public charging stations are designed for quicker charging.
- In March 2025, there were more than 13,000 public charging stations and 34,000 EV public charging ports in Canada (Figure 19). Their distribution is not even, as it is influenced by population density across the country (Figure 20 & 21).
- There are 3 types of chargers for EVs: 1, 2 and 3 (DC Fast). Level 1 chargers add approximately 6.5 kilometers of range per hour, level 2 add 50 kilometers and level 3 between 270 to 480 km.

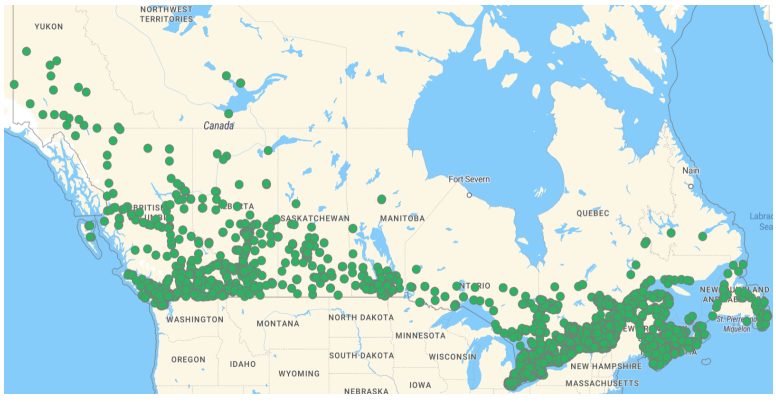
Trends in electric charging stations in Canada

Figure 18: Expected ratio of private over public charging ports



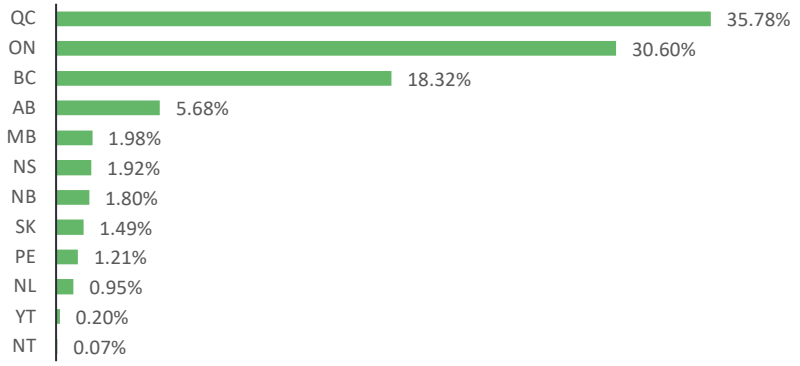
Source: Natural Resources Canada (2024). Update forecasts of vehicle charging needs, grid impacts and costs for all vehicle segments.

Figure 19: Map of public charging stations Canada, 2025



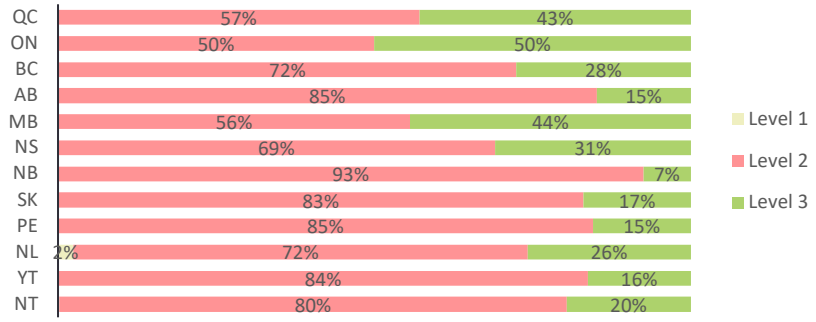
Source: Natural Resources Canada (2025) Electric Charging and Alternative Fuelling Stations Locator. Accessed March 2025.

Figure 20: Distribution of public charging stations by province (Canada), 2025



Source: Natural Resources Canada (2025) Electric Charging and Alternative Fuelling Stations Locator. Accessed 1/29/2025.

Figure 21: Distribution of public type of charger by province (Canada) 2025



1. Natural Resources Canada (2025) Electric Charging and Alternative Fuelling Stations Locator. Accessed 1/29/2025.

Source: Natural Resources Canada (2025) Electric Charging and Alternative Fuelling Stations Locator. Accessed 1/29/2025.

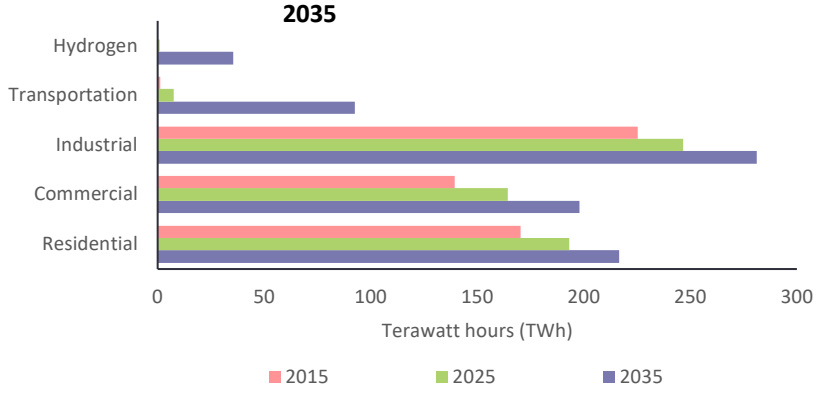
INFRASTRUCTURE – ELECTRICITY INDUSTRY

Key observations

- Currently, transportation accounts for 1% of electricity demand (Figure 22).
- As EV adoption expands, transportation electricity demand is expected to grow and intensify peak consumption hours[1].
- For 2035, transportation is projected to consume 11% of electricity demand, with growth in generation driven primarily by renewable energy (Figure 23).
- Therefore, utilities and system operators will need to ensure they can meet users' needs at all times, maintaining sufficient capacity to supply the required demand (Figure 23 & 25).
- This will require a conjoint effort of a system that works with different technologies (Figure 24), needing an increase in the energy transmitted between provinces to meet growing demand (Figure 25).

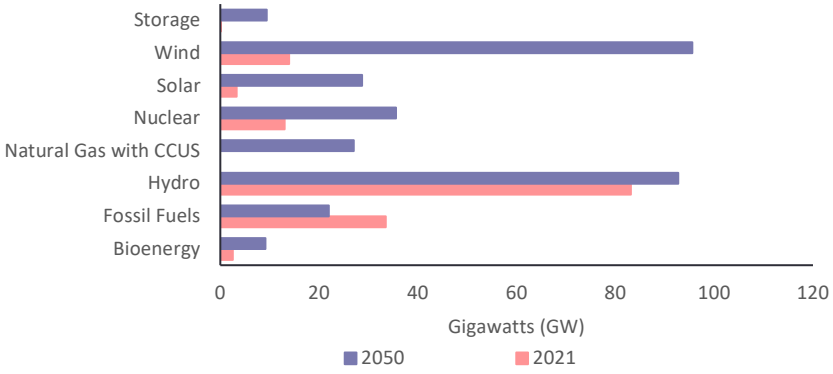
Electricity generation, transmission and demand

Figure 22: Electricity use By sector from 2015, 2025 and 2035



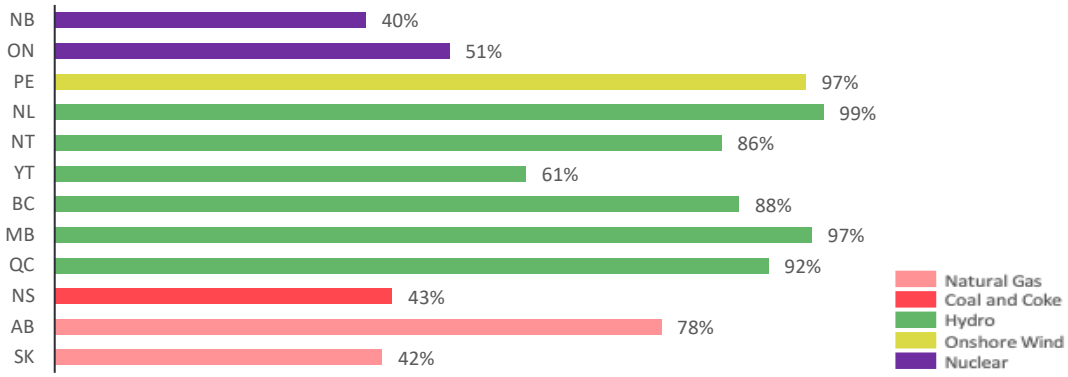
Source: Canada Energy Regulator (2023). Canada's Energy Future 2023.

Figure 23: Change in electricity capacity by technology from 2021 to 2050



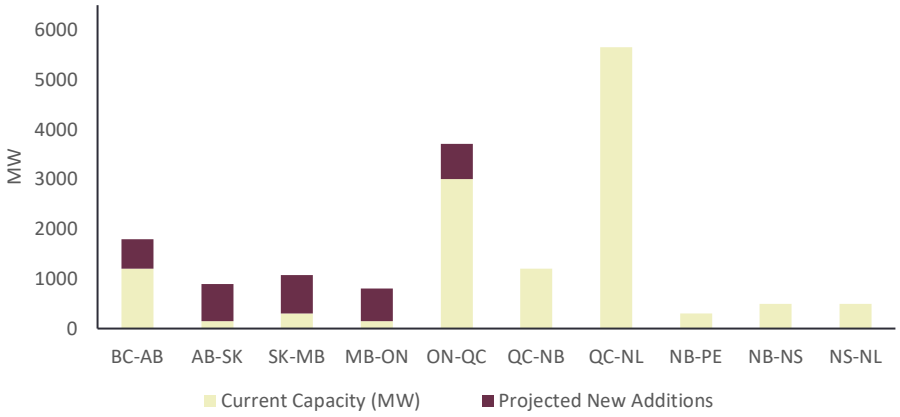
Source: Canada Energy Regulator (2023). Canada's Energy Future 2023.

Figure 24: Top electricity generation technology 2024 by province



Source: Canada Energy Regulator (2023). Canada's Energy Future 2023.

Figure 25: Inter-provincial transmission line capacity projection



Source: Canada Energy Regulator (2024). Market Snapshot: New Canada's Energy Future net-zero analysis: the role of inter-provincial transmission expansion.

1. "EV owners tend to plug their vehicles into chargers when they arrive home. For many drivers, this is often in the late afternoon when they return from work. Residential electricity demand is often already high during these hours, including higher use of stoves and electronics". Canada Energy Regulator (2023). Canada's Energy Future 2023.

Economic modelling methodology

METHODOLOGY – MODEL INPUTS

- The macroeconomic model development begins with identifying the model inputs, as illustrated below. These inputs allow to gain an understanding of the market dynamics and facilitate the formulation of informed assumptions.
- Public data, stakeholders' insights along with proprietary database are considered to carry out the macroeconomic model.

Statistical data and surveys	EV market research & proprietary knowledge		Surveys and interviews with stakeholders
National economic accounts Measure the production, incomes, consumption, saving, investment and others from an economy.	**Consumer demographics and preferences** Assumptions regarding changes in consumer demographics and preferences.	**Mapping the value chain** Proprietary data and knowledge of the automotive sector, including understanding specific productive processes at each stage.	**Industry outlook** Which part of the EV value chain organizations participate in. How the company evaluates growth in that specific part of the chain.
Supply and use tables and input-output tables Presents the structure of an economy and the interlinkages among various industries.	**Technological advancements** For example, battery life and access to charging stations can lower EV costs and improve their performance, affecting the adoption process.	**Policy and regulatory environment changes** Insights from research and sector knowledge used to estimate the potential impact of regulatory changes on EV adoption.	**Employment, revenue and cost changes** What are the organization's potential hiring plans. How the organization's revenues and cost structure will change as a result of electrification.
Labour force and employment The data will allow to quantify the number of workers in each phase of the productive process.	**Economic conditions** Internal and external forecasts were used to account for changes in consumption due to economic conditions.	**Production and sales forecast** Access to proprietary database in eMobility sector, including production, sales, charging infrastructure. etc.	**Investments and initiatives in response to electrification** What are organization's new projects and investments and when are they planning to implement.

METHODOLOGY – ANALYSIS

The methodology employed was structured into five key stages that provide a comprehensive analysis of the mobility sector. Each stage builds upon the previous one, facilitating an understanding of the industry's ecosystem, its economic impact, the distinctions between traditional mobility and eMobility, as well as future contributions of the industry. Analysis starts with a baseline understanding of the industry classifications under the mobility sector.

Stage 1: Understanding the automotive ecosystem

The analysis begins with an understanding of the mobility ecosystem, emphasizing the value chain at a granular level, which includes the materials, services, and inputs integral to the industry.

Table 3: Automotive ecosystem phases by mobility type

Ecosystem phase	Common for eMobility and traditional mobility	Exclusive traditional mobility	Exclusive eMobility
Raw materials & parts suppliers	Steel, aluminium, rubber, copper	Platinum, lead, engine Oils, lubricants	Lithium, nickel, cobalt, graphite
Manufacturing	Desing and engineering, quality control and testing	Transmission, lubricant and cooling systems	Battery manufacturing, software & control systems
Dealerships	Distribution, dealerships, branding, marketing	-	Promotion of EV benefits
Infrastructure	-	Petroleum extraction, transportation, refining, distribution	Energy supply, installation and operation of charging points
Services	Loans and insurance	-	Financing of charging stations
Maintenance & repair	Service centers, spare parts	Engines and exhaust systems	Battery health monitoring and replacement
Recycling and disposal	Vehicle recycling, reuse of components and Materials	-	Battery recycling, recovery of materials from batteries

Note: Non-exhaustive list of materials, inputs and services.

Stage 2: Linking to NAICS classification

The methodology then connects the phases at a granular level to the North American Industry Classification System (NAICS), which systematically classifies industries that operate in the Canadian economy.

Table 4: Mobility ecosystem mapped to NAICS Classification

Segment	Industry	NAICS code
Core mobility	Other electrical equipment and component manufacturing	3359
	Motor vehicle manufacturing	3361
	Motor vehicle parts manufacturing	3363
	Motor vehicle and parts wholesaler-distributors	4150
	Motor vehicle and parts dealers	4410
	Gasoline stations	4470
	Automotive repair and maintenance	8111
Supporting mobility	Metal ore mining	2122
	Non-metallic mineral mining and quarrying	2123
	Non-metallic mineral product manufacturing (except cement and concrete products)	327A
	Alumina and aluminum production and processing	3313
	Non-ferrous metal (except aluminum) production and processing	3314
	Oil and gas extraction	2111
	Petroleum and coal product manufacturing	3241
	Petroleum product wholesaler-distributors	4120
	Crude oil and other pipeline transportation	486A
	Paint, coating and adhesive manufacturing	3255
	Plastic product manufacturing	3261
	Rubber product manufacturing	3262
	Metalworking machinery manufacturing	3335
	Industrial machinery manufacturing	3332
	Architectural, engineering and related services	5413
	Other professional, scientific and technical services	5419
	Electric power generation, transmission and distribution	2211
	Truck transportation	4840
	Insurance carriers	5241
	Automotive equipment rental and leasing	5321
	Waste management and remediation services	5620

Using economic models derived from the principles of the input-output (I-O) model, economic contributions (direct, indirect and induced impacts) supported by the mobility sector are estimated, segmented by traditional mobility and eMobility. Future state contributions are then modelled and forecasted.

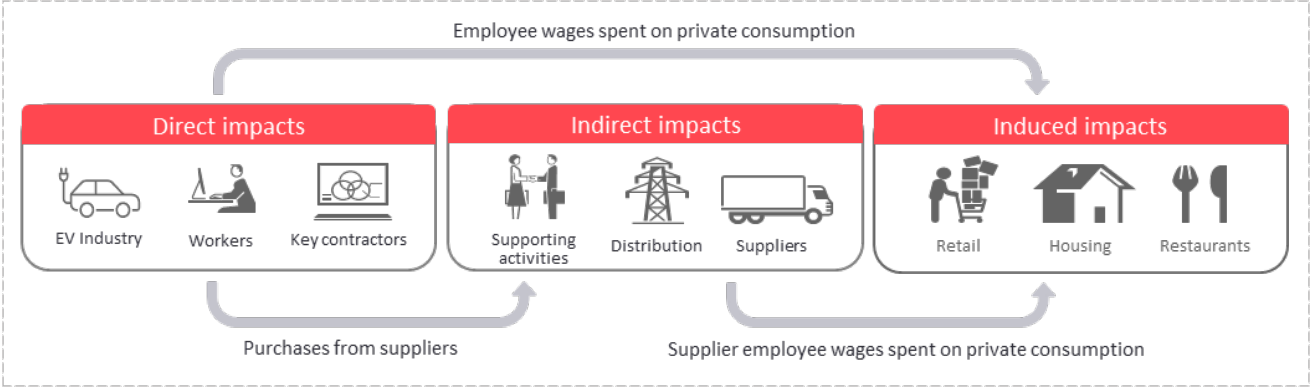
Stage 3: Analysis of the economic contributions of the automotive industry

Input-output tables associated with the NAICS codes enable the quantification of the mobility industry's impact on the economy, thereby showcasing the interconnections between various economic activities.

The I-O economic framework

- To model the economic impacts of the mobility sector and its different components, EY's proprietary economic model is employed.
- EY employs a proprietary economic model based on the principles of the I-O framework.
- The model captures economic impacts through direct, indirect, and induced channels, demonstrating the mobility sector's influence on the broader economy. It translates direct impacts into total economic contributions, measured through Gross Domestic Product (GDP) and employment estimates.
- Impacts estimated account for the identified interrelationships across the mobility value chain, which focus on the contributions of industries throughout the economy, highlighting contributions through the lens of core industries in the mobility value chain, as well as the supporting industries that provide goods and services directly and indirectly to the mobility sector.

Figure 26: Direct, indirect and induced economic impacts



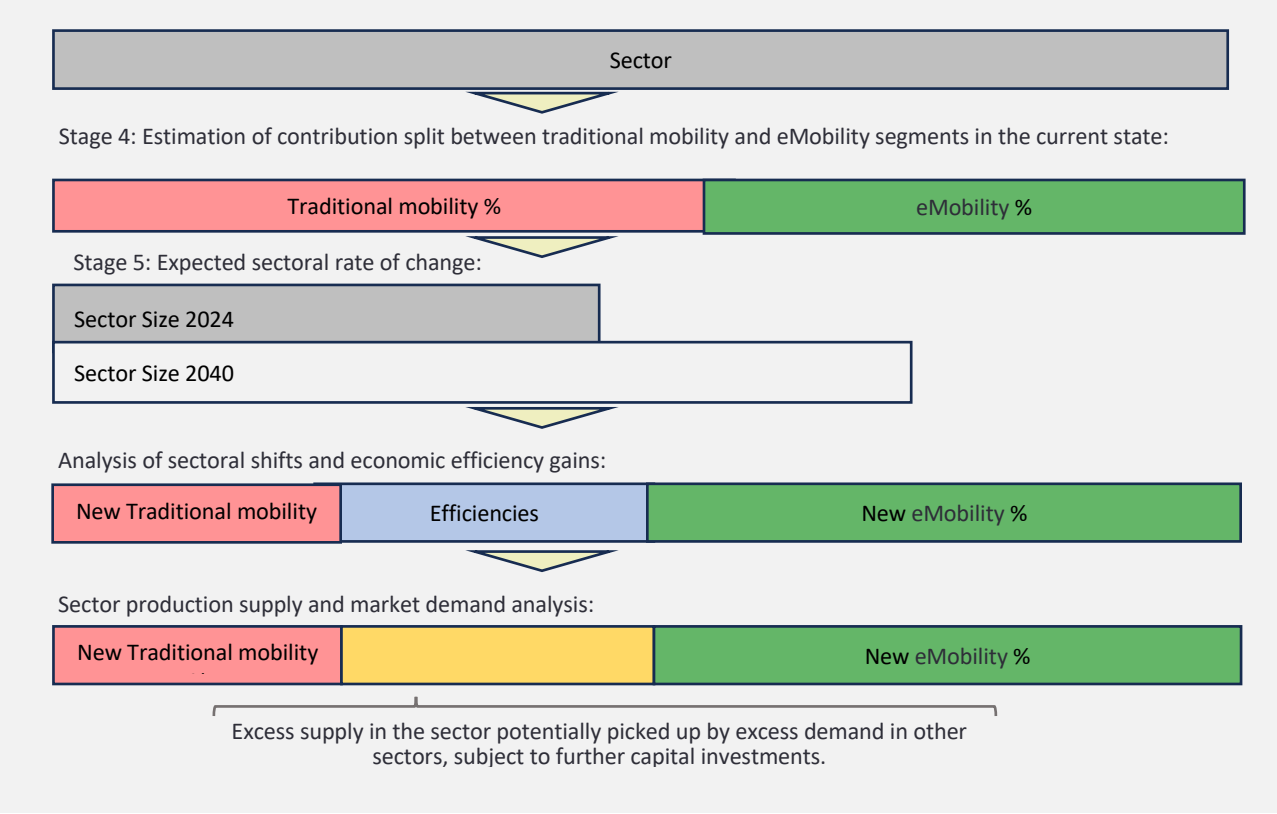
Stage 4: Isolating traditional and eMobility

Subsequently, the approach facilitates the isolation of components linked to traditional mobility and those associated with eMobility. The methodology employed in this analysis involved utilizing regression analysis to determine the degree of dependence among various sectors on stock, production, or sales. By examining the future behavior of sales, stock, and production, the analysis established how these factors influence the future overall behavior of each sector.

Stage 5: Predicting future contributions

The final stage focuses on measuring and predicting the future contributions of the mobility industry, further separating the analysis into traditional and eMobility.

Figure 27: Isolating traditional and eMobility in the current and future automotive sector



Note: Shares presented in the figure above are illustrative.

METHODOLOGY – FUTURE STATE CONSIDERATIONS

When modeling and quantifying future contributions, several considerations are taken into account.

Electrification demand and supply drivers

Resource availability	• Canada has substantial endowment of critical minerals required for battery production. • Currently, there are several projects in the development phase in mining, which include processing and refining of lithium, cobalt, nickel and graphite.
Regulatory support	• The new U.S. administration has expressed its intent on cutting back on spending related to the Inflation Reduction Act, which provides significant tax incentives for EV manufacturing. • Some EV rebate programs in Canada are ending, which may put downwards pressure on demand for EVs in the near future.
Government initiatives	• Canada has mandated that all new vehicle sales must be zero-emission vehicles (ZEVs) by 2035. • Federal and provincial governments are providing subsidies to attract major EV battery manufacturers.
Public and private collaboration	• Strong collaboration between the government and private sector to create an integrated value chain; including investments in technology, infrastructure, and workforce development.

In addition to these considerations, below is an additional set of other broader effects that remain important and contribute significantly to the economy, which are described qualitatively in this report.

Broader expected changes and contributions

- **Canadian clean energy supply:** transitioning to clean energy will be essential as manufacturers increasingly utilize Canadian owned and sourced renewable energy for production and EV charging.
- **Skills development:** the mobility industries will require enhanced skills development programs to prepare the workforce for EV technology.
- **Health:** EVs are expected to benefit people's health by reducing air pollution and promoting cleaner urban environments.
- **Environment:** the development of the industry will lead to a reduction in environmental impact.
- **Research & innovation:** ongoing research and innovation will be vital for developing advanced technologies.

METHODOLOGY - SCENARIO ANALYSIS

Scenarios defined

The following scenarios are generated, considering eMobility market growth trends. This incorporates various adoption rates of electrification.

'Medium' scenario	• This scenario is a balanced scenario and provides a neutral view of what is expected in the future. • It is constructed using the current electrification market growth trends and policies. • This scenario assumes short-term impacts of U.S. tariffs.
'High scenario'	• This scenario is crafted under assumptions that the market will evolve under near ideal conditions for growth, allowing to estimate the potential EV market. • In particular, the presence of subsidies and tax credits, advancements in technology, and high fuel prices, among other factors, may accelerate the transition to EV vehicles.
'Low' scenario	• This scenario is created under the assumption that the expected development of the market will realize at its least favourable state. • Factors that contribute to limited performance include low government regulations, few subsidies, poor charging infrastructure, and the impacts of U.S. tariffs among others, may slow the short-term transition of EVs.

Potential implications of policy uncertainty in the U.S.

Potential changes to GDP, employment, and other economic variables related to the transition to electrification in Canada may be affected by the policy uncertainty generated by recent local and global geopolitical events.

Uncertainty	Key events, announcements or intentions which may present implications on outcomes for jobs and GDP contributions include: ▪ Suspension of public funding for electric charging infrastructure ▪ Potential reform or removal of tax credits offered for EV purchases ▪ Imposition of a short-term 25% tariffs on steel and aluminum imports ▪ Imposition of a short-term 25% tariff on all imports coming from Canada ▪ Imposition of a short-term 25% tariff on imported automobiles and parts
Areas potentially affected	Event uncertainty may lead to sudden changes in various areas that can affect outcomes for the broader mobility sector, including implications on key areas such as: ▪ Infrastructure development supporting electrification ▪ Rebates and incentives for EV adoption ▪ Broader regulation related to vehicle electrification, including emissions standards and electrification goals
Report takeaways	Given the fluid dynamics of the current economic climate, the level of uncertainty is significant in determining the magnitude, duration, and timing of policy effects on the Canadian economy. As a result of rapidly changing local and global policy measures, results of this analysis should be interpreted as a moderate scenario for potential impacts.

Shown in the table below is an overview of the key major considerations and drivers in the development of the scenario analysis.

Scenarios are built on the joint consideration of the factors outlined in this section.

Consideration	'Low' scenario	'Medium' scenario	'High' scenario
Economic environment	• Some tariffs on vehicles and other automotive components raise manufacturing costs for Canadian automakers, resulting in in higher vehicle prices, whether gas or electric • There will be supply chain disruptions that will hinder production	• The economy experiences moderate certainty • Overall growth in the EV market is limited by economic uncertainty, and manufacturers face challenges in scaling production	• There is a stable economic environment, where consumers are confident, and the supply chain faces no major constraints
Government policies and incentives	• Existing measures to support EVs are being withdrawn, resulting in minimal government incentives or regulations to promote their adoption	• Moderate government support, including some incentives for EV purchases and regulations aimed at reducing emissions, leading to gradual market growth	• Strong government support with aggressive policies promoting EV adoption, including substantial subsidies, tax breaks, and stringent emissions regulations, resulting in rapid market growth
Consumer adoption	• Low public awareness of the benefits of EVs, with prevailing skepticism about their practicality	• Increased public awareness of EV benefits, with a growing number of consumers considering EVs as viable options	• High public awareness and positive attitudes toward EVs, driven by environmental concerns and favorable experiences, leading to widespread acceptance
Technology advancements	• Slow progress in battery technology and EV performance, leading to higher costs and lower consumer interest	• Steady improvements in battery technology and EV features, making them more appealing but still facing challenges in cost and performance	• Significant breakthroughs in battery technology, leading to lower costs, longer ranges, and faster charging times, making EVs highly attractive to consumers
Charging infrastructure development	• Limited charging infrastructure, resulting in range anxiety among consumers and reduced willingness to switch to EVs	• A growing network of charging stations, but still not sufficient to fully alleviate range anxiety	• Extensive and accessible charging infrastructure, including fast chargers and widespread availability, eliminating range anxiety and encouraging widespread adoption
Market competition and availability	• Few EV models available, with limited choices for consumers, leading to a lack of competitive pricing	• A moderate variety of EV models available, leading to competitive pricing and more choices for consumers, but still limited compared to traditional vehicles.	• A diverse range of EV models available at competitive prices, catering to various consumer preferences and needs, resulting in a robust and growing market

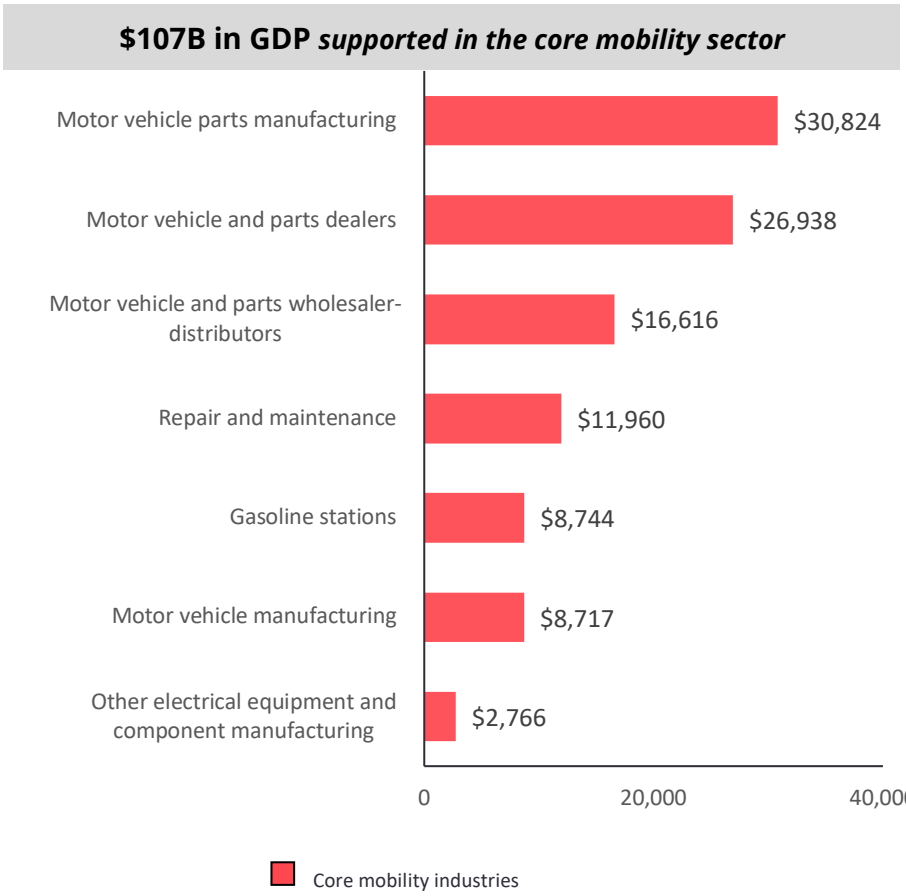
Current state economic contributions

GROSS DOMESTIC PRODUCT CONTRIBUTIONS

Outlined below is an **overview of industry GDP contributions** supported by the mobility ecosystem, **including contributions from both traditional mobility and eMobility segments**. Results are **presented on an annual basis**, in Canadian dollars ($), and in **constant prices for the 2023 calendar year**.

GDP contributions in core mobility sector

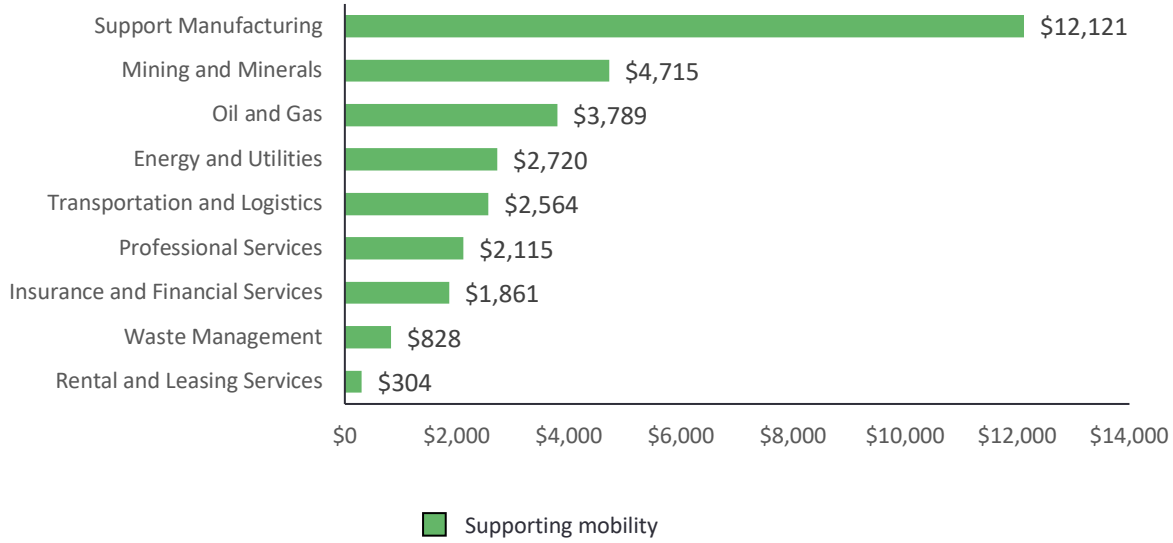
Figure 28: Annual contributions, core mobility, 2023



- Core mobility industries represent those which all or most of their output is directly related to activities in the mobility sector, whereas supporting industries provide value directly and indirectly across the value chain and ecosystem.
- **Core industries currently represent $107 billion** in contributions, while **supporting industries support over $31 billion** as of 2023.
- In total, the **mobility sector supports around $138 Billion of Canada's GDP** based on sectoral interlinkages and supply chain considerations.

GDP supported by core mobility sector across the value chain and ecosystem

Figure 29: Annual contributions, supporting mobility, 2023



Note: These contributions reflect a share of the sectoral GDP that is supported by the mobility sector and not total sectoral GDP.

Note: Figures include direct, indirect and induced contributions.

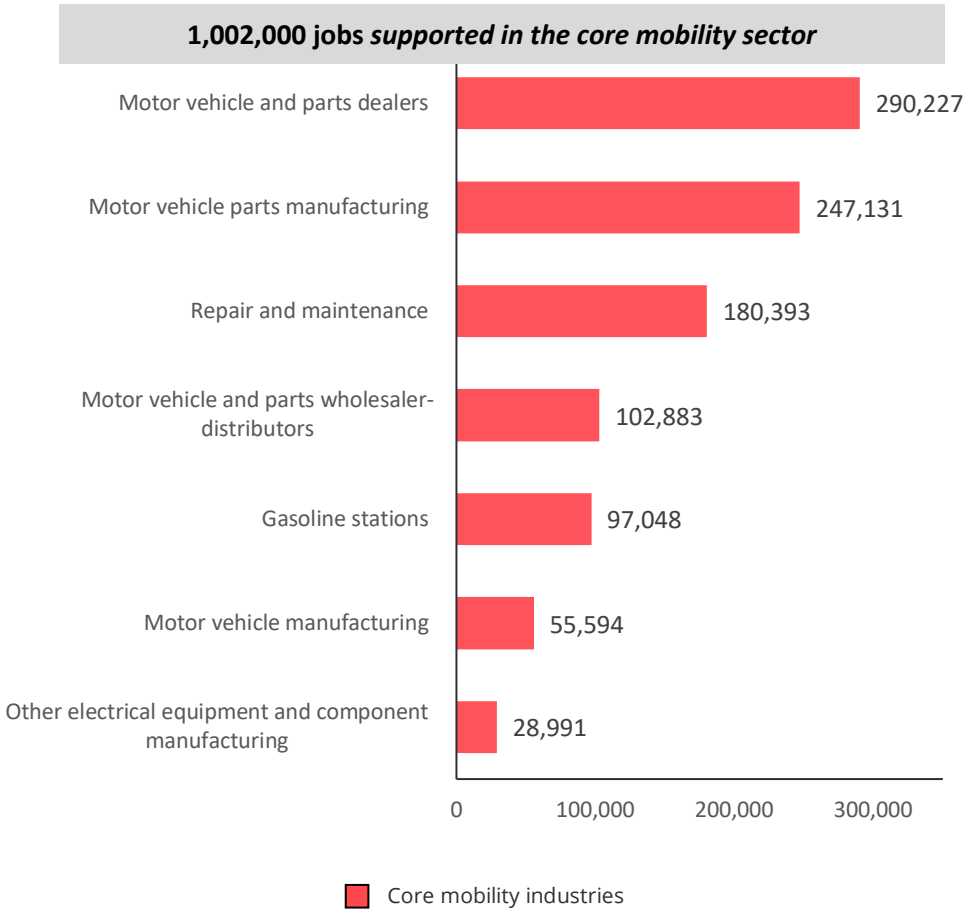
Source: EY analysis.

EMPLOYMENT CONTRIBUTIONS

Outlined below is an **overview of industry employment contributions** supported by the mobility ecosystem, **including contributions from both traditional mobility and eMobility segments**. Results are **presented on an annual basis for the 2023 calendar year**.

Jobs contributions in core mobility sector

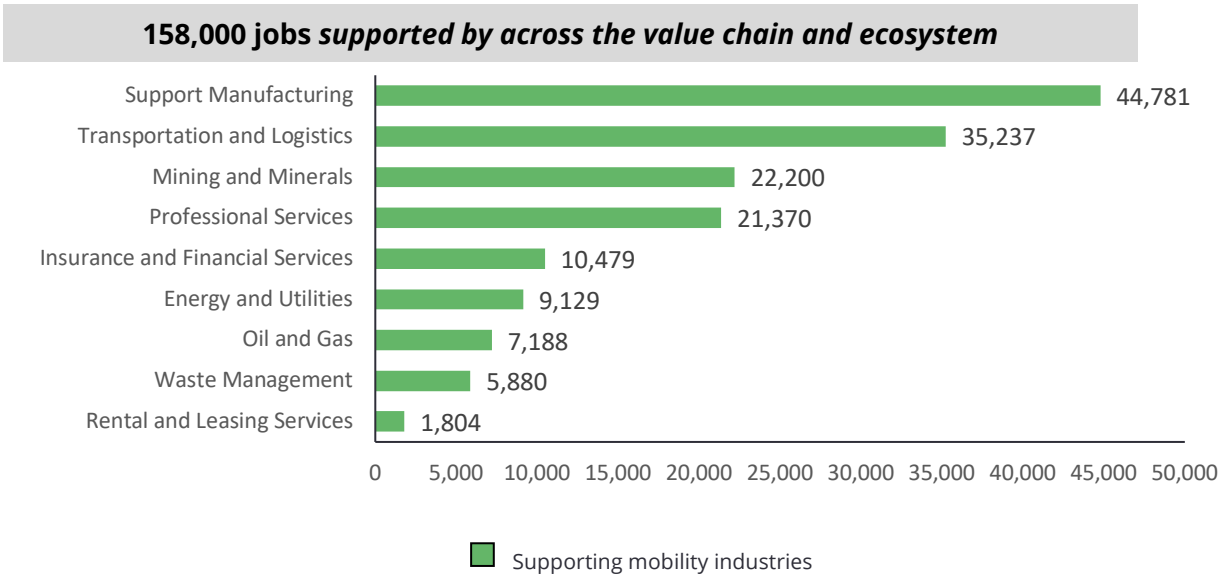
Figure 30: Annual sustained contributions, core mobility, 2023



- **Total employment contributions for core industries currently represent over 1,000,000 jobs.**
- In the supporting mobility industry, **direct, indirect and induced contributions represent just over 158,000 jobs**, with key industries in the manufacturing and professional services contributing the most.
- Between the core and supporting industries, **direct, indirect and induced job contributions are estimated to be around 1,160,000 nation-wide**.

Jobs supported by core mobility sector across the value chain and ecosystem

Figure 31: Annual sustained contributions, supporting mobility, 2023



Note: These contributions reflect a share of the sectoral employment that is supported by the mobility sector and not total sectoral employment.

Note: Figures include direct, indirect and induced contributions.
Source: EY analysis.

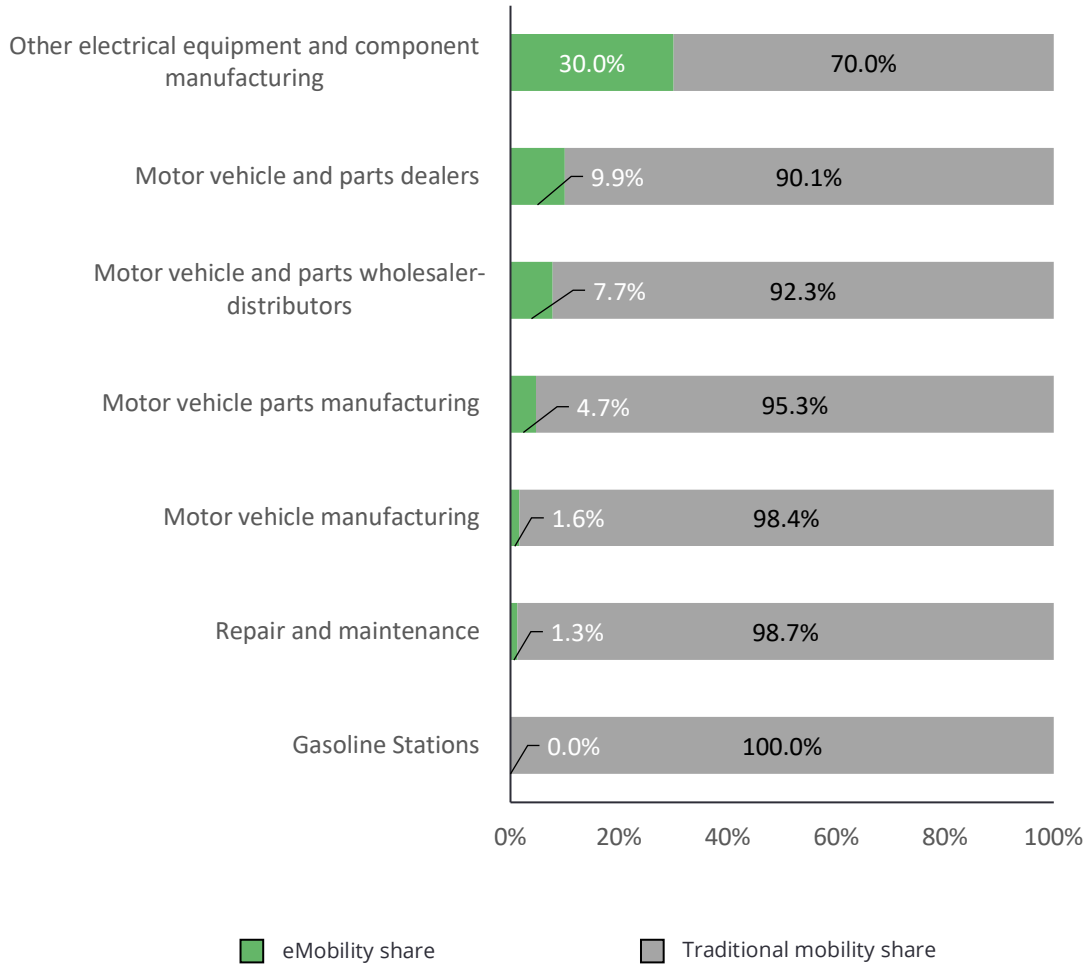
EMOBILITY AND MOBILITY CONTRIBUTIONS

Below is an overview of the estimated breakdown of contributions to GDP and employment between eMobility and traditional mobility segments.

The results are presented as a percentage of the total mobility sector.

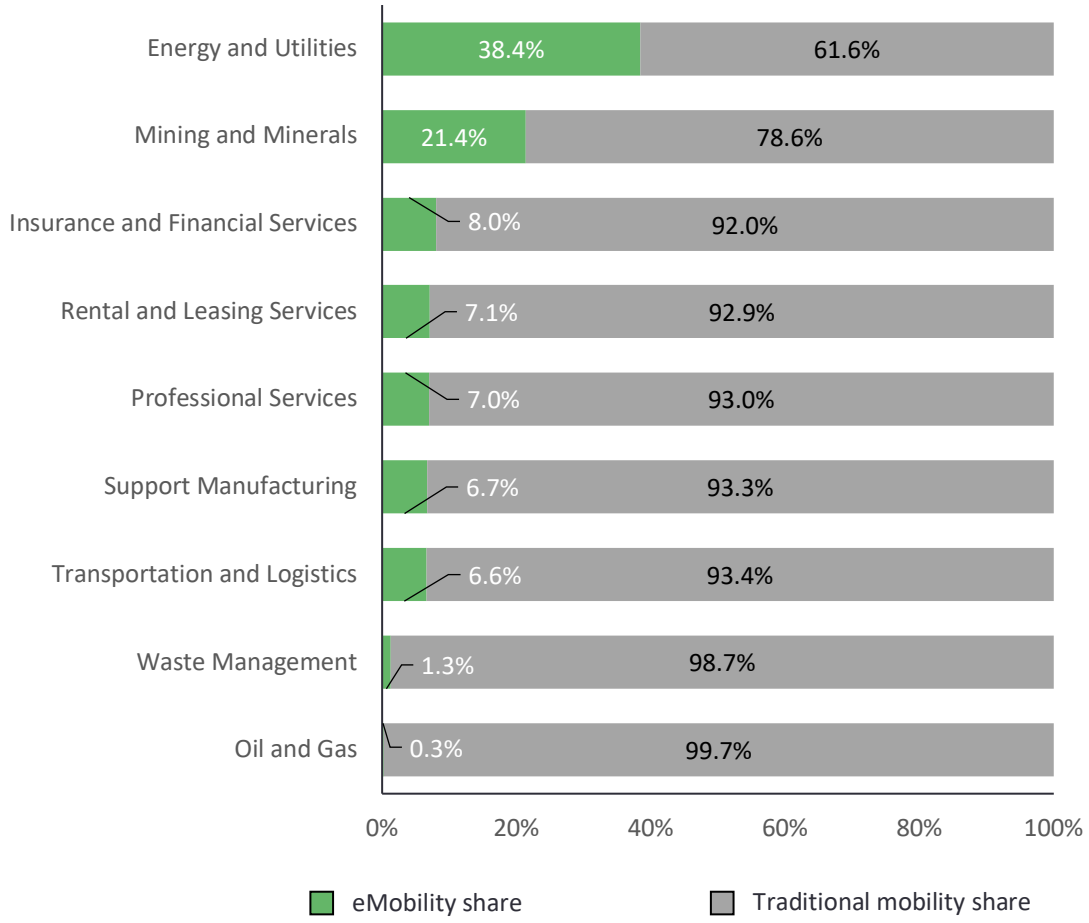
Share of contributions in the core mobility sector

Figure 32: Traditional mobility and eMobility current share in GDP and employment, core industry, 2023



Share of contributions in the supporting mobility sector

Figure 33: Traditional mobility and eMobility current share in GDP and employment, supporting industry, 2023



Note: Figures include direct, indirect and induced contributions.
Source: EY analysis.

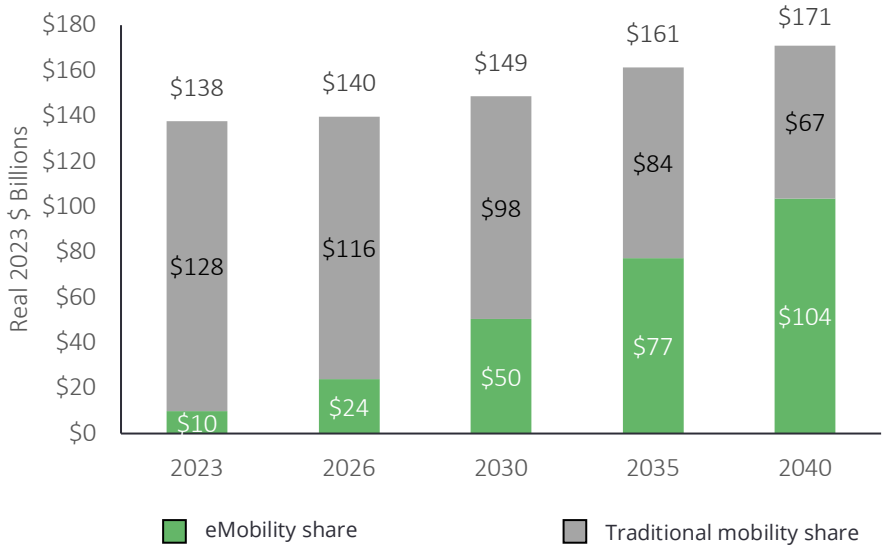
Future state economic contributions

MEDIUM CASE - MOBILITY CONTRIBUTIONS 2040

The medium scenario reflects a balanced outcome based on current industry trends. This approach provides a foundation for assessing the mobility sector's economic impacts. Results presented in the medium scenario reflect the inclusion of current regulation as it relates to Canada's Zero-Emission vehicle sales targets. For further details, including a breakdown of results by industry, please refer to the Appendix.

GDP contributions

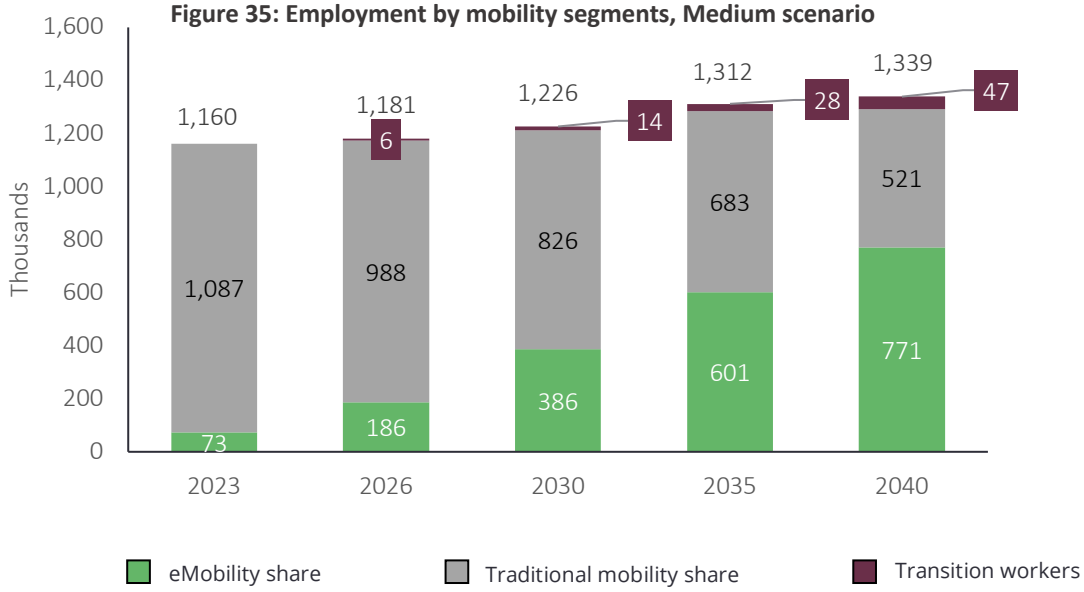
Figure 34: GDP by mobility segments, Medium scenario



- The mobility sector is projected to grow at an average annual rate of 1.0% from 2023 to 2030, accelerating to 1.4% between 2030 and 2040.
- Contributions from the eMobility segment are expected to increase more than ten-fold by 2040, while gasoline stations, repair and maintenance services and oil and gas will exhibit a contrary trend and decline more rapidly as electrification scenarios become more optimistic.

Employment contributions

Figure 35: Employment by mobility segments, Medium scenario



- **Total employment supported by the mobility sector is expected to increase** in the future, although **the growth rate will be slower than that of GDP.**
- This slowdown is primarily attributed to economic and technological efficiencies associated with emerging technologies in vehicle electrification.
- Additionally, **some workers** from key mobility industries **are likely to transition to roles within or outside the traditional mobility and eMobility ecosystem**.

Note: Transition workers represent a subset of the labor force reallocating from the traditional mobility sector, driven by the transition to electrification. Their transition to alternative industries will be contingent upon the interdependencies within the economic system, particularly the market frictions encountered, and the compatibility of their existing skill sets as inputs with the requirements of new roles in the output sectors.

Source: EY analysis.
Note: Figures include direct, indirect and induced contributions.

SCENARIO ANALYSIS - GDP CONTRIBUTIONS 2040

Outlined below are the GDP contributions of the traditional mobility and eMobility segments by scenario (low, medium and high). For further details, including a breakdown of results by industry, please refer to the Appendix.

Figure 36: GDP by mobility segments, Low scenario

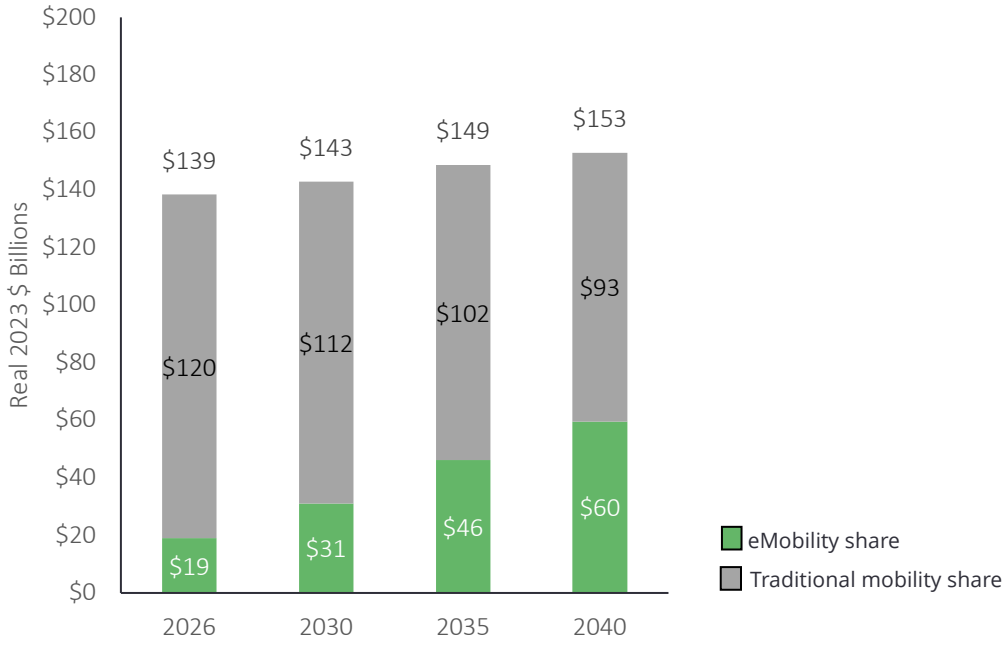


Figure 37: GDP by mobility segments, Medium scenario

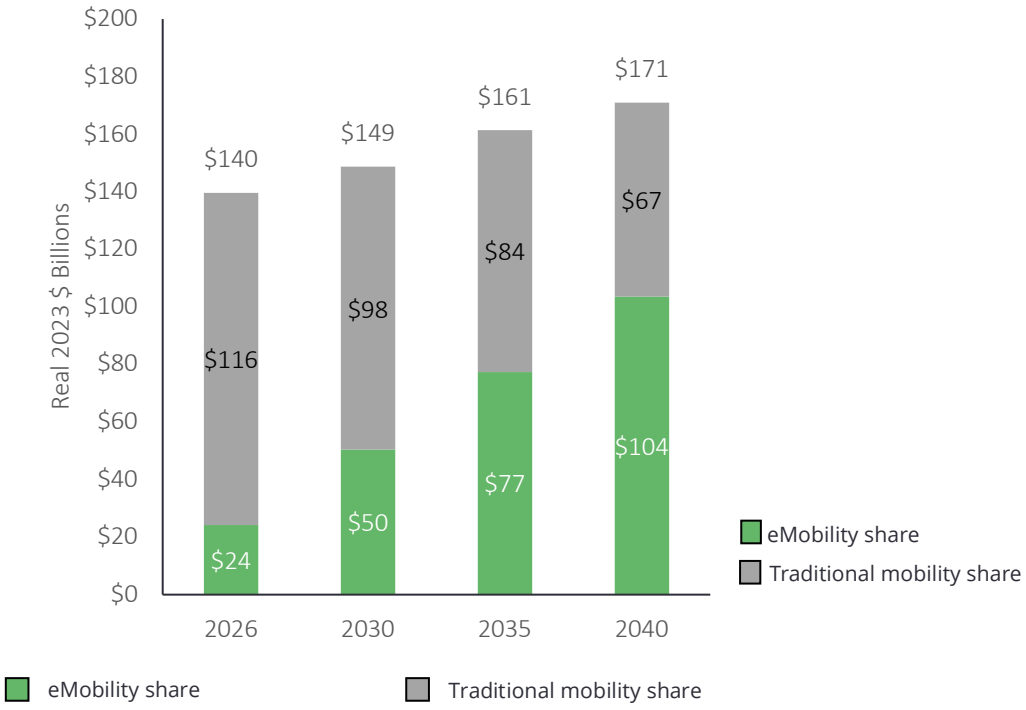
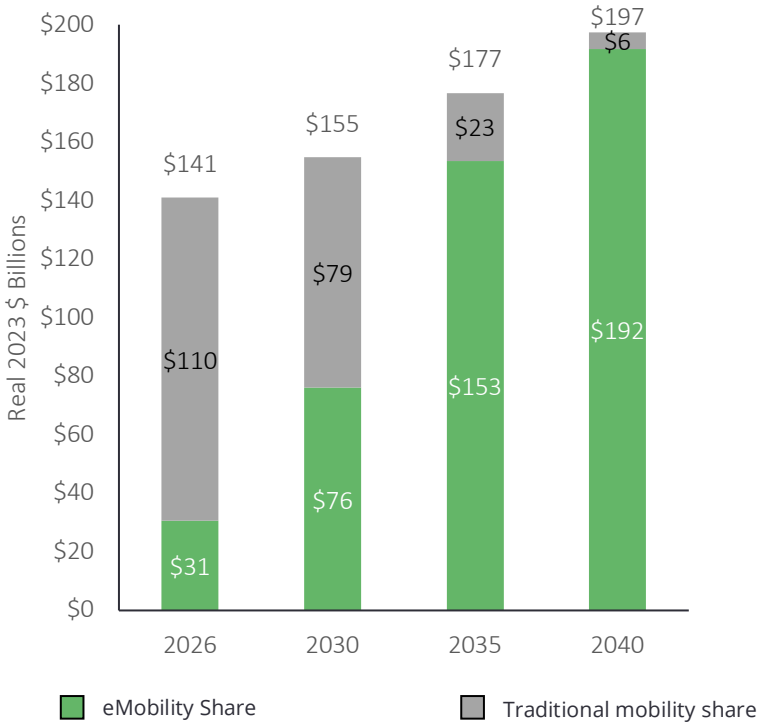


Figure 38: GDP by mobility segments, High scenario



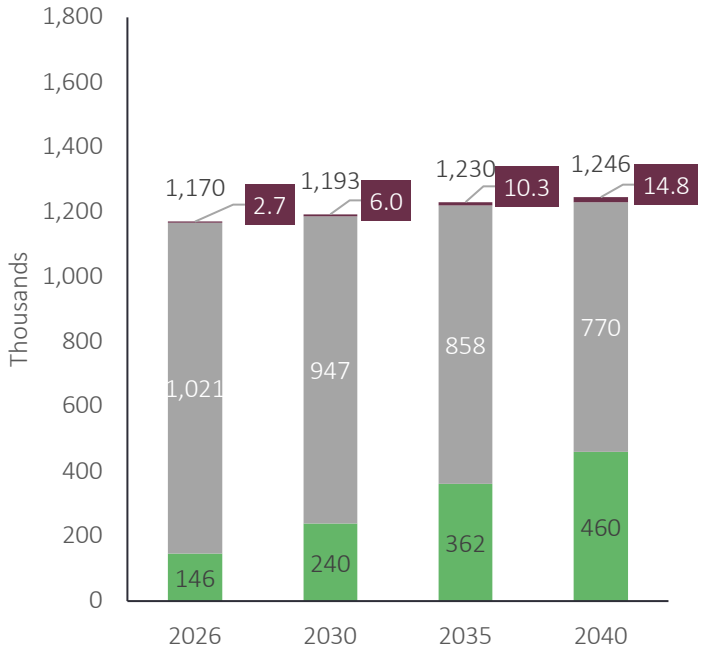
Source: EY analysis.
Note: Figures include direct, indirect and induced contributions

- **By 2040**, the size of total GDP contributions in the overall mobility sector for the **high scenario is 15% larger than the medium scenario**, while the **medium scenario is 11.8% larger than the low scenario**.
- The relative importance of eMobility increases over time, but at different rates depending on the scenario. **By 2040**, it is estimated that **39% of GDP contributions can be attributed to eMobility in the low scenario**, compared to **61% in the medium scenario**, and **97% in the high scenario**.
- As the eMobility rate increases through each scenario, the effect on GDP becomes greater.

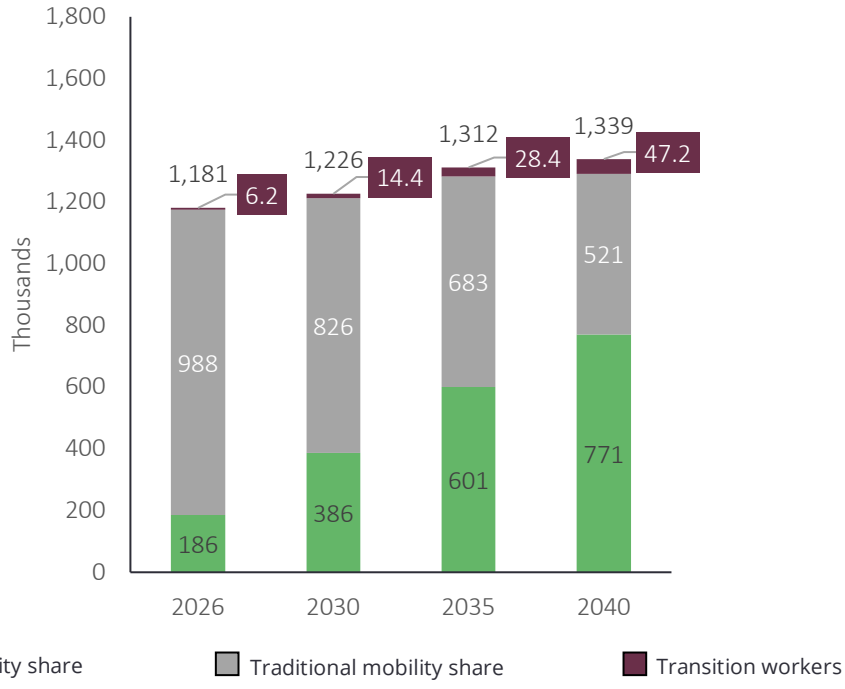
SCENARIO ANALYSIS - EMPLOYMENT CONTRIBUTIONS 2040

Outlined below are the employment contributions of the traditional mobility and eMobility segments by scenario (low, medium and high). For further details, including a breakdown of results by industry, please refer to the Appendix.

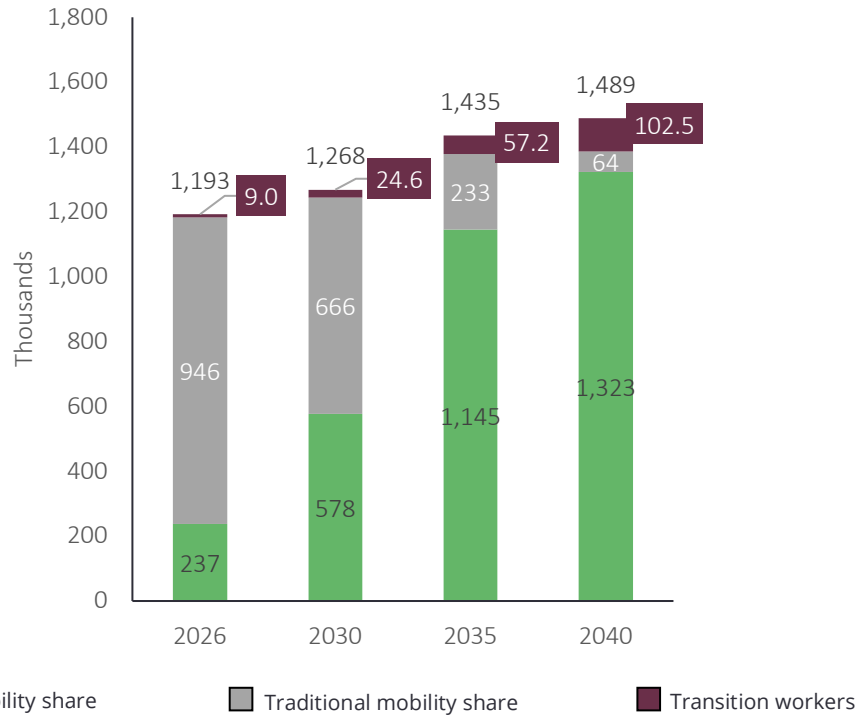
Figure 39: Employment by mobility segments, Low scenario



Medium Scenario: Figure 40: Employment by mobility segments, Medium scenario



High Scenario: Figure 41: Employment by mobility segments, High scenario



Source: EY analysis.
Note: Figures include direct, indirect and induced contributions.

- **By 2040**, the size of total employment contributions in the overall mobility sector for **the high scenario is 11% larger than the medium scenario**, while the **medium scenario is 7.5% larger than the low scenario**.
- **By 2040**, it is estimated that **37% of employment contributions can be attributed to eMobility in the low scenario**, compared to **58% in the medium scenario**, and **89% in the high scenario**.

Note: Transition workers represent a subset of the labor force reallocating from the traditional mobility sector, driven by the transition to electrification. Their transition to alternative industries will be contingent upon the interdependencies within the economic system, particularly the market frictions encountered, and the compatibility of their existing skill sets as inputs with the requirements of new roles in the output sectors.

BROADER SOCIAL IMPACT OF EV GROWTH IN CANADA

In addition to employment and GDP growth, transitioning to electric vehicles can significantly reduce diesel exhaust and carcinogenic risks, leading to substantial health savings and improved air quality. By mitigating pollutants linked to serious health conditions, we can save lives and reduce healthcare costs, paving the way for a healthier future.

Health benefits

1. **Reduction in diesel exhaust and carcinogenic risks:** diesel exhaust is a confirmed carcinogen with significant health risks, including increased cancer and chronic disease probability.
    - Health Canada has conducted comprehensive reviews and concluded that diesel exhaust emissions have direct effects on human health, including being carcinogenic and specifically associated with the development of lung cancer.[14]
    - International Agency for Research on Cancer (IARC) has classified diesel engine exhaust as a Group 1 carcinogen.[2]
2. **Larger health savings:**
    - Health Canada estimates that emissions from all on-road vehicles contribute to approximately 1,200 premature deaths and millions of non-fatal health outcomes annually, with an economic cost of $9.5 billion per year.[15]
    - A study by the University of Toronto found that transitioning to electric vehicles (EVs) and clean grids could yield over $100 billion in health benefits for Canada[15] between 2022 and 2050. This includes reductions in adverse health effects such as heart attacks, asthma, and decreased lung function.
3. **Reduction in pollutants**: According to a study by the American Society of Hematology, exposure to pollutants such as PM2.5, NO2, and NOx is significantly associated with an increased risk of developing venous thromboembolism (VTE). One of the primary sources of these pollutants is the combustion of fossil fuels.[3]
    - A study shows that in Alberta, Ontario & Quebec, approximately 13 out of every 10,000 people are diagnosed with VTE each year, with the risk increasing significantly with age, particularly over 60.[16]
    - The study conducted by the University of Toronto (U of T) also estimates that PM2.5 was responsible for approximately 15,300 deaths in Canada in 2021.[17] By transitioning to electric vehicles (EVs) and clean grids, significant reductions in adverse health effects can be achieved.
4. **Noise reduction benefits of EVs:** Environmental noise, such as traffic, has been shown to increase stage 1 sleep and decrease slow wave and REM sleep.
    - A study by Health Canada has found that approximately 2.5 million people in Canada suffer from chronic high sleep disturbance due to environmental noise.[18] It was also found that long-term exposure to traffic noise is associated with a 34% increase in heart attacks, strokes, and other serious heart-related problems for every 5-decibel increase in noise levels.[19]
    - A study conducted by the Canadian Cardiovascular Society found that high noise exposure accounted for about 1 in 20 heart attacks in Ontario.[20]

1. https://electricautonomy.ca/automakers/2025-01-24/u-of-t-evs-health-study-canada/
2. https://www.iarc.who.int/news-events/iarc-diesel-engine-exhaust-carcinogenic/
3. https://ashpublications.org/blood/article/145/10/1089/534404/Air-pollution-is-associated-with-increased-risk-of
4. https://www.ourmental.health/mind-body-connection/how-noise-pollution-elevates-stress-the-hidden-health-costs-of-urban-sound
5. https://www.lung.org/clean-air/electric-vehicle-report
6. https://www.cbc.ca/news/canada/windsor/electric-vehicles-environmental-impact-1.6723430
7. https://www.canada.ca/en/environment-climate-change/news/2023/12/canadas-electric-vehicle-availability-standard-regulated-targets-for-zero-emission-vehicles.html
8. https://www.pnas.org/doi/10.1073/pnas.2320858121
9. https://www.lung.org/getmedia/9e9947ea-d4a6-476c-9c78-cccf7d49ffe2/ala-driving-to-clean-air-report.pdf
10. https://www.sleepfoundation.org/noise-and-sleep
11. https://www.icben.org/2021/ICBEN%202021%20Papers/full_paper_28925.pdf
12. https://www.health.harvard.edu/heart-health/how-noise-pollution-may-harm-the-heart
13. https://www.acc.org/About-ACC/Press-Releases/2022/03/22/19/59/Living-Near-Noise-Pollution-Tied-to-Greater-Risk-of-Heart-Attack
14. https://www.canada.ca/en/health-canada/services/publications/healthy-living/human-health-risk-assessment-diesel-exhaust-summary.html
15. https://electricautonomy.ca/automakers/2025-01-24/u-of-t-evs-health-study-canada/
16. https://plus.mcmaster.ca/ClotPlus/Articles/EvidenceSummary/95
17. https://www.canada.ca/en/health-canada/services/publications/healthy-living/health-impacts-air-pollution-2021.html
18. https://www.quebec.ca/en/health/advice-and-prevention/health-and-environment/the-effects-of-environmental-noise-on-health/effects-of-environmental-noise-on-physical-health
19. https://publications.gc.ca/site/archivee-archived.html?url=https://publications.gc.ca/collections/collection_2024/sc-hc/H129-54-3-2023-eng.pdf
20. https://www.occupationalcancer.ca/wp-content/uploads/2023/04/Oiamo_OEH_Nov2022.pdf

Source: EY analysis.

EV advancements are driving innovation with advancements in battery technology and smart grid integration are revolutionizing electric vehicles, enhancing efficiency and sustainability. With significant cost savings and automotive innovations, the shift to EVs is paving the way for a greener future.

Environmental benefits

- **Reduced greenhouse gas emissions:** Oil and gas sector is the largest contributor to Canada's total greenhouse gas emissions, accounting for approximately 31%. This is followed by the transportation sector, which contributes 22%.[8] EVs help lower Canada's greenhouse gas emissions, contributing to the country's goal of achieving carbon neutrality by 2050.[6] The Canadian government has set targets for zero-emission vehicles to reduce emissions from the transportation sector.[7]
- **Improved air quality:** As of today, certain regions in Canada are experiencing high-risk air quality. Notably, Toronto, Ontario, and Vancouver, British Columbia. Both have an Air Quality Health Index (AQHI) of 7, indicating a high health risk.[8] Elevated vehicle emissions are identified as one of the primary contributors to this situation.[9] By eliminating tailpipe emissions, EVs reduce pollutants like NO_2, SO_2, CO, and particulate matter, leading to cleaner air and fewer health issues related to air pollution.[6]
- **Decreased dependence on fossil fuels:** EVs run on electricity, which can be generated from renewable sources like wind, solar, and hydropower, reducing reliance on fossil fuels.[6] In 2022, renewable energy sources provided 16.9% of Canada's total primary energy supply.[10] Also Canada is the third largest producer of hydroelectricity in the world, with hydropower accounting for 61.7% of Canada's electricity generation in 2022.[10]

Technological innovation

- **Advancements in battery technology:** As demand for EVs increases, there is a strong incentive to develop more efficient, longer-lasting, and faster-charging batteries. This can lead to breakthroughs in energy storage technology.[1] For instance, the Canadian government has recently made substantial investments in battery technology. In January 2025, the government announced an investment of up to $169.4 million in Linamar Corporation through the Strategic Innovation Fund to accelerate the development of green technologies, including advanced EV battery parts.[11]
- **Smart grid technology:** The integration of EVs with the power grid encourages the development of smart grid technologies that can manage energy distribution more efficiently, balance loads, and reduce peak demand.[3] For example, In Denmark, Nissan has successfully implemented Vehicle-to-Grid (V2G) technology with its Leaf EVs. The project allows EV owners to sell excess electricity back to the grid, helping to balance supply and demand.[12] This initiative has demonstrated the potential for EVs to act as mobile energy storage units, providing grid stability and reducing electricity costs. The project was in collaboration with Enel and Nuvve establishing the world's first fully commercial V2G hub.[13]
- **Automotive innovation:** The shift to EVs drives innovation in vehicle design, including lightweight materials, aerodynamics, and advanced electronics. This can lead to more efficient and safer vehicles.[4] Enhancements in aerodynamics, such as those seen in Tesla's Model S, reduce drag and increase efficiency. Advanced electronics, including regenerative braking and driver-assistance systems, improve safety and performance, as demonstrated by the Chevrolet Bolt EV.
- **Cost savings:** EVs can lead to significant long-term savings. Charging an EV at home is cheaper than refuelling a gas-powered car. Additionally, EVs have fewer mechanical parts, resulting in lower maintenance costs. A report by Clean Energy Canada found that switching to an EV can save Canadian households up to $3,000 annually in fuel and maintenance costs.[14]

1. https://electricautonomy.ca/automakers/2025-01-24/u-of-t-evs-health-study-canada/
2. https://www.iarc.who.int/news-events/iarc-diesel-engine-exhaust-carcinogenic/
3. https://ashpublications.org/blood/article/145/10/1089/534404/Air-pollution-is-associated-with-increased-risk-of
4. https://www.ourmental.health/mind-body-connection/how-noise-pollution-elevates-stress-the-hidden-health-costs-of-urban-sound
5. https://www.lung.org/clean-air/electric-vehicle-report
6. https://www.cbc.ca/news/canada/windsor/electric-vehicles-environmental-impact-1.6723430
7. https://www.canada.ca/en/environment-climate-change/news/2023/12/canadas-electric-vehicle-availability-standard-regulated-targets-for-zero-emission-vehicles.html
8. https://aqihub.info/indices/Canada
9. https://historyoftoronto.ca/blog/worsening-air-quality-in-toronto-the-alarming-cause-for-concern
10. https://natural-resources.canada.ca/energy-sources/renewable-energy/about-renewable-energy-Canada
11. https://www.canada.ca/en/innovation-science-economic-development/news/2025/01/government-of-canada-further-strengthening-the-electric-vehicle-manufacturing-sector.html
12. https://vivatechnology.com/news/vehicle-to-grid-technology-energy-and-consumer-savings
13. https://eepower.com/news/first-fully-commercial-vehicle-to-grid-hub-in-denmark/
14. https://electricautonomy.ca/automakers/passenger-electric-vehicles/2024-10-24/clean-energy-canada-report-ev-savings/

Source: EY analysis.

Transition to electrification: case studies of Canadian projects

CASE STUDY 1: VOLT-AGE ELECTRIFICATION RESEARCH PROGRAM

Overview

Volt-Age is Canada's leading electrification research program, based at Concordia University and supported by a $123 million grant from the Canada First Research Excellence Fund (CFREF).[1] The program aims to pioneer carbon-neutral solutions through integrated research in building technology, energy storage, smart grids, and transportation electrification. The key research areas include building technology, energy storage, smart grids & transport electrification.[1]

Role in EV transition

1. **Increased EV adoption:** Volt-Age's research has contributed to the innovation of advanced battery technologies and charging infrastructure, making EVs more accessible and practical for future Canadians.[5]
2. **Environmental benefits:** by promoting the adoption of EVs and bringing in new electrification technologies, Volt-Age has helped reduce greenhouse gas emissions and support Canada's climate goals.[4]
3. **Innovation ecosystem:** Volt-Age has created a vibrant ecosystem of innovation, attracting investments and fostering collaborations that drive the development of new technologies.
4. **Seed funding for green energy**: Volt-Age announced seed funding for 36 research projects from Concordia and its partner institutions. This significant investment is expected to jump-start large scale projects that will bridge the gap between academia and industry to develop green energy and foster sustainable communities.

The future of electric vehicles: current trends, challenges, and opportunities

- Karim Zaghib, Professor, Chemical and Materials Engineering, Concordia University

1.Current state and technology:

- Lithium-ion (LI) batteries will dominate for the next 100 years.
- Charging infrastructure is crucial, with most people charging at home. Level 3 chargers offer faster charging times.

2.Consumer adoption:

- Most users charge at home, reducing the need for widespread public chargers.
- Safety improvements for faster charging are needed within the next 10 years.

3.Policy and regulation:

- Government support is essential for infrastructure and consumer adoption, including financial incentives and recycling regulations.
- Cost parity between LI batteries and internal combustion engines (ICE) is expected in 5-7 years.

4.Supply and manufacturing:

- LI battery supply is dominated by Asia, but North America has opportunities for independence.
- Local manufacturing can reduce costs, as seen with Panasonic and Tesla.

5.Economic and environmental impact:

- Electrification of transportation is crucial for reducing global warming and pollution-related deaths.
- The transition to electric vehicles (EVs) will create new job opportunities, especially in AI and smart grid technologies.

6.Future technologies:

- Hydrogen and batteries are not in direct competition; hydrogen may be better for larger vehicles like trucks and trains.
- Hybrid solutions might be necessary for longer flights, but safety concerns need to be addressed.

Conclusion

Volt-Age is a transformative program that aims to position Canada as a global leader in electrification research. By focusing on decarbonization, affordability, and societal well-being, Volt-Age is making significant strides towards a sustainable and equitable future.

1. https://www.concordia.ca/research/volt-age.html
2. https://www.concordia.ca/news/stories/2024/12/1
3. concordia-s-volt-age-now-has-250-fully-funded-phd-opportunities.html
4. https://www.concordia.ca/research/volt-age/about/themes-and-platforms.html
5. https://www.concordia.ca/research/volt-age.html
6. https://finance.yahoo.com/news/transport-electrification-battery-industry-quebec-163000482.html

Source: EY analysis.

CASE STUDY 2: MINING IN THE RING OF FIRE

Overview

The Ring of Fire is a mineral-rich region located in the Far North of Ontario, Canada, approximately 500 kilometres northeast of Thunder Bay. Covering about 5,000 square kilometres, it is considered one of the most promising mineral development opportunities in the province.[1] These minerals are essential for the production of electric vehicles (EVs) and their components, positioning the Ring of Fire as a strategic asset for Canada's transition to a sustainable transportation sector.

Role in EV transition

- **Supply of critical minerals:** mining in the Ring of Fire can significantly impact the electric vehicle (EV) value chain and EV manufacturing in Canada by providing essential mineral such as;
    - Nickel: critical for high-energy density EV batteries, ensuring a stable supply chain.
    - Copper: used extensively in electric motors, batteries, inverters, and charging infrastructure.
    - Chromite: essential for stainless steel production, used in various EV components.
    - Platinum Group Elements (PGEs): used in catalytic converters and fuel cells, crucial for reducing emissions in hybrid and fuel cell vehicles.[1]
- **Global competitiveness:** the Ring of Fire's mineral wealth positions Canada as a key player in the global EV market, ensuring a stable supply of critical materials needed for EV production.
- **Economic growth:** the development of these mineral resources can create jobs, generate revenue, and build infrastructure, boosting local economies and supporting the broader EV value chain.

Expected launch	The provincial government has pledged $1 billion to build 450 kilometres of the all-season road, with completion expected by 2027.[6]
Production capacity	Estimated $90 billion worth of chromium, gold, platinum, zinc, copper, and nickel.[6]
Alliances/joint ventures	First Nations Collaboration: A significant milestone was reached with an agreement involving 15 First Nations and the Impact Assessment Agency of Canada (IAAC). This agreement outlines the terms for a comprehensive environmental assessment of the region.[8] The First Nations involved include Aroland, Attawapiskat, Constance Lake, Eabametoong, Fort Albany, Ginoogaming, Kashechewan, Long Lake #58, Marten Falls, Missinabie Cree, Moose Cree, Neskantaga, Nibinamik, Webequie, and Weenusk.[8,9]

Conclusion

The Ring of Fire represents a significant opportunity for economic development and the transition to a cleaner, sustainable global economy. The development of the Ring of Fire is poised to significantly impact Canada's EV industry and value chain. By leveraging its rich mineral resources, Canada can enhance its EV manufacturing capabilities, reduce reliance on imported materials, and support the transition to a cleaner, more sustainable transportation sector.

1. https://www.ontario.ca/page/ontarios-ring-fire
2. https://www.costmine.com/2025/01/27/costmine-intelligence-ring-of-fire-report-2024/
3. https://www.canadianminingjournal.com/featured-article/passing-though-the-ring-of-fire-recent-developments/
4. https://www.cbc.ca/news/canada/thunder-bay/wyloo-metals-ceo-update-1.7092369
5. https://globalnews.ca/news/10142331/mining-claims-ontario-ring-of-fire/
6. https://macleans.ca/society/technology/ev-battery-mining-ring-of-fire/
7. https://www.ontario.ca/page/ontarios-ring-fire
8. https://ricochet.media/indigenous/milestone-deal-reached-with-15-first-nations-on-ring-of-fire-mining-development/
9. https://www.nationalobserver.com/2025/01/20/news/regional-assessment-ring-fire-feds-first-nations-mining-Ontario

Source: EY analysis, Ontario.ca

CASE STUDY 3: BC HYDRO'S DEVELOPMENT OF EV CHARGING INFRASTRUCTURE

Overview

BC Hydro, a major electric utility in British Columbia, Canada, has been at the forefront of developing public electric vehicle (EV) charging infrastructure. This case study explores their strategic approach, key initiatives, and the impact of their efforts on EV adoption in the region

Role in EV transition

1. **Infrastructure development**: BC Hydro has been instrumental in expanding the public EV charging network across British Columbia. They have installed numerous DC fast chargers and Level 2 chargers in urban areas and along major travel corridors.[4]
2. **Improved energy efficiency:** BC Hydro improves energy efficiency through EV programs by offering rebates for power management devices that prevent overloads. Their Smart Charging Infrastructure project supports public charging stations and mitigates grid impacts. BC Hydro's smart charging solutions include features like scheduled charging, which allows users to set specific times for their vehicles to charge, optimizing energy use and reducing costs. Also, BC Hydro announced Canada's first vehicle-to-grid (V2G) pilot project for medium and heavy-duty vehicles.[6] The project aims to leverage the growing number of EVs to provide clean and flexible energy solutions, especially during emergencies and peak demand periods. They also run Public Awareness Campaigns for users to promote efficient use of resources.[7]
3. **Partnerships and collaborations:** BC Hydro has collaborated with various stakeholders, including government bodies and private enterprises, to fund and expand the charging infrastructure.[5] These partnerships have been crucial in accelerating the deployment of charging stations and ensuring their accessibility.
4. **Incentives and rebates:** BC Hydro provides financial incentives and rebates for home and workplace charging stations.[5] These incentives make it more affordable for individuals and businesses to install chargers, further promoting the adoption of EVs.
5. **Supporting government goals:** BC Hydro's initiatives align with the Government of B.C.'s CleanBC Roadmap to 2030, which aims to meet emissions reduction targets and achieve net-zero emissions by 2050.[4] By supporting these goals, BC Hydro helps drive the transition to sustainable transportation.
6. **Market growth:** BC Hydro's efforts have led to a substantial increase in EV registrations in British Columbia. The province has one of the highest EV adoption rates in North America, with EVs accounting for a significant percentage of new car sales.[4]
7. **BC Hydro EV app**: BC Hydro's EV app helps users find and connect to fast charging stations, manage RFID cards, monitor charging status, and access chargers across North America through roaming partnerships. It is available on the Google Play Store and BC Hydro's website.

Conclusion

BC Hydro's proactive approach to developing public EV charging infrastructure has played a crucial role in accelerating the adoption of electric vehicles in British Columbia and Canada as a whole. By addressing key barriers to EV adoption—such as charging accessibility and cost—BC Hydro has helped pave the way for a more sustainable transportation future. Additionally, BC Hydro's energy efficiency initiatives, including their Energy Efficiency Plan which invests over $700 million in tools, technology, and programs, further support the transition by promoting energy-efficient choices and reducing peak demand.[9]

1. https://www.bchydro.com/powersmart/electric-vehicles/industry/charging-network-planning.html
2. https://www.bchydro.com/content/dam/BCHydro/customer-portal/documents/power-smart/electric-vehicles/ev-5-year-ev-fast-charging-network-deployment-plan.pdf
3. https://www.bchydro.com/news/press_centre/news_releases/2025/ev-charge-hubs-icbc-claim-centres.html
4. https://www.bchydro.com/news/conservation/2024/ev-by-the-numbers.html
5. https://www.bchydro.com/powersmart/electric-vehicles/ev-news-resources.html
6. https://www.bchydro.com/news/press_centre/news_releases/2023/vehicle-to-grid-announcement.html
7. https://www.bchydro.com/powersmart/electric-vehicles/public-charging/trip-planning.html
8. https://www.bchydro.com/content/dam/BCHydro/customer-portal/documents/power-smart/electric-vehicles/ev-current-upcoming-stations-map.pdf
9. https://www.bchydro.com/content/dam/BCHydro/customer-portal/documents/corporate/electrification/report-energy-efficiency-plan.pdf

Source: EY analysis, bchydro.com

CASE STUDY 4: VOLKSWAGEN'S BATTERY MANUFACTURING PLANT IN ONTARIO

Overview

Volkswagen, Europe's largest automaker, has been aggressively expanding its EV capabilities to meet the growing global demand for zero-emission vehicles. Recently, Volkswagen announced a $7 billion investment to establish its first overseas electric vehicle (EV) battery manufacturing plant in St. Thomas, Ontario. This investment marks the largest EV-related investment in Canadian history and is set to significantly impact the local economy and the global EV market.[1,2]

Role in EV transition:

- **Boost to EV manufacturing:** the plant will significantly enhance Canada's capacity to produce EV batteries, supporting the growth of the EV market.[9]
- **Strengthening supply chain:** by establishing a local battery manufacturing facility, Volkswagen aims to secure a stable supply of batteries, which is crucial for the production of EVs.[2]
- **Innovation and competition:** the plant will produce cutting-edge unified cells, a new cell technology designed for volume production.
- **More affordable EVs**: increased production and localized manufacturing can lead to economies of scale, potentially reducing the cost of EVs.
- **Environmental benefits:** by producing batteries domestically, the plant will help reduce the carbon footprint associated with importing batteries.[9]
- **Market leadership:** this investment positions Canada as a leader in the global EV industry, attracting further investments and innovations.[9]

Strategic importance

- **Economic impact:** the investment is expected to generate approximately $200 billion in value, making it the largest manufacturing plant in Canada.[1,4]
- **Environmental benefits:** the plant will contribute to the production of zero-emission vehicles, aligning with global efforts to reduce carbon emissions and combat climate change.[2]
- **Technological advancements:** the facility will leverage cutting-edge technology to produce high-quality batteries, positioning Volkswagen as a leader in the EV market.[3]

Key details

- Production capacity: up to 90 GWh annually, enough to supply batteries for approximately one million EVs per year.[6,7]
- Completion timeline: construction is expected to begin in 2024, with production starting in 2027. [5,6]

Conclusion

Volkswagen's $7 billion battery manufacturing plant in Ontario is a transformative project for Canada's EV industry. It will not only boost battery production and create jobs but also support the country's environmental goals and position Canada as a key player in the global EV market.

1. https://news.ontario.ca/en/release/1002955/volkswagens-new-electric-vehicle-battery-plant-will-create-thousands-of-new-jobs
2. https://news.ontario.ca/en/release/1002817/canada-and-ontario-welcome-historic-investment-from-Volkswagen
3. https://www.investontario.ca/de/spotlights/ontario-welcomes-historic-7b-investment-Volkswagen
4. https://www.pm.gc.ca/en/news/news-releases/2023/04/21/volkswagens-new-electric-vehicle-battery-plant-will-create-thousands
5. https://news.ontario.ca/en/release/1002955/volkswagens-new-electric-vehicle-battery-plant-will-create-thousands-of-new-jobs
6. https://www.vw.ca/en/electric-vehicles/ev-hub/ev-news/st-thomas-gigafactory.html
7. https://www.volkswagen-group.com/en/press-releases/volkswagen-and-powerco-se-will-build-their-largest-cell-factory-to-date-in-canada-16163
8. https://news.ontario.ca/en/release/1002955/volkswagens-new-electric-vehicle-battery-plant-will-create-thousands-of-new-jobs
9. https://electricautonomy.ca/ev-supply-chain/batteries/2023-04-22/vw-20-billion-ontario-battery-factory/

Source: EY analysis, electricautonomy.ca, vw.ca, news.ontario.ca

CASE STUDY 5: NEO'S SILICON ANODE MANUFACTURING FACILITY IN WINDSOR, ONTARIO

Overview

Neo Battery Materials Ltd. is a Canadian company specializing in the development of silicon anode materials for lithium-ion batteries. Silicon anodes offer a higher energy density compared to traditional graphite anodes, potentially leading to longer-lasting batteries for electric vehicles. These batteries are primarily used in electric vehicles (EVs), electronics, and energy storage systems.

Role in EV transition

- **Reduced reliance on imports:** the facility will reduce dependence on imported battery materials, strengthening the domestic supply chain.[4]
- **Proximity to key players**: located near major automotive and battery companies like Stellantis, NextStar Energy, and Volkswagen.[2]
- **Innovation in battery technology:** silicon anodes enable longer-running and ultra-fast charging batteries, enhancing EV performance.[4]
- **Economic growth:** creation of skilled jobs and investment in the local economy will boost regional development.[3]
- **Market expansion:** increased production capacity will support the growing demand for EVs in Canada.[4]

Economic impact & future plans

- **Economic impact:** the project aims to foster economic growth and innovation in the region, supported by tax incentives and favourable lease terms. Windsor City Council also approved a grant to support operations.
- **Expansion:** Neo plans to expand the facility and its projects over the next 8 years, potentially accelerating the timeline based on partnerships and joint ventures.[2]
- **Community impact:** the facility is expected to have a positive impact on the local community by creating jobs and contributing to the region's status as a hub for automotive and battery innovation.[2]

Key details

- Location: Windsor, Ontario, at Windsor Airport.
- Size: 8 acres (approximately 350,000 square feet).
- Production capacity: 5,000 tons of silicon anodes annually.[1,2]
- Investment: initial investment of CAD 69 million, with a total of CAD 120 million planned over the next 8 years.[1,2]
- Job creation: over 100 skilled jobs.[1,2]
- Expected to begin operations in late 2026.

Conclusion

Neo's silicon anode manufacturing facility in Windsor represents a significant milestone for both the company and the Canadian battery ecosystem. It is a huge step towards advancing Canada's EV industry by producing high-performance battery materials domestically. Through this, Neo is helping to drive innovation, reduce reliance on imports, and support economic growth.

1. https://neobatterymaterials.com/neo-battery-materials-to-establish-canadas-first-silicon-anode-facility-on-8-acres-in-windsor-ontario/
2. https://electricautonomy.ca/ev-supply-chain/2025-01-23/neo-battery-materials-silicon-anode-canada/
3. https://neobatterymaterials.com/neo-battery-materials-to-establish-canadas-first-silicon-anode-facility-on-8-acres-in-windsor-ontario/
4. https://www.evengineeringonline.com/new-silicon-anode-facility-to-support-north-americas-ev-battery-supply-chain/

Source: EY analysis, neobatterymaterials.com, electricautonomy.ca

CASE STUDY 6: TESLA'S PIVOTAL ROLE IN CANADA'S EV TRANSITION AND ECONOMIC GROWTH

Overview

Tesla Motors Canada is a driving force in Canada's EV industry and clean energy sector, contributing significantly through innovative products, Canadian-based manufacturing investments, infrastructure and environmental benefits. Its key local activities include advanced manufacturing (Tesla Toronto Automation), research and development (with facilities in Dartmouth, NS; Mississauga and Richmond Hill, ON), vehicle sales and service operations, as well as a growing EV charging network.

Economic impact

- **Economic contribution:** Tesla contributes substantially to Canada's economy. In 2021, it was assessed that Tesla contributed $762 million to Canadian GDP. This economic footprint is distributed across 51 sectors, underscoring Tesla's broad influence on the Canadian economy.[1]
- **Manufacturing presence:** Tesla Toronto Automation (TTA) (Markham & Richmond Hill, ON), conceptualizes, designs, engineers, machines, assembles, programs, and manages Tesla's in-house battery cell manufacturing equipment used in Tesla Gigafactories.[2] TTA also manufactures other components for Tesla products. In 2024, Tesla's Canadian manufacturing business sourced from ***over 250 Canadian-based industry suppliers.***
- **Job creation:** Tesla Canada employs over 1,400 people in Canada today. Additionally, the EnviroEconomics study shows that Tesla helped create and sustain 6,645 full-time jobs (direct, indirect and induced) in Canada. 3,100 of these jobs were a direct result of Tesla's operations and spending on goods and services in Canada – spending which exceeded $830M on Canadian-made goods and services that year alone.[1]

Role in EV transition

- **EV sales:** Tesla is the best-selling EV brand in Canada having now delivered over 250,000 electric vehicles in the country since 2012.
- **EV charging:** as of April 2025, Tesla operates over 2,400 DC fast charging connectors at 241 locations in Canada, with most being open to both Tesla and other brands. Tesla Supercharger is the most-used EV charging network in Canada, with sites spanning from Victoria to Halifax and North throughout much of Saskatchewan and Alberta. Tesla plans to significantly expand its Canadian Supercharger network by adding over 50 new sites and more than 630 charging connectors.[3] This expansion will not only enhance charging accessibility for Tesla drivers but also support other EV brands and create more jobs to build out the networks.
- **Technological advancements:** Tesla's Canadian manufacturing teams are creating innovative and more efficient ways to assemble batteries, reduce costs and increase output. Tesla also undertakes world-leading research into battery cell longevity (Dartmouth, NS), environmentally friendly cathodes (Mississauga, ON) and leading-edge geartrain technology (Vancouver region, BC). Through a partnership between Tesla and the Canadian government, Tesla supports the NSERC/Tesla Canada Industrial Research Chair in Long-Lived, High-Energy Density and Low-Cost Lithium-Ion Batteries at Dalhousie University.[4]

Tesla's role in energy storage in Canada
Electrical grid support: • Canada's successful transition to EVs requires strong and resilient electrical grids. The Six Nations of the Grand River, Boralex and Tesla are working to build Canada's largest battery energy storage facility (1.2 GWh) in Haldimand, Ontario.[5] A second project is underway in the same community where Tesla is working with the Six Nations of the Grand River and Toronto-based companies Northland Power, NRStor and AECON to build an additional 1 GWh battery storage facility.[6]

Conclusion

Tesla continues to play a pivotal role in accelerating Canada's transition to electric vehicles by driving battery innovation; creating jobs through manufacturing, research, infrastructure construction, sales and service; expanding the charging network; and supporting the optimization of electrical grids. Through its economic contributions, Canadian investments and technological advancements, Tesla continues to strengthen Canada's position as an EV leader while fostering sustainable economic growth.

1. https://www.enviroeconomics.org/single-post/driving-the-economy-while-reducing-emissions-tesla-s-impact-in-canada#:~:text=Tesla's%20total%20contribution%20to%20Canadian,goods%20and%20services%20in%20Canada.
2. https://driveteslacanada.ca/news/first-look-at-tesla-toronto-automation-manufacturing-facility-in-markham-ontario/
3. https://x.com/TeslaCharging/status/1870999758267097549?ref_src=twsrc%5Etfw%7Ctwcamp%5Etweetembed%7Ctwterm%5E1870999758267097549%7Ctwgr%5Eee77e81a3de27bd83cb6d8a802467caff0fad3c3%7Ctwcon%5Es1_&ref_url=https%3A%2F%2Fevchargingstations.com%2Fchargingnews%2Ftesla-to-install-50-supercharging-sites-in-canada-in-2025%2F
4. https://www.nserc-crsng.gc.ca/Chairholders-TitulairesDeChaire/Chairholder-Titulaire_eng.asp?pid=321
5. https://www.thespec.com/news/haldimand-battery-energy-storage-park-nearing-construction/article_f38f14e4-f088-56a0-8f27-c9ea961f8a7b.html
6. https://www.nationalobserver.com/2024/11/26/analysis/canada-biggest-battery-power-grid-electricity

Source: EY analysis, enviroeconomics.org, driveteslacanada.ca, tesla.com

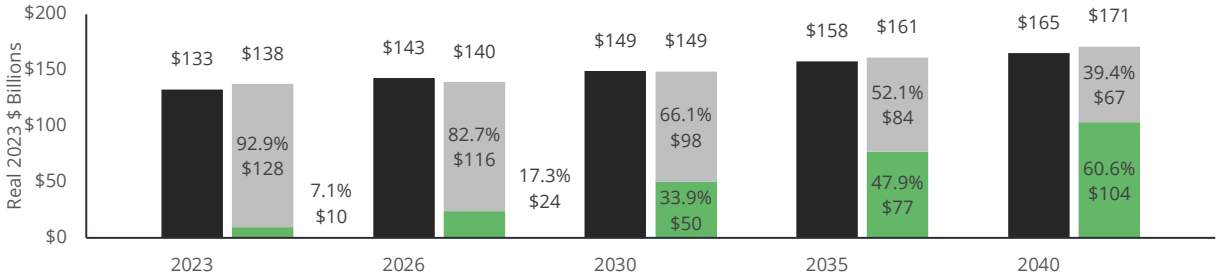
Appendix

OIL AND GAS VS. EMOBILITY ECONOMIC CONTRIBUTIONS

In the Medium scenario, both the oil and gas and mobility sectors are expected to continue growing and providing increased contributions to the economy over the next 15 years.

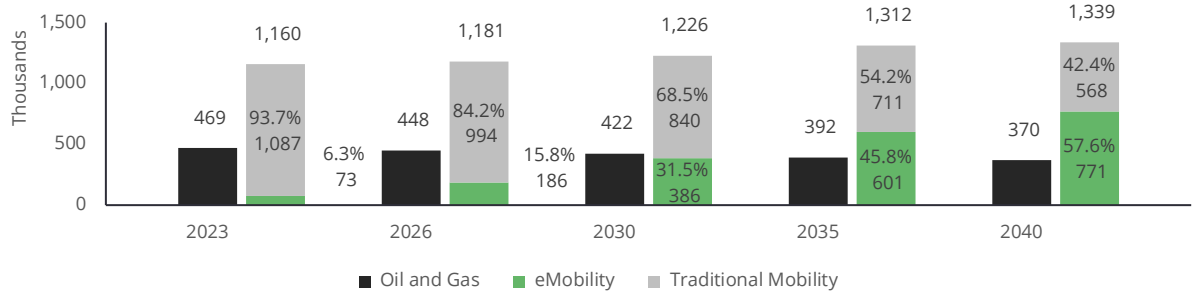
GDP

Figure 42: GDP contributions oil and gas vs. eMobility, 2023-2040 – Medium scenario



Employment

Figure 43: Employment contributions oil and gas vs. eMobility, 2023-2040 – Medium scenario

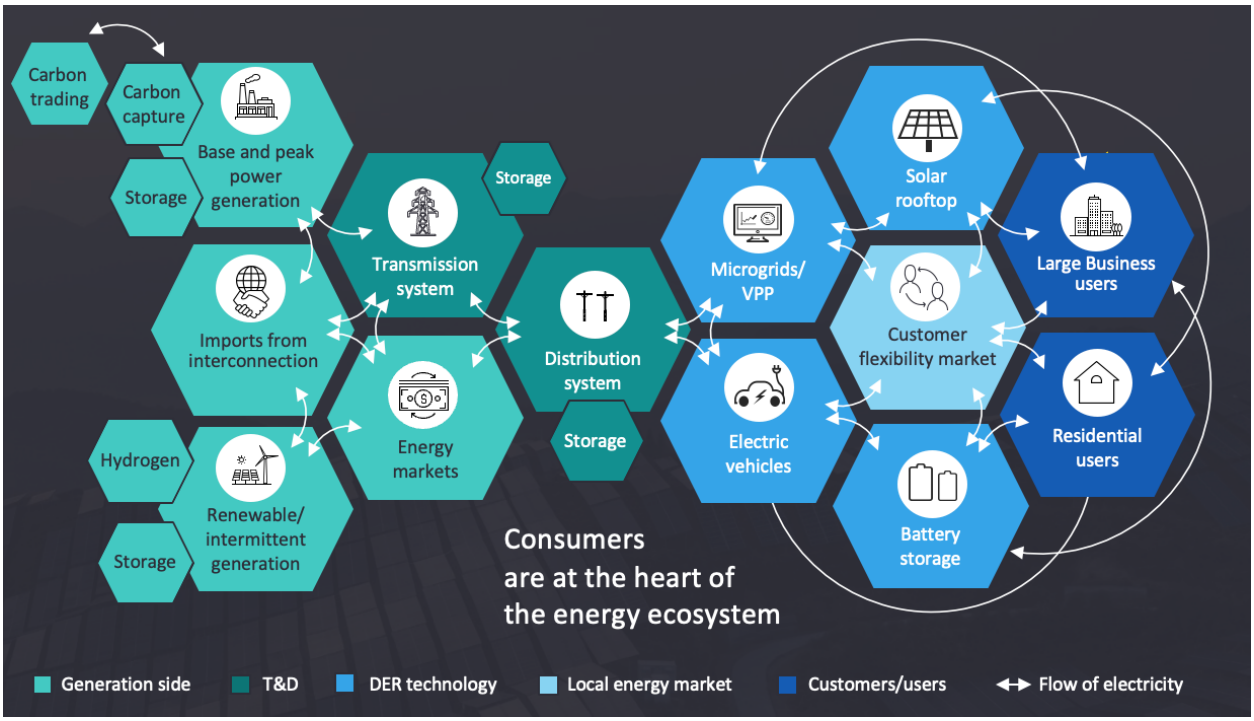


- By 2040, eMobility GDP contribution is expected to be about 63% of total contributions from the oil and gas sector.
- eMobility employment contributions are foreseen to surpass oil and gas employment contributions between 2030 and 2035.
- Oil and gas GDP contributions are projected to be in line with the total mobility sector, both showing robust growth between 2023 and 2040.
- The majority of output produced by the Canadian oil and gas industry is exported, implying that the transition to eMobility will have minimal impacts on the oil and gas sector's economic contributions. Both are expected to continue to grow concurrently, even as mobility transitions to electrification.

- GDP data is sourced from Statistics Canada and its associated input-output multipliers (Statistics Canada) are utilized to quantify the sector's economic contributions, capturing direct, indirect, and induced effects. Future state multipliers are forecasted based on historical performance and the sector's anticipated contributions to the Canadian economy. Furthermore, the growth trajectory of the sector is assessed through econometric and statistical methodologies, underpinned by historical insights and secondary research.

Source: Statistics Canada and EY analysis.
Note: Figures include direct, indirect and induced contributions for the medium scenario

We are rapidly shifting from a fossil fuel-dominated, centralized energy system to an energy ecosystem that integrates a multitude of generators, providers, solutions and commercial relationships:



Source: Global markets analysis

This energy transition has eight implications:

Implication 1

Renewables dominate energy generation

2038

when renewables will become the dominant power generation source.

Implication 2

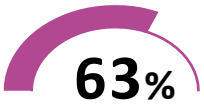
(Almost) everything is electrified

2x

2x global electricity demand rise by 2050.

Implication 3

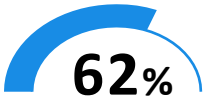
Oil and gas are diversifying their businesses



of the crude oil demand drop beyond 2030 will be from transport.

Implication 4

Energy systems are localized



of power will come from local renewable sources by 2050.

Implication 5

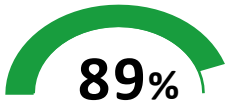
The urgent quest to build a hyper-intelligent, flexible grid

10x

more grid flexibility required in Europe by 2050.

Implication 6

Consumers take the lead



of global consumers surveyed across 18 markets are interested in renewables and self-generation

Implication 7

Supply chains are redefined

910%

increase in demand for lithium by 2050 from 2022 levels.

Implication 8

Integration of old and new energy systems

300%

increased annual investment in low-carbon technologies required to 2050.

RAW MATERIALS SUPPLIERS – PRODUCTION & INVESTMENTS

The demand for lithium, cobalt, nickel, and graphite is expected to rise due to their essential role in EV battery production. This has led to increased exploration, extraction and refining investments:

Lithium		
FRONTIER LITHIUM	**PAK Lithium Project**[1]	**Investment and funding**
• Located in northwestern Ontario, the company aims to become vertically integrated operation; involved in every stage of lithium production. • Mine and mill construction is anticipated to begin in mid-2025, with production slated for 2027. Construction of the chemical plant is expected to start in mid-2027, with production commencing in 2029.		
E3 LITHIUM	**Clearwater Project**[2]	**In development**
• Large-scale lithium extraction project from 2 reservoirs in Alberta, utilizing its Direct Lithium Extraction (DLE) technology (extract lithium from brine resources, a byproduct generated by oil and gas industry). • The project aims to produce battery-grade lithium carbonate, with an estimated start-up in July 2025.		
GREEN TECHNOLOGY Metals	**Seymour Project**[3]	**In development**
• Located in Ontario, this vertically integrated project aims to produce, process lithium, and subsequently transport it to a chemical refinery in for conversion into lithium hydroxide. • Up to date, the project includes 3 stages: i) Eastern Hub mine and Concentrator (operation in 2026), ii) Lithium Hydroxide Conversion Facility (operation in 2026) and iii) Western Hub mine and Concentrator (operation in 2029).		

Cobalt		
FORTUNE MINERALS LIMITED	**NICO Project**[4]	**Investment and funding**
• NICO Project is a fully integrated project that encompasses mining and processing ores in the Northwest Territories, with the metal concentrate being transported to a proposed refinery in Alberta for further processing. • The project has received contribution funding from the US Department of Defense, Natural Resources Canada and Alberta Innovates.		
Electra Battery Materials	**Ontario Refinery**[5]	**Investment and funding**
• Located in Ontario, the Ontario Refinery is dedicated cobalt refining plant in North America. The Canadian government has invested CA$5 million in this project to support the processing of critical minerals for the electric vehicle industry. • At full capacity, Electra's Ontario Refinery could produce enough cobalt sulfate to supply more than 1 million electric vehicles per year. • The company is also exploring the possibility of building a second cobalt sulphate refinery in Bécancour, Quebec.		

1. Frontier Lithium (2025) "Path to Production". Accessed 1/2/2025. URL: PATH TO PRODUCTION | Frontier Lithium
2. E3 Lithium (2025). Accessed 1/2/2025. URL: E3 Lithium - About Us
3. Green Technology Metals (2025). Accessed 1/2/2025. URL: https://www.greentm.com.au/integrated-project-strategy/
4. Fortune Minerals Limited (2025). Accessed 1/2/2025. URL: Fortune Minerals Limited - Fortune Minerals Provides an Update of NICO Project Test Work, Rio Tinto Process Collaboration & Feasibility Study
5. Electra Battery Minerals (2025). Accessed 1/2/2025. URL: Electra Battery Materials | Bécancour

Nickel	
CANADA NICKEL COMPANY **Crawford Project[1,2]**	**Acquisition of permits & conducting studies**
• Located in the Timmins-Cochrane area of Ontario, the company has recently secured surface rights for 32,000 acres in one of the world's largest nickel sulfide discoveries to date. • The project involves the construction and operation of an open-pit nickel-cobalt mine and metal mill. • Construction is expected to begin in 2025, with production anticipated to start in 2027. The project is projected to produce over 80,000 tons of nickel annually	
Class 1 Nickel Technologies - Alexo-Dundonald Project[3]	**Exploration**
• Located near Timmins, Ontario, the project includes four nickel sulfide deposits, covering 3,730 hectares, 97 Single Cell Mining Claims, 6 Boundary Cell Mining Claims, and 3 Multi-Cell Mining Claims. • The company is advancing exploration and development activities to expand its resource Medium.	
Class 1 Nickel Technologies - Somanike Project[4]	**Exploration**
• Located in Quebec, the project consists of 148 mining titles (mining rights area) covering 6,882 hectares. The Company's primary objective is to make a major discovery of high-grade magmatic nickel sulphides in an environment of known nickel mineralization with significant opportunity for new discoveries.	

Graphite	
NOUVEAU MONDE GRAPHITE **Matawinie Project[5]**	**In construction**
• The project consists in the development of a mine and concentrator located in Quebec. • Currently, the project is in construction phase. • The project also involves the construction of the Bécancour Battery Material Plant, to produce active anode material for lithium-ion batteries.	
LOMIKO METALS **La Loutre Project[6]**	**Exploration**
• Lomiko has staked approximately 14,255 hectares of mineral claims, 236 claims in total, on six projects in the Laurentian region of Quebec.	
CANADA CARBON **Miller & Asbury Projects[7]**	**Acquisition of permits & conducting studies/ expansion**
• Canada Carbon is advancing a high-purity graphite project in Quebec, which has significant resource potential for supplying high-purity graphite for various high-tech applications. The Asbury Project, also located in Quebec, has a history of graphite production and is being developed to meet the growing demand for high-quality graphite.	
FOCUS GRAPHITE **Lac Knife Project[8]**	**Investment and funding**
• Located in Quebec, the project aims to produce high-quality graphite concentrate. Focus Graphite is working on securing financing and offtake agreements to move the project towards production.	

1. Canada Nickel Company (2025). Accessed 1/2/2025. URL:Projects - Canada Nickel
2. Crux Investor (2024) "Canada Nickel Forges Ahead with Crawford Project: FEED Underway, First Production Targeted for 2027". Accessed 1/2/2025. URL: https://tinyurl.com/yhb4zz9b.
3. Nickel and Technologies (2025). Accessed 1/2/2025. URL: https://class1nickel.com/alexo-dundonald-project/
4. Nickel and Technologies (2025). Accessed 1/2/2025. URL: Somanike Project – Class 1 Nickel
5. Nouveau Monde Graphite (2025). Accessed 1/2/2025. URL: Integrated operations » Nouveau Monde Graphite
6. Lomiko Metals (2025). Accessed 1/2/2025. URL: La Loutre High Grade Flake Graphite Project - Lomiko Metals Inc.
7. Canada Carbon (2025). Accessed 1/2/2025. URL: Canada Carbon Inc. - Miller Graphite Project
8. Focus Graphite (2025). Accessed 1/2/2025. URL Lac Knife - Focus Graphite

SCENARIO ANALYSIS – GDP CORE AND SUPPORTING INDUSTRIES

Table 6: GDP - Core industries scenario analysis 2026-2040

Core industry	2026	2030	2035	2040
Low scenario				
Total	**106.9**	**109.9**	**114.4**	**117.1**
Motor vehicle manufacturing	8.8	9.2	9.6	10.1
Motor vehicle parts manufacturing	30.8	30.7	31.2	32.2
Motor vehicle and parts wholesaler-distributors	16.9	17.8	18.9	20.0
Motor vehicle and parts dealers	27.4	28.8	30.7	32.5
Other electrical equipment and component manufacturing	2.9	3.8	5.5	5.6
Gasoline stations	8.2	7.4	6.6	5.9
Repair and maintenance	12.0	12.2	11.9	10.8
Medium scenario				
Total	**107.5**	**114.2**	**124.1**	**130.3**
Motor vehicle manufacturing	8.9	9.6	10.6	11.6
Motor vehicle parts manufacturing	30.9	31.5	33.1	35.8
Motor vehicle and parts wholesaler-distributors	17.2	19.0	21.5	24.1
Motor vehicle and parts dealers	27.9	30.8	34.8	39.1
Other electrical equipment and component manufacturing	2.9	4.5	8.0	8.3
Gasoline stations	7.6	6.4	5.1	4.1
Repair and maintenance	12.1	12.4	10.9	7.3
High scenario				
Total	**108.3**	**119.0**	**135.1**	**147.4**
Motor vehicle manufacturing	9.0	10.1	11.6	13.4
Motor vehicle parts manufacturing	31.1	32.3	35.3	40.4
Motor vehicle and parts wholesaler-distributors	17.5	20.3	24.4	29.0
Motor vehicle and parts dealers	28.3	32.9	39.5	46.9
Other electrical equipment and component manufacturing	3.0	5.4	11.8	12.3
Gasoline stations	7.3	5.8	4.4	3.3
Repair and maintenance	12.2	12.2	8.1	2.2

- Total core and supporting industry experience growth over time, though at varying rates depending on the specific scenario.
- All sectors grow at a faster rate, with the exception of gasoline stations, repair and maintenance services and oil and gas which exhibit a contrary trend and decline more rapidly as electrification scenarios become more optimistic.

Table 7: GDP - Supporting industries scenario analysis 2026-2040

Supporting industry	2026	2030	2035	2040
Low scenario				
Total	**31.6**	**32.9**	**34.3**	**35.9**
Oil and gas	3.7	3.9	3.9	4.1
Mining and minerals	4.8	5.0	5.1	5.4
Support manufacturing	12.2	12.7	13.4	14.0
Transportation and logistics	2.7	2.9	3.0	3.2
Energy and utilities	2.9	3.1	3.4	3.6
Professional services	2.1	2.1	2.1	2.1
Insurance and financial services	1.9	2.0	2.1	2.2
Rental and leasing services	0.3	0.3	0.3	0.4
Waste management	0.9	0.9	0.9	0.9
Medium scenario				
Total	**32.1**	**34.6**	**37.4**	**40.8**
Oil and gas	3.7	3.9	3.5	3.2
Mining and minerals	4.9	5.3	5.9	6.7
Support manufacturing	12.3	13.4	14.7	16.1
Transportation and logistics	2.9	3.2	3.6	4.0
Energy and utilities	2.9	3.3	3.9	4.6
Professional services	2.1	2.1	2.1	2.1
Insurance and financial services	2.0	2.1	2.4	2.6
Rental and leasing services	0.3	0.3	0.4	0.4
Waste management	0.9	0.9	1.0	1.0
High scenario				
Total	**32.6**	**35.8**	**41.6**	**50.0**
Oil and gas	3.7	3.1	2.5	2.1
Mining and minerals	5.1	5.7	7.1	9.9
Support manufacturing	12.5	14.1	16.2	18.6
Transportation and logistics	3.1	3.6	4.2	4.9
Energy and utilities	2.9	3.6	5.3	7.6
Professional services	2.1	2.1	2.1	2.1
Insurance and financial services	2.0	2.3	2.7	3.1
Rental and leasing services	0.3	0.4	0.4	0.5
Waste management	0.9	1.0	1.0	1.1

Source: EY analysis.

SCENARIO ANALYSIS – EMPLOYMENT CORE AND SUPPORTING INDUSTRIES

Table 8: Employment - core industries scenario analysis 2026-2040

Core industry	2026	2030	2035	2040
Low scenario				
Total	**1,006**	**1,020**	**1,047**	**1,050**
Motor vehicle manufacturing	56	57	58	59
Motor vehicle parts manufacturing	248	245	245	247
Motor vehicle and parts wholesaler-distributors	104	106	109	111
Motor vehicle and parts dealers	294	300	306	313
Other electrical equipment and component manufacturing	31	45	71	71
Gasoline stations	91	83	73	65
Repair and maintenance	182	184	185	183
Medium scenario				
Total	**1,010**	**1,036**	**1,094**	**1,085**
Motor vehicle manufacturing	57	58	60	62
Motor vehicle parts manufacturing	250	247	249	254
Motor vehicle and parts wholesaler-distributors	106	110	115	120
Motor vehicle and parts dealers	298	309	323	338
Other electrical equipment and component manufacturing	32	58	118	119
Gasoline stations	85	71	57	45
Repair and maintenance	183	183	172	146
High scenario				
Total	**1,016**	**1,060**	**1,166**	**1,136**
Motor vehicle manufacturing	57	60	63	66
Motor vehicle parts manufacturing	251	250	253	265
Motor vehicle and parts wholesaler-distributors	107	113	121	129
Motor vehicle and parts dealers	302	319	341	365
Other electrical equipment and component manufacturing	33	75	197	199
Gasoline stations	82	65	48	36
Repair and maintenance	184	178	142	76

- Similar to the trends seen in GDP, core and supporting industry employment experiences growth over time at varying rates depending on the specific scenario.
- In line with the findings from GDP contributions, all sectors grow at a faster rate, with the exception of gasoline stations, repair and maintenance services and oil and gas which exhibit a contrary trend and decline more rapidly as electrification scenarios become more optimistic.

Table 9: Employment - supporting industries scenario analysis 2026-2040

Supporting industry	2026	2030	2035	2040
Low scenario				
Total	**162**	**167**	**174**	**180**
Oil and gas	7	7	7	8
Mining and minerals	25	26	27	28
Support manufacturing	43	43	44	45
Transportation and logistics	36	37	39	41
Energy and utilities	10	11	11	12
Professional services	22	23	25	27
Insurance and financial services	11	11	11	12
Rental and leasing services	2	2	2	2
Waste management	6	6	6	7
Medium Scenario				
Total	**165**	**176**	**190**	**207**
Oil and gas	7	7	7	6
Mining and minerals	26	27	30	34
Support manufacturing	43	44	46	47
Transportation and logistics	37	40	43	47
Energy and utilities	10	11	13	16
Professional services	23	26	29	33
Insurance and financial services	11	11	12	13
Rental and leasing services	2	2	2	3
Waste management	6	7	7	8
High scenario				
Total	**168**	**184**	**212**	**251**
Oil and gas	7	6	5	4
Mining and minerals	26	29	36	49
Support manufacturing	44	45	48	50
Transportation and logistics	38	42	48	55
Energy and utilities	10	12	18	26
Professional services	24	28	34	42
Insurance and financial services	11	12	13	14
Rental and leasing services	2	2	3	3
Waste management	6	7	8	9

Source: EY analysis.

DIRECT, INDIRECT AND INDUCED ECONOMIC IMPACTS

Shown below is a breakdown of estimated and forecasted economic impacts by scenario and by direct, indirect and induced contributions.

Economic impact breakdown for GDP (real 2023 $ billions)
Table 10: GDP – Economic impact breakdown

Scenario	Impact	2026	2030	2035	2040
Low scenario	Direct	$64.2	$65.8	$68.2	$69.7
	Indirect	$44.5	$46.2	$48.5	$50.4
	Induced	$29.9	$30.8	$32.0	$32.8
	Total	**$138.6**	**$142.8**	**$148.7**	**$153.0**
Medium scenario	Direct	$64.6	$68.4	$73.9	$77.8
	Indirect	$44.9	$48.2	$52.6	$56.2
	Induced	$30.2	$32.1	$34.9	$37.0
	Total	**$139.7**	**$148.8**	**$161.5**	**$171.1**
High scenario	Direct	$65.1	$71.2	$81.1	$90.4
	Indirect	$45.3	$50.0	$57.2	$64.4
	Induced	$30.5	$33.6	$38.3	$42.5
	Total	**$140.9**	**$154.7**	**$176.7**	**$197.4**

Economic impact breakdown for employment (thousands)
Table 11: Employment - economic impact breakdown

Scenario	Impact	2026	2030	2035	2040
Low scenario	Direct	612.5	627.8	651.4	663.4
	Indirect	326.4	334.7	348.3	356.3
	Induced	231.3	230.3	230.8	225.8
	Total	1,170.3	1,192.7	1,230.5	1,245.6
Medium scenario	Direct	615.6	639.2	680.7	690.5
	Indirect	330.9	348.2	379.9	398.6
	Induced	234.1	239.0	251.2	249.9
	Total	1,180.7	1,226.3	1,311.8	1,339.0
High scenario	Direct	620.1	655.5	727.4	736.2
	Indirect	335.4	363.7	426.1	465.8
	Induced	237.0	249.2	281.2	287.3
	Total	1,192.5	1,268.4	1,434.7	1,489.4

Source: EY analysis.