Priority Policies for the Advancement of Transportation Electrification in Canada

2023 pre-Budget Recommendations

(short version)

By Electric Mobility Canada – Mobilité Électrique Canada

October 8, 2022

Policy & Regulation for Light Duty Zero Emission Vehicles

1- **Federal rebate for electric cars and light trucks:** Until EVs reach price parity in sticker price, incentives are needed to level the playing field for consumers faced by a choice between electric and gas cars.

2- **Used EV rebate:** The government should make purchase incentives available for used / pre-owned EVs.

3- **Federal ZEV sales mandate:** Adopt clear targets so 20% of LDV sales be ZEVs by 2026; 60% by 2030 and 100% by 2035. For details regarding how to adopt a federal ZEV mandate, see EMC & CEC 2022 document titled *How Canada can develop a truly effective Zero Emission Sales Mandate*.[9]

4- **Federal GHG emission standards:** Canada must align its auto tailpipe emission standards with the toughest standards in North America, in addition to establishing a national ZEV mandate.

5- **Feebate:** Establish a financially neutral *feebate* system to make polluting passenger vehicles pay for ZEV rebates, so the rebate programs can finance themselves. Feebate exemptions could be considered for special use and large families.

6- **PHEVs:** Progressively remove the federal rebate for PHEVs with less than 50 km of electric range *or* make the rebates proportional to their official range: $2,000 from 40 to 59km, $3,000 from 60 to 79km, $4,000 from 80km or more.

7- **Low income rebate:** We recommend an incentive for lower- and modest- income Canadian individuals and families to transition to ZEVs by offering a dedicated $2000 rebate for a new or used ZEV via a program like the California Income Eligibility program.

8- **Green cash for clunkers**: Develop a program 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.

9- **Electric taxis, car sharing and carpooling incentive:** Offer a $2000 rebate for taxis, car sharing and carpooling businesses and individuals who want to transition to electric vehicles ***and remove the 10 vehicle cap on fleet rebates***. This program should be stackable.

10- **Support Consumer EV education**: Many Canadians want to go electric but have unanswered questions or don't know where to start. Work with leading and trusted organizations like Plug'n Drive, EV Society, Plug in BC, AVÉQ, EVAAC and EAC and others to establish a suite of programs to educate and support consumers in making the transition to electric vehicles.

Charging Infrastructure Measures for Light-Duty Vehicles

We recommend that the federal government:

11- **LDV Infrastructure Targets:** Sets up clear targets in accordance with the 2022 NRCan report[10]:

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Table ES- 2: Estimated total charging infrastructure needs and EV-to-charger ratios for Canada.

		2025	2030	2035	2040	2045	2050
Scenario 1: High access to home charging	Public DCFC	4,300	13,800	32,000	50,200	62,700	69,000
	Public L2	48,000	181,000	410,000	593,000	673,000	658,000
	Total Public Ports	52,000	195,000	442,000	643,000	736,000	727,000
	Total MURB Ports	515,000	1,302,000	2,189,000	3,191,000	4,326,000	5,610,000
	EVs/Level 2	21	26	30	35	40	47
	BEVs/DCFC	180	250	300	330	350	380
	EVs/Public Port	20	24	28	32	37	43
	EVs/Total Ports	2	3	5	5	5	5
Scenario 2: Low access to home charging	Total DCFC	4,300	14,100	33,700	55,100	72,500	84,900
	Total L2	49,000	186,000	436,000	659,000	791,000	830,000
	Total Ports	53,000	201,000	469,000	714,000	864,000	914,000
	Total MURB Ports	46,000	152,000	499,000	886,000	1,318,000	1,799,000
	EVs/Level 2	21	25	28	31	34	37
	BEVs/DCFC	170	240	280	300	300	310
	EVs/Public Port	20	23	26	29	31	34
	EVs/Total Ports	11	14	13	13	13	12

12- **Infrastructure Funding:** provide sufficient funding so Canada reaches the following targets:

- 53,000 public ports by 2025: 5,000 DCFC & 48,000 L2
- 200,000 public ports by 2030: 15,000 DCFC & 185,000 L2

13- **Condo and apartment Infrastructure targets:** Sets a goal to make 1-million existing apartment and condominium/strata parking stalls EV-ready by 2030 and establish new funding programs to achieve this target.

Budget for 100,000 chargers in 2023-2024

14- **Incorporate EV-ready requirements** into the Model National Building Code and Energy Code for Buildings and/or support EV-ready municipal zoning bylaws.

15- Put underutilized government lands to work by facilitating multi-service provider "charging hubs," particularly in high density and high-cost real estate markets.

16- Include EV charger installation or EV-readiness as part of energy efficiency programs to help Canadians who live in older houses (40 years and older) retrofit to the electric infrastructure requirements for EV charging.

Budget for 20,000 home retrofits in 2023-2024

Policy & Regulation for Medium & Heavy-Duty Zero Emission Vehicles

17- **MHDV Infrastructure**[11]: While the federal government has recently launched the new iMHZEV Program to support the purchase of electric MHDVs, there is no program dedicated to MHDV charging Infrastructure. We recommend that the federal government established clear infrastructure deployment targets and a total funding envelope that is scaled to what the California Energy Commission has invested in MHDV charging (approximately USD $390m) through its Clean Transportation Program for 2021–2023.

Budget for MHDV charging infrastructure in 2023-2024: In line with California Energy Commission

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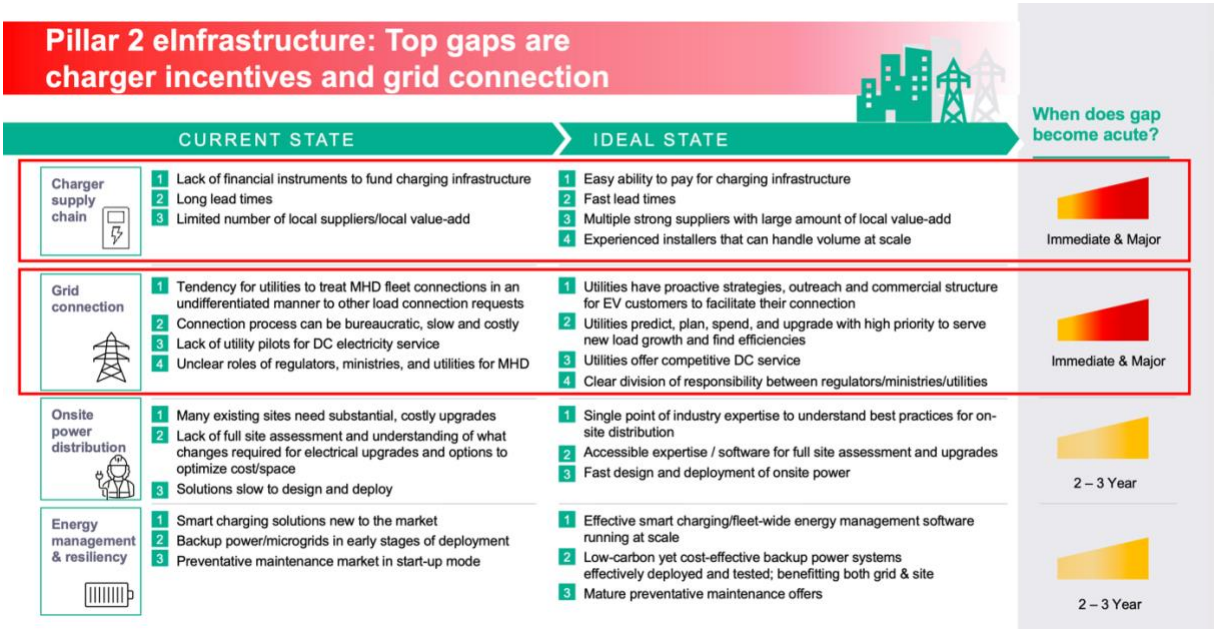
38 place du Commerce, 11-530 Ile des Sœurs, QC H3E 1T8



18- **EMC supports the federal government in its will to develop Zero Emission Vehicle adoption targets backed by regulation as mentioned in Canada's Emission Reduction Plan:** "Launch an integrated strategy to reduce emissions from medium-and heavy-duty vehicles (MHDVs) with the aim of reaching 35% of total MHDV sales being ZEVs by 2030. In addition, the Government will develop a MHDV ZEV regulation to require 100% MHDV sales to be ZEVs by 2040 for a subset of vehicle types based on feasibility, with interim 2030 regulated sales requirements that would vary for different vehicle categories based on feasibility, and explore interim targets for the mid-2020s."[11]

19- **Electric Vehicles fleets in ports, airports and other federal facilities:** Phase out fossil-fuel vehicles at federally regulated properties, such as ports and airports, through a combination of tolls on polluting vehicles, restrictions on access for polluting trucks, and through support for charging infrastructure.

Policy & Regulation for off road vehicles and marine transportation

A growing number of companies offer a diversity of off road vehicles ranging from electric snowmobiles to electric watercrafts and electric side by side that are either used for work or pleasure, and that can help significantly reduce GHG emissions, not to mention air and water pollution. For example, a modern gas snowmobile emits as much air pollutants as 40 modern cars. In remote regions of the country, snowmobiles can often be one of the first means of transportation. In addition, some of the leaders in the electric off-road and marine industry are based here in Canada, which means that supporting the transition to zero emission will help create high paying sustainable jobs in the country.

That's why we recommend:

20- A federal rebate for the purchase of electric snowmobile, personal watercraft or RV in line with the Yukon electric snowmobile rebate of $2500.[13]

21- A ZEV mandate for off-road vehicles in line with the most ambitious jurisdictions in North America, whether at the federal or state level.

22- A luxury tax exemption for zero-emission vessels since they cost more than gas or diesel powered vessels and their purchase should be supported, rather than discouraged.[14]

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23- Electric ferries: Canada is home to over 180 different ferry routes with a route presently operating in each province and the majority of the territories[15]. When we went to Norway in 2022, we discovered that out of 825 ferries in their country, 47% of them were already electric. The largest electric ferry[16] has room for 600 passengers and 200 cars or 24 trucks. We recommend that the federal government launches a program to support the electrification of ferries in order to lower GHG emissions, air and water pollution AND create a Canadian zero emission marine industry to become a North American leader.

(June 2022 - Electric ferry in Oslo)

Policy & Regulation for EV Industry jobs

According to a 2022 World Energy Employment report for the International Energy Agency[17], "Energy employment is set to shift rapidly as countries and companies accelerate efforts to decarbonize and meet net zero emissions pledges… Clean energy employs over 50% of total energy workers, owing to the substantial growth of new projects coming online. **There is tremendous growth for energy employment on the horizon, driven primarily by new investments to decarbonize.**

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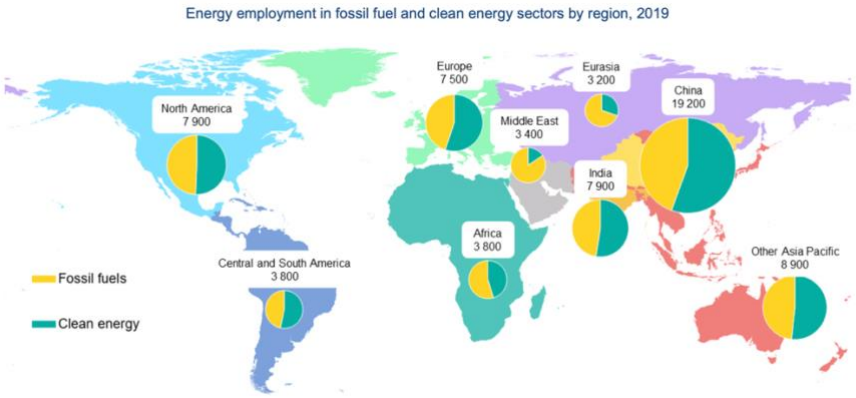

The Canadian Battery industry: a once in a generation opportunity

According to the 2022 Clean Energy Canada & Trillium Network for Advanced Manufacturing Report titled "Canada's Economic Engine"[19] in which EMC participated, by 2030, Canada's EV battery supply chain could support nearly 250,000 direct and indirect jobs and add $48.2 billion to its economy. When induced jobs are considered (for example, employees at a restaurant popular with supply chain workers), a total of nearly 323,000 jobs could be created across Canada and $59 billion added to the Canadian economy.

That is why we recommend that Canada:

24- **Develops an integrated electric mobility strategy to achieve Canada's climate and electrification targets in coordination with Canada's First Nations, Inuit and Métis:** We recommend the launch of a pan-Canadian EV Strategy that includes an EV Action Plan to accelerate EV adoption. Enact legislation requiring the federal government to (1) establish an EV strategy, and, (2) maintain and regularly update an EV action plan through 2035. Accountability measures, such as periodic audits, should be established. Considering that transportation electrification projects might impact First Nation's, Inuit and Métis, we highly recommend collaboration as soon as possible in order to make this collaboration fruitful for all parties involved from environmental, social and economic points of views. As the national voice of electric mobility in the country, EMC can play a central role in the development of this strategy through a fund specifically dedicated to its development, writing and deployment in collaboration with all federal departments involved.

Budget to develop an integrated electric mobility strategy in 2023-2024: $20 million

25- **Support and attract EV-related business and investment in Canada:** Focus on attracting more investment to accelerate EV manufacturing and related industries in Canada, including assembly, parts, machinery, charging equipment, and battery materials extraction/processing with a "Canadian EV Economic Development and Investment Attraction Strategy."

26- **Focus R&D Investment on strategic EV technology:** Canada should focus its efforts on accelerating technologies, research, development and manufacturing associated with reducing the costs of vehicle batteries and thus vehicle costs per unit of range.

27- **Work with provinces to fast-track EV-only service technician training**: EVs are far less complicated machines than gas vehicles. Work with provinces to revamp the vehicle mechanic curriculum to prioritize EVs by fast-tracking training for EV mechanics, and provide them with more apprenticeship opportunities.

28- **Support training and retraining programs to help workers make the transition to a decarbonized economy:** Building a labor force with the right skills– from engineering and research, electrical and mechanical, charging infrastructure installation, sales, maintenance, and fleet management–will be critical to the success of Canada's transition to a zero

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carbon economy. Explore opportunities for the government to support employers, whether traditional industry or all-EV, to train new employees who have not previously worked in the EV industry.

EV battery circular economy: In collaboration with industry stakeholders, adopting and implementing a framework based on the highest international standards of circular economy will optimize EV battery lifecycles and ensure that EV batteries are managed efficiently at the end of their useful life.

Federal leadership

29- **Establish a Privy council office for electric mobility**
Create a dedicated Privy Council Office to coordinate EV responsibilities across departments and advise the Prime Minister on progress being made towards achieving the government's electrification goals.

30- **Make government and parliamentarians EV education a priority:** Unless both consumers and policy makers understand all the benefits, needs and savings associated with electric vehicles, the transition to an electric future will take longer than necessary.

31- **Convene electricity stakeholders to develop EV solutions for the future of Canada's electric grid:** EMC has a utility working group that is working at developing Canadian based solutions for the future of EV deployment but the federal government must play a leading role in this transition. That's why we recommend the establishment of a cross-Canadian guidance for electricity regulators to speed up deployment of charging infrastructure.

32- **Ensure federal fleets and buildings are 100% electric and EV ready by 2030:** Government can lead by example and further increase domestic EV demand and investment by using its own purchasing power. Starting now, every vehicle purchased by the government should be electric, unless an electric option does not yet exist to meet a specific need.

Detailed plan of EMC's 2023 pre-budget recommendations available here:

https://emc-mec.ca/wp-content/uploads/Final-Oct-8-2022-Electric-Mobility-Canada-2023-pre-budget-Recommendations.pdf

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