ispiciwin

Industry Insights Program

SHAPING THE FUTURE OF CLEAN TRANSPORTATION: WHAT MATTERS MOST TO INDUSTRY

Survey Respondent Guide

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Welcome to the Ispiciwin Project's Industry Insights Program (IIP)!

This survey guide is designed to function as a reference document as you take part in the IIP's inaugural industry survey campaign *Shaping the Future of Clean Transportation: What Matters Most to Industry*. Along with the presentation hosted on the IIP's landing page, the survey guide will introduce you to the Ispiciwin Project, provide you with information about zero-emission vehicle (ZEV) adoption across public and industry in Canada, and detail important steps to help you navigate the campaign survey.

As a member of Canadian industry, we recognize that your time is valuable, and have carefully tailored the IIP to create a seamless experience that maximizes the value of your input while minimizing the time and effort required to participate meaningfully. Industry plays a critical role in shaping Canada's adoption of more sustainable transportation solutions and on behalf of The Pîsim Collective, we thank you for your participation in the IIP.

INDUSTRY INSIGHTS PROGRAM

INTRODUCTION

The Ispiciwin Project (ᐃᐢᐱᒋᐏᐣ, the Project) is an educational outreach project that explores the way in which we travel in our modern age to generate awareness around the progressive transition our society is making towards zero-emission vehicles (ZEV) and clean fuels. Ispiciwin (ᐃᐢᐱᒋᐏᐣ), in nêhiyawêwin, means to travel, and this Project focuses on the journey we are taking as a society towards more sustainable and affordable transportation solutions. The Ispiciwin Project is being proudly delivered by The Pîsim Collective.[1]

The Industry Insights Program (IIP) is an industry-focussed node of the Ispiciwin Project, geared towards educating and exploring Canadian Industry's role in ZEV development and adoption. *Shaping the Future of Clean Transportation: What Matters Most to Industry* is the Project's first industry outreach campaign that aims to deepen our understanding of ZEV adoption in industry across the country. The main objectives of this survey campaign are to explore the state of current ZEV adoption across industries and regions in Canada, the importance of ZEV attributes across industries and regions in Canada, and how ZEV performance is perceived against conventional options (e.g., internal combustion engine vehicles, ICE) in order to encourage adoption.

The results of this survey campaign will be published in an Industry Insights Report that will be featured on the Project's main digital hub (www.ispiciwin.ca) and through associated educational channels.

All data collected through the IIP will be treated in strict confidence. No personally identifiable information will be disclosed or included in any published reports or shared results.

1 The Pîsim Collective is a majority Indigenous-owned Canadian company dedicated to delivering exceptional services and projects in the realms of environmental sustainability, education, and culture. For more information, please visit www.ispiciwin.ca.

UNDERSTANDING ZEVs

ZEVs TODAY

A zero-emission vehicle (ZEV) is a vehicle that either produces no tailpipe emissions or has the potential to produce no emissions. Examples of ZEVs include battery-electric vehicles (BEVs), plug-in hybrid electric vehicles (PHEVs), and hydrogen fuel cell vehicles (FCVs). While some ZEVs, like PHEVs, may include a conventional internal combustion engine, they must also be capable of operating without them.[1]

- As ZEV technology improves, and supporting infrastructure expands, ZEV adoption grows across Canada. ZEVs represented 14% of new vehicle registrations in 2024.[2]
- Model availability, a historical problem with ZEVs, is improving with over 150 models now available for purchase across the country.[3]
- The most common advantage ZEV owners cite is the lower operational costs compared to similar gas alternatives and fewer maintenance problems. These result in about a 40% reduction in overall ownership cost compared to a gas alternative.[4]

Common roadblocks to ZEV adoption are generally price, range, and charging convenience, all of which are rapidly improving. For example, global ZEV prices fell 37% from 2010 to 2019, demonstrating that technological innovation in the sector is making adoption more affordable for consumers.[5] Similarly, the average ZEV range (meaning the distance a ZEV can travel on a single charge) has tripled since 2012, and the number of public charging stations in Canada has also tripled since 2018.[6] [7] Other ZEV attributes, such as environmental impact, payload, and towing capacity are also features gaining ground thanks to sector innovations.

1 Natural Resources Canada, Types of Zero Emission Vehicles, 2025.
2 Statistics Canada, In Canada 1 in 7 Vehicles Sold In Canada Were Zero Emission Vehicles, 2025.
3 Canadian Automobile Association, Availability of EVs in Canada, 2025.
4 Government of Canada, Benefits of Driving a ZEV, 2025.
5 International Energy Agency, Average Price and Range of BEVs, 2020.
6 Ibid.
7 440 Megatonnes, EV Infrastructure is Spreading Rapidly Across Canada, 2023.

ZEV ADOPTION IN CANADA

ZEVs are increasing in popularity across Canada for a variety of reasons. Provincial and federal incentive programs have improved affordability, new technology has enabled better performance and cost-effectiveness, and charging infrastructure expansion has increased the convenience of owning and utilizing ZEVs to meet personal and professional needs. ZEVs are also an attractive option for those trying to reduce their carbon footprint.

- The federal government has set a goal for 100% new light duty vehicle registrations to be ZEVs by 2035.[8]
- ZEV adoption between provinces varies. In 2024 half of the new ZEVs purchased in Canada were in Quebec. Ontario and British Columbia are also significant leaders in ZEV adoption.[9]
- The prairie provinces have had a slower rate of ZEV adoption - in Manitoba 5% of new vehicles are ZEVs, 4% in Alberta and 3% in Saskatchewan.[10]

ZEVs AND INDUSTRY

There is a wide range of industry options for ZEVs in Canada, from passenger vehicles to heavy duty specialty vehicles. These vehicles differ in range, price, and charging time among other performance attributes. When choosing between these types of vehicles, a business owner must consider the performance tradeoffs between them. A smaller ZEV might be more economical and charge faster, but may have a shorter range and reduced payload capacity. Alternatively, a larger ZEV may have a longer range and greater payload capacity, however, it may be more expensive and take longer to charge.

The table on the next page presents the performance of different attributes across sizes of ZEVs which highlights the tradeoffs to consider when deciding what type of vehicle to purchase.

8 Transport Canada, Canada's Zero Emission Sales Target, 2024.
9 Statistics Canada, In Canada 1 in 7 Vehicles Sold In Canada Were Zero Emission Vehicles, 2025.
10 Ibid

ZEV RANGE, PRICE AND CHARGING TIME BY VEHICLE TYPE

VEHICLE TYPE	PRICE	RANGE	LEVEL 2	LEVEL 3
LIGHT PASSENGER VEHICLES	$40,000 - $100,000+	200-800km	6-12 hours	1-2 hours
LIGHT-MEDIUM DUTY VANS	$60,000 - $200,000	400-700km	8-12 hours	1-3 hours
LIGHT DUTY TRUCKS	$60,000 - $140,000	400-700km	8-12 hours	1-3 hours
MEDIUM – HEAVY DUTY TRUCKS	$150,000 - $600,000	200-800km	12+ hours	2-6 hours

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BENEFITS OF ZEVs: ESSENTIAL INSIGHTS

As the transportation sector continues to evolve, ZEVs are proving to be more than just an environmentally conscious choice—they also offer significant economic advantages for individual drivers and fleets alike. From substantial savings on fuel and maintenance costs to a meaningful reduction in greenhouse gas (GHG) emissions, the benefits of ZEVs compared to internal combustion engine (ICE) vehicles are both practical and far-reaching. The following key insights highlight how ZEV adoption can lead to lower operational expenses, improved vehicle uptime, and a smaller carbon footprint over the lifespan of a vehicle.

Cost Reductions

Fuel savings: Electricity for a passenger ZEV is generally 60-70% of the cost per km driven in

1 Canada Drive, Cheapest Electric Cars in Canada, 2025.; Lucid Air, Grand Touring.
2 Clean Energy Canada, Zero Emission Medium and Heavy Duty Vehicles, 2024.
3 Ford, 2025 F150 Lightning.; Tesla, Cyber Truck, 2025.; GMC, Sierra EV. and more.
4 Clean Energy Canada, Zero Emission Medium and Heavy Duty Vehicles, 2024.

a gas vehicle.[5]

For example, the operational cost of an electric F150 is 0.39 cents per km, whereas the gas fueled F150 is 59 cents per km.[6] This means the electric driver saves $20 every 100km driven.[7]

The average driver travels 15,000 km a year which is equal to $3,000 saved each in the electric F150.[8]

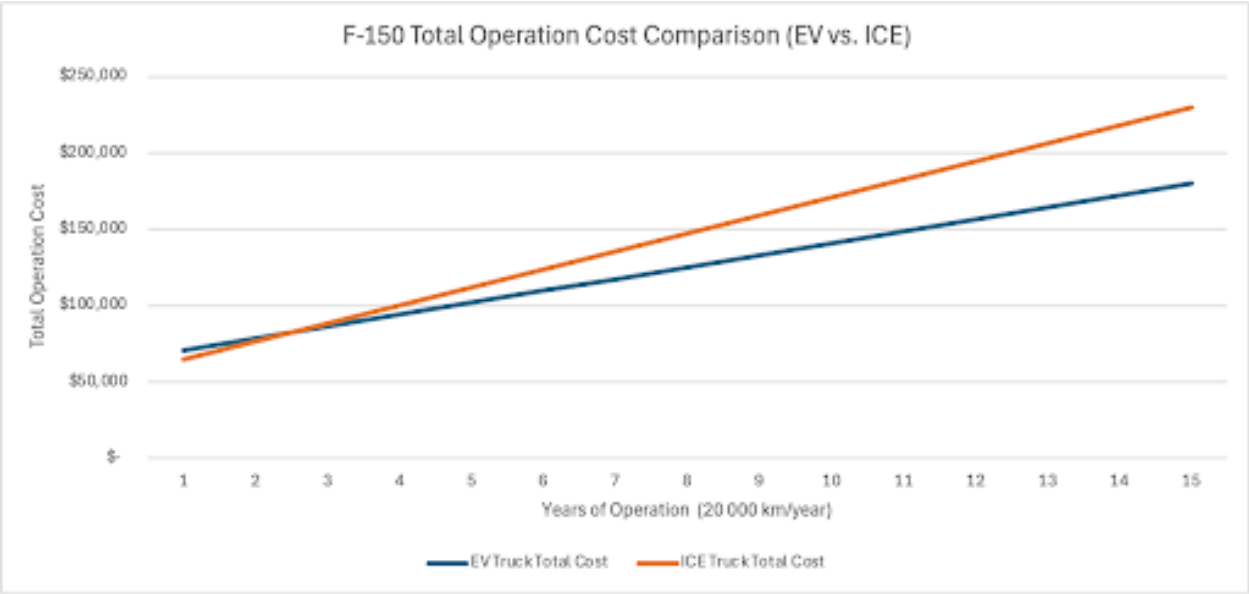
Maintenance: The average EV owner will save 40-50% in maintenance costs over a vehicle's lifetime compared to a gas alternative. The EVs reduced maintenance requirements also increases a vehicle's productivity wasting less time in shops.[9]

GHG Reductions: EV owners will reduce their personal carbon footprint by 60% over a vehicle's lifetime.[10]

INDUSTRY SPOTLIGHT

Platinum Pro Claim is a fire and flood damage repair company based in British Columbia. They operate a medium fleet of vehicles that moves employees and materials both to and from a worksite. They use ZEVs from passenger vehicles, vans and even a class 6 box truck which generally drive about 60km a day.

- Since implementing ZEVs in 2016 they have saved over $300,000 in fuel and improved vehicle reliability.[11]



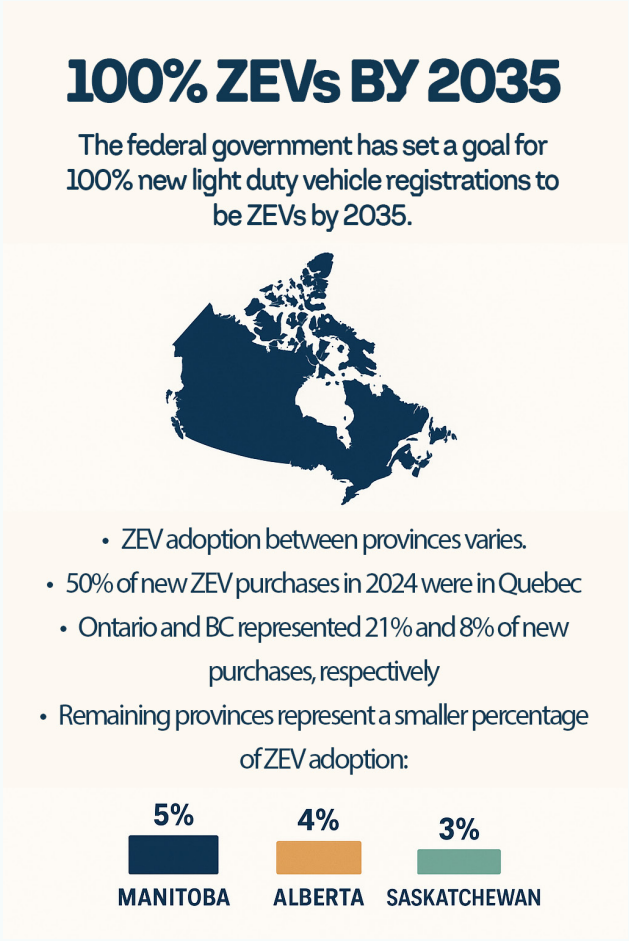
5 Clean Energy Canada, The Scenic Route, 2024.
6 Clean Energy Canada, The Scenic Route, 2024.
7 20$/100km = (0.59*100) - (0.39*100)
8 $3000 = (15 0000km / 100km) * $20/ 100
9 Government of Canada, Benefits of Driving ZEVs, 2025.
10 Canadian Automobile Association, Cost of Owning an Electric Vehicle, 2025.
11 Clear Energy Canada, Platinum Pro-Claim Restoration, 2024.

Labatt Brewing Company, the Canadian based international beer brewing company, added 10 heavy-duty electric trucks that travel approximately 100km per day to deliver materials for production and deliver products to retailers.

- Realize a 70% decrease in fuel costs.[12]

Fize Electric is a small charging station installer in Quebec. They own 9 ZEVs including a light duty truck that travels about 25,000km a year.

- Traveling this distance using a gas Ford transit costs about $5800 worth of fuel depending on gas mileage and prices. An E-Transit can travel this distance with about $1,300 depending on efficiency and electricity prices. This means each vehicle saves $4,100 in fuel each year. With 9 electric vehicles Fize electric saves over $36,000 a year in fuel costs.[13][14]



12 Volvo, Labatt Breweries Places Single Largest Order of Volvo VNR Electric Trucks in Canada, 2024.
13 Electric Autonomy Canada, "Let it snow" says one EV fleet operator, 2024.
14 Transit gas costs = 3750*1.55= 5812
Quebec gas price: Kalibrate, Quebec Breakdown, 2025.
Quebec Electricity Price: Hydro Quebec, Business Customer Rates. 2025
40500=gas cost- electricity cost.
Gas cost = $5812 = Litres of gas used per year * price of gas = (15L/100KM)*25000km= 3750L per year.
Price is 1.55$/L.
Electricity cost: = kwh per year * price per kwh = (40kwh/100km)*25000km = 11000kwh. price = 0.11933$/kwh so Electricity cost = 1313.
Savings for 1 vehicle = 5812-1313= 4099.
Savings for 9 vehicles = 4100*9 = 36900

SHAPING THE FUTURE OF CLEAN TRANSPORTATION: **WHAT MATTERS MOST TO INDUSTRY**

The main objectives of this survey outreach campaign are to explore:

- the state of current ZEV adoption across industries and regions in Canada;
- the importance of ZEV attributes across industries and regions in Canada; and
- how ZEV attribute performance is perceived against conventional options (e.g., internal combustion engine vehicles, ICE) as a factor for adoption.

Not only will this information provide unique insights into regional variances and industry perspectives on the most important drivers of ZEV adoption as it relates to vehicle attributes, it will also shed light on how these attributes must perform against conventional ICE options for these emerging technologies to encourage greater adoption across the vehicle market.

The survey is expected to take approximately 5-7 minutes to complete, and can be accessed through the IIP's landing page.

SURVEY PROCESS

The survey begins with generic questions to gain an understanding around respondents' region of operation, industry, current understanding of ZEVs, and status of adoption. These questions are meant to gather a regional and industry-specific perspective on ZEV adoption as a basis for further insights.

Following, respondents will be asked to explore the way in which they consider and value attributes that are associated with ZEVs. These attributes can range from features such as price, range, reliability, environmental performance and more. In addition to ranking these attributes in order of importance, respondents will be asked to consider these attributes against the performance of conventional ICE vehicles, and how ZEV attributes must perform to encourage adoption. Additional questions around attributes will explore which attributes respondents would compromise, if any, for optimal performance of their most value attribute.

The attributes presented in the survey are generally defined as follows:

- **Price:** The full initial price of a ZEV. Defined as the total cost of purchasing the vehicle outright.
- **Range:** The distance a ZEV can travel on a full battery. This is the total distance that a ZEV with a full battery can travel before needing to be charged again.
- **Charging Time:** The time it takes to fully charge a ZEV, not specific to a ZEV class or charging infrastructure.
- **Environmental Impact:** The lifetime emissions of a ZEV. This includes the environmental impact of ZEV lifecycle implications such as raw material extraction, industrial processes, electrical operation emissions, and disposal.
- **Load Capacity:** The maximum weight a vehicle can tow or carry in its bed.
- **"Other":** There may be other performance attributes you find important that aren't listed. This can be something like the effects of cold weather on range, safety ratings or even something as small as particular software or hitch.

QUESTIONS AND FEEDBACK

The Pîsim Collective greatly appreciates your feedback and partnership in the Ispiciwin Industry Insights Program. Your feedback and insights are critical to the success of the Ispiciwin Project, and the future of Canadian sustainable transportation.

If you have any questions, feedback, or would like to connect to discuss further outreach opportunities, please contact our team at **admin@pisimcollective.ca.**