



**Priority Policy recommendations for the Advancement of  
Transportation Electrification in Canada**

To the political parties represented at the House of Commons

**By Electric Mobility Canada – Mobilité Électrique Canada**

**August 5, 2021**

To all the political parties represented at the House of Commons,

The demand for electric mobility continues to rise in Canada and around the world as a growing number of consumers and businesses are switching to zero emission vehicles\* (ZEVs) for climate, air pollution, health and economic reasons. International and domestic investments into Canada's ZEV sector is also growing rapidly, creating high quality and high paying sustainable jobs across the country. In fact, Canada is very well positioned to be a global leader in electric mobility policy and technology.

As the leading voice of electric mobility in Canada, Electric Mobility Canada (EMC) presents the following recommendations to help accelerate Canada's growing ZEV economy. EMC's committee of leading policy experts, with representation from all parts of the electrified transportation sector, recommend these priority policies to help achieve the electrification of Canada's transportation sector and major growth in Canada's ZEV supply chain.

Best regards,



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### **About Electric Mobility Canada - Mobilité Électrique Canada**

Electric Mobility Canada is a national membership-based not-for-profit organization dedicated exclusively to the advancement of electric mobility as an exciting and promising opportunity to fight climate change and air pollution while stimulating the Canadian economy. EMC's mission is to strategically accelerate the transition to electric mobility across Canada.

Established in 2006, EMC is one the very first electric mobility associations in the world. It represents multiples organizations working to electrify transportation across Canada. Members representing more than 70 billion dollars a year in revenue include vehicle manufacturers, utilities, charging infrastructure manufacturers, charging suppliers and networks, technology companies, mining companies, fleet managers, unions, cities, universities, dealer associations, NGOs and EV owners associations. They are located in every region of Canada, from BC to Atlantic Canada and are involved in EV related industries, from light-, to medium- to heavy-duty and from off-road to marine to micro-mobility, and from infrastructure to research.

\*: The term *Zero Emission Vehicle* refers to a 100% electric, plug-in hybrid or hydrogen vehicle

## Introduction

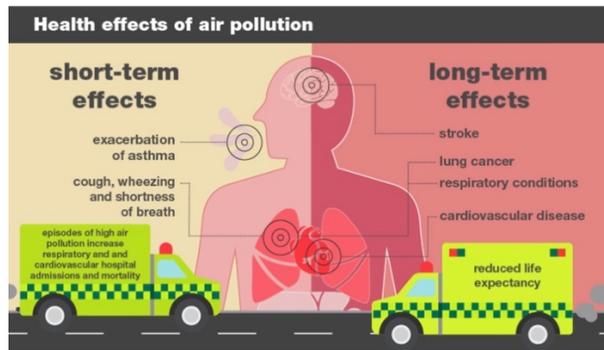
There are 3 fundamental reasons why Canada should support the development of the transportation electrification sector:

Air pollution & health, Climate change and the Economy.

### Air pollution & health

According to the 2021 report published by Health Canada<sup>1</sup> titled “Health Impacts of Air Pollution in Canada: Estimates of morbidity and premature mortality outcomes,” Health Canada estimates that:

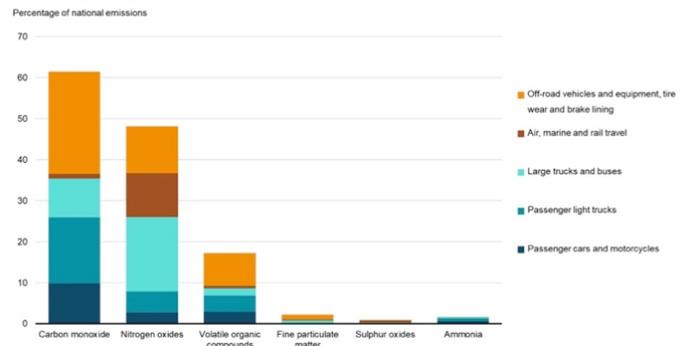
- 15,300 deaths per year can be attributed to air pollution in Canada, 8 times the death toll from motor vehicle accidents.
- \$120 billion a year is the total annual economic cost of health outcomes associated with air pollution



According to a 2020 Environment Canada report<sup>2</sup>, a significant part of that air pollution comes from transportation. In 2019, the sector accounted for:

- 37% of Canada’s Carbon Monoxide (CO) emissions,
- 37% of Canada’s Nitrogen Oxides (NOx) emissions
- 30% of Canada’s Black Carbon emissions

Figure 24. Contribution of transportation, off-road vehicles and mobile equipment to total air pollutant emissions by transportation mode, Canada, 2019



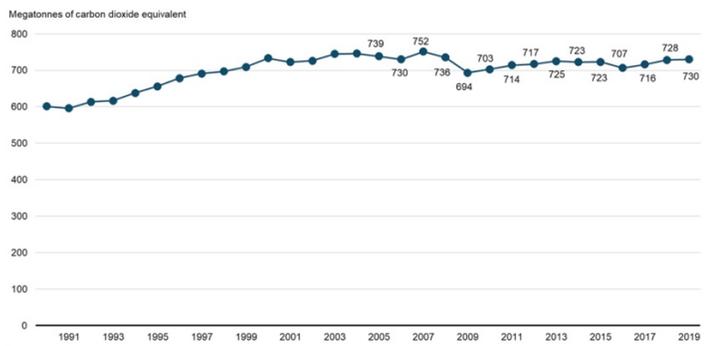
Passenger cars and light trucks are an important source of pollutants, especially in urban centers. In 2019, passenger cars, light trucks and motorcycles represented 26% of Canada’s CO, 8% of NOx and 7% of VOCs emissions.

## Climate change

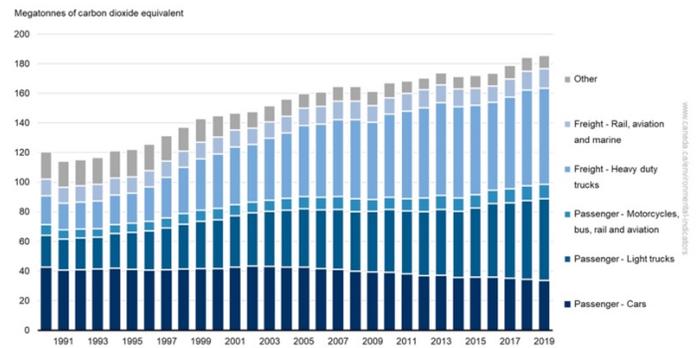
Since April 2021, Canada has a new more ambitious GHG emission reduction target for 2030: -40% to -45% compared to 2005 level. According to a 2021 Environment Canada report<sup>3</sup>, in the 14 years between 2005 and 2019, GHG emissions in Canada decreased by only 1%. Therefore, Canada needs to lower its GHG emissions by another 39% to 44% in the remaining 9 years until 2030.

Between 2005 and 2019, GHG emissions from Light Duty passenger vehicles increased by 8%.

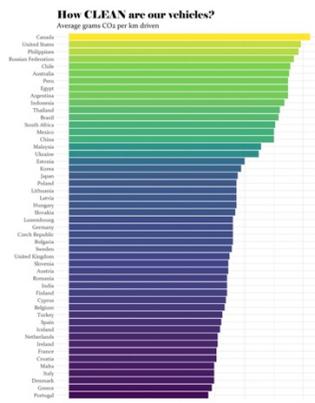
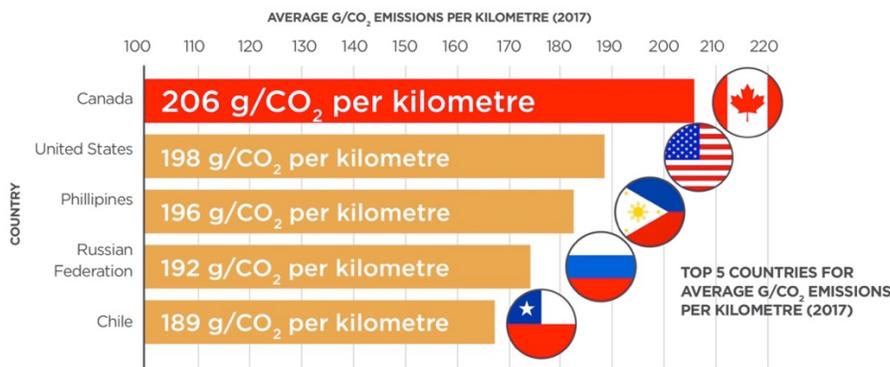
Greenhouse gas emissions, Canada, 1990 to 2019



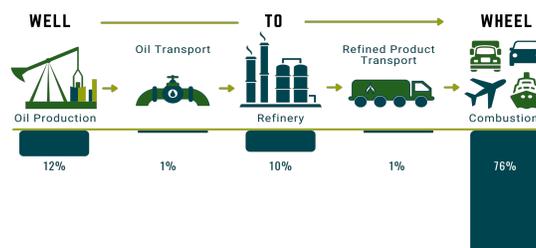
Transport sector greenhouse gas emissions, Canada, 1990 to 2019



According to 2019 report from the International Energy Agency<sup>4</sup>, Canada's Light Duty passenger fleet is the #1 in the world for GHG emissions per kilometer driven. They are also the largest and second heaviest in the world.

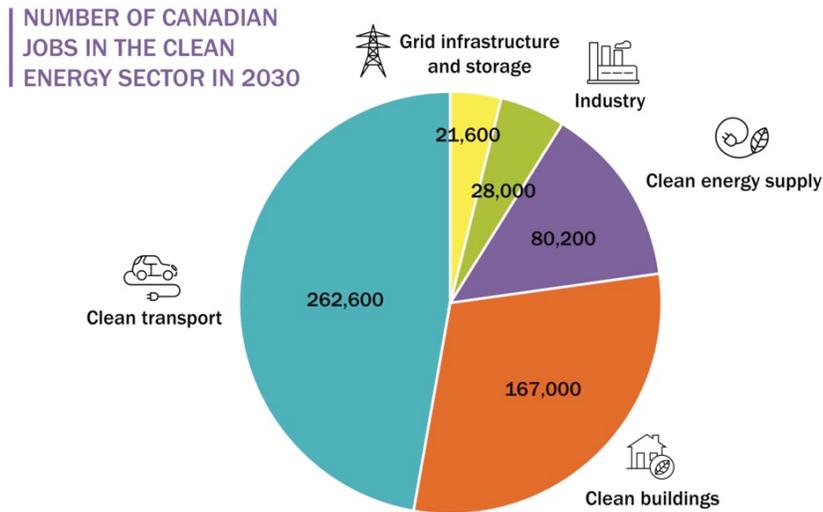


25% of Canada's Greenhouse Gas emissions comes from transportation. But when we take into account upstream emissions to produce the fuel necessary to propel different types of vehicles, we must add at least 24% to the tailpipe GHG emissions from the transportation sector. This means that total GHG emissions from transportation (tailpipe emissions + upstream emissions) represent at least 31% of Canada's total GHG emissions making transportation the #1 source of GHG emissions in Canada.



**The economy**

According to 2019 report from Clean Energy Canada<sup>5</sup>, there will be approximately 560,000 jobs in the clean energy sector by 2030, with almost 50% in clean transport.



According to a 2020 report by Electric Mobility Canada<sup>6</sup>, if Canada adopts a strong electric mobility strategy inspired by those of California, BC or Québec, we can anticipate at least \$200 billion in sales revenue between now and 2030 in the EV sector.

These jobs will be created in mining, research and development, assembly, sales, marketing, ingeneering, chemistry, construction, electricity, administration, environment, electricity production & distribution and they will be located from BC to Atlantic Canada.



***Accelerating the development of the electrification of transport will end up saving Canadians thousands of lives and billions of dollars while creating hundreds of thousands of high paying high quality sustainable jobs across the country.***

## Electric Mobility Canada recommendations

### Policy & Regulation for ZEV supply

- 1- First and foremost, we recommend that the Government of Canada develops and implements **a comprehensive Canadian ZEV strategy** that includes all aspects of the ZEV ecosystem, from mining to mobility, to establish Canada as a leader in electric mobility. In fact, an emerging organization – *Accelerate, Canada's ZEV Supply Chain Alliance* – is growing out of EMC to support the development of the Canadian ZEV industrial sector. Canada's ZEV strategy development should be done in collaboration with its US allies as agreed upon in the *Roadmap for a renewed U.S.-Canada partnership*.

This strategy should be developed with coordination across government departments through executive oversight by establishing a Privy Council Office for Transportation Electrification reporting to the Prime Minister to achieve Canada's climate and electrification targets.

- 2- Set clear, binding and legislated requirements (such as ZEV mandates) for all categories of vehicles to support increasing consumer choice, decrease delivery wait times, spur continued innovation, and support economies of scale:
  - a) 100% of Light Duty passenger vehicles sold by 2030 be ZEVs and that binding interim targets and mandates be established between now and 2030.
  - b) 100% of Medium- and Heavy-Duty vehicles sold by 2040 be ZEVs and that binding interim targets and mandates be established between now and 2040.
  - c) For off road vehicles, align with the strongest regulation and emission standards in North America.

### Passenger ZEV Demand Measures

- 3- Establish a financially neutral *feebate* system to make polluting passenger vehicles pay for ZEV rebates, so the rebate program can finance itself. For vehicle categories that do not have a ZEV option (e.g. pickup trucks and SUVs needed for work or larger families), feebate exemptions should be considered until ZEV models come to market.
- 4- Renew and expand passenger ZEV purchase incentive program eligibility for individual consumers, businesses and fleets, by re-funding the iZEV incentive and expanding eligibility to address high-polluting, high-demand, vehicle segments like pickup trucks and SUVs.
- 5- Incentivize lower- and modest- income Canadians to transition to ZEVs by offering a dedicated rebate for a new or used ZEV via a program like the California Income Eligibility program.
- 6- Offer a "Green cash for clunkers" / "Green SCRAP-IT" style incentive: A trade-in program for retired fossil-powered vehicles can be a useful stimulus tool to restore consumer vehicle purchasing. We believe that any such program must be focused on Canada's long-term climate objectives, meaning funds should be only available for the purchase of new or used ZEVs, transit passes or active transportation tools (e.g. bikes or e-bikes). This program should be stackable with other incentive programs.
- 7- Incentivize ZEV conversions: Since it will take some time before Canadians can have access to new EVs in all categories, we recommend, for availability as well as environmental and economic reasons, that the government offers rebates for the purchase for any Light, Medium and Heavy-Duty vehicle converted from a gas or diesel to a ZEV.
- 8- Implement a G/HST exemption for both new and used light duty ZEVs to support equitable access to the benefits of driving electric.
- 9- Provide a four-year federal guarantee on ZEV financing contracts for ZEV loans via the Canada Infrastructure Bank to ensure that all Canadians have access to ZEV financing since their initial purchase price is higher than that of comparable gas vehicles.

### **Charging Infrastructure Measures**

- 10- Establish a greater focus on charging infrastructure investment needs by:
- a) Setting and funding higher one and five-year targets for EV charging station deployment sufficient to meet Canada's ZEVS sales targets.
  - b) Setting a goal to make 1-million existing apartment and condominium/strata parking stalls EV-ready by 2030 and establishing new funding programs to achieve this goal.
  - c) Focusing dedicated charging investments: (i) on cities' downtown areas where millions of Canadians cannot charge their ZEVs at home, (ii) rural, remote and Northern communities where charging deployment may be less development.
  - d) Focusing highway side charging investments on (i) closing the gaps in Canada's charging infrastructure along long-distance travel corridors, and on (ii) increasing density of charging in high-travel areas where charging demand is growing fastest.
- 11- Incorporate EV-ready requirements into the Model National Building Code and Energy Code for Buildings and/or support EV-ready municipal zoning bylaws.
- 12- Put underutilized government lands to work by facilitating multi-service provider "charging hubs," particularly in high density and high-cost real estate markets.
- 13- Accelerate timelines for Measurement Canada to enable energy-based billing for charging services. In doing so, the agency should find a way to accommodate the \$100M+ in private and government investment in public charging already made in Canada to date.
- 14- Include EV charger installation or EV-readiness as part of energy efficiency programs to help Canadians who live in older houses retrofit to the electric infrastructure requirements for EV charging.

### **Medium, Heavy and Off-road Demand Measures**

- 15- Incentivize consumer and fleet acquisitions of ZEVs in the medium and heavy-duty vehicle classes (e.g. transit buses, school buses and commercial trucks) and off-road vehicles to meet or surpass binding vehicle sales requirements with trade-in or scrappage programs for fossil fuel-powered vehicles in exchange for a ZEV (ideally one that is stackable with other financial incentives) and rebates (that have a clear pre-approval process). This will support Canada's ZEV manufacturing, electrical infrastructure and EV charging industry and vehicle dealerships.
- 16- Establish, a time-limited, federally funded five-year utility connection "rebate" program to support the deployment of large-scale EV charging installations, particularly in the medium and heavy-duty segments.
- 17- Champion Canada's mining advantage by supporting electrification at mining locations across the country and promoting sustainable mining development and operations, particularly in connection with those metals and minerals necessary for the ZEV supply chain in Canada and in other jurisdictions.
- 18- Pre-order or bulk buy heavy-duty electric transit buses, school buses and waste hauling vehicles for public sector agencies.

## **Ramping Up Canadian-based ZEV Manufacturing & Green Jobs Measures**

- 19- Increase economies of scale in the ZEV supply chain to accelerate the reduction in battery prices and ZEV technologies by leveraging R&D, Strategic Innovation Fund, resource exploration and other economic development funding.
- 20- Expand funding for ZEV education targeted at Canadian citizens, businesses, fleet owners, dealers, elected officials and governments to increase awareness of the reality and advantages of ZEVs and ZEV infrastructure.
- 21- Fund ZEV education, training and retraining programs to help current and future electric mobility sector workers and companies make the transition as efficiently and seamlessly as possible.
- 22- Significantly increase electrification of government and Crown corporation fleets with clear binding targets, education and training and adequate financial support vehicle for purchases and the associated charging infrastructure. We encourage the federal government, its agencies and other levels of government to update their whole-of-government procurement approach to focus on purchasing near-zero and zero-emission public vehicles and associated infrastructure and services.
- 23- Use the federal government's convening power to facilitate a pan-Canadian harmonized circular economy strategy, in consultation with EV drivers, owners and manufacturers. Foster the development of EV battery management regulatory frameworks that take into account the unique characteristics of EV batteries such as their size, weight and value, and that encourage innovations in battery lifespan, reuse of batteries for other purposes and job creation in the recycling sector in Canada.

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For more detail on some of these proposals see our February 2021 pre-budget submission to Finance Canada:

<https://emc-mec.ca/wp-content/uploads/Feb-19-2021-Pre-budget-recommendations-from-EMC.pdf>

EMC's submission to the Standing Committee on Environment and Sustainable Development, December 2020, can be found here:

<https://emc-mec.ca/wp-content/uploads/EMC-The-case-for-the-EV-industry-and-a-ZEV-standard-DEC-6-2020.pdf>

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### **Sources:**

- 1: <https://www.canada.ca/content/dam/hc-sc/documents/services/publications/healthy-living/2021-health-effects-indoor-air-pollution/hia-report-eng.pdf>
- 2: <https://www.canada.ca/content/dam/eccc/documents/pdf/cesindicators/air-pollutant-emissions/2021/air-pollutant-emissions-en.pdf>
- 3: <https://www.canada.ca/content/dam/eccc/documents/pdf/cesindicators/ghg-emissions/2021/greenhouse-gas-emissions-en.pdf>
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- 5: [https://cleanenergycanada.org/wp-content/uploads/2019/10/Report\\_TER2019\\_CleanJobsFuture\\_20191002\\_FINAL-FOR-WEB.pdf](https://cleanenergycanada.org/wp-content/uploads/2019/10/Report_TER2019_CleanJobsFuture_20191002_FINAL-FOR-WEB.pdf)
- 6: <https://emc-mec.ca/wp-content/uploads/EMC-The-case-for-the-EV-industry-and-a-ZEV-standard-DEC-6-2020.pdf>