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**Via Email**

Honourable William Morneau  
Minister of Finance  
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and

Honourable Mona Fortier – Minister of Middle-Class Prosperity and Associate Minister of Finance  
[mona.fortier@canada.ca](mailto:mona.fortier@canada.ca)

**Subject: Electric Mobility Canada (EMC) submission on Pre-Budget Consultations in advance of the 2020 Federal Budget**

Dear Minister Morneau and Minister Fortier,

I am writing on behalf of EMC's membership, which includes companies involved in the manufacture, sale and servicing of battery electric vehicles (BEVs) and Plug-In-Hybrid Vehicles (PHEVs) across Canada, as well as suppliers of electric vehicle charging equipment, electric utilities, end-users and research organizations. Our mission is to strategically accelerate the transition to electric mobility in all modes of transportation including battery and hydrogen fuel cells technologies.

Please accept this letter as our recommendations for measures to include in the 2020-21 federal budget to accelerate electrification of all modes of transportation in Canada. We believe these measures respond directly and supportively to numerous items identified in mandate letters to you and your cabinet colleagues and to the call for decisive and early actions on climate change expressed by the majority of Canadians in the last federal election.

**Why we need to accelerate the electrification of transportation**

Canada's urban, suburban and rural infrastructure is heavily dependent on a transportation system built around the use of private automobiles for personal transportation, and which, even in the case of freight, school or public transit buses, typically relies on internal combustion engines, emitting significant quantities of greenhouse gas emissions and negatively impacting local air quality. Converting this fleet to electricity is the most readily available option to reduce Greenhouse Gas emissions (GHGs) from transportation. We have known for some time that transportation contributes roughly 24% of GHGs in Canada, and, worryingly, transportation emissions have increased against our 2005 base year, against which we measure our progress against our Paris climate targets. This problem is even more pronounced

in Canada's cities. A recent report by the Toronto Atmospheric Fund shows that in the Toronto Region, transportation is responsible for nearly 40% of GHGs. <sup>1</sup>

Improvement on Canada's transportation emissions is fundamental to achieving our climate targets and, fortunately, achievable based on currently available technologies. Canada has the technologies and expertise to respond rapidly to the needed changes and at the same time contribute to economic growth in clean technologies in several provinces.

### EV sales are growing but not fast enough

According to a report on the contribution of Electric Vehicles to Canada's Economy<sup>2</sup> Plug-in electric vehicle (PEV)<sup>3</sup> sales have grown from close to zero in 2010 to 3.5% of light-duty vehicle sales in Q3 of 2019. By the end of 2019, there will be an estimated 151,000 plug-in electric vehicles on Canadian roads. Figure 1 explains this rapid growth.

Figure 1: Plug-in electric vehicles cumulative numbers and share of new light-duty sales

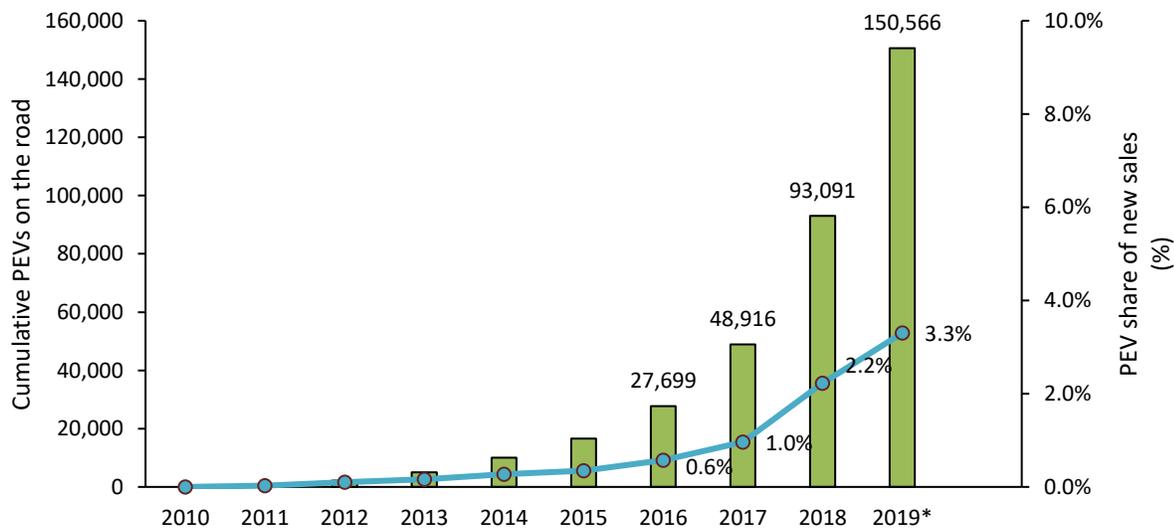


Table 1 below summarizes the sale data for Plug-In Electric Vehicles in recent years and estimates the level of activity for FY2020-21. The actuals are from data regularly published by Electric Mobility Canada. The estimates are the result of consultations with EMC members and reflect current policies in place at all levels of government, targets identified by the federal government as well as the availability of new technologies.

<sup>1</sup> Toronto Atmospheric Fund Carbon Emissions Inventory for the GTHA – 2019 Edition

<sup>2</sup> The Contribution of Electric Vehicles to Canada's Economy – Navius Research Inc. Sept 2019

<sup>3</sup> Plug-In Electric Vehicles (PEVs) include Plug-In Hybrid Vehicles (PHEV) and Battery Electric Vehicles (BEV)

Table 1 – Plug-In Electric Vehicles sales in Canada

	<b>PEV's sold in Canada</b> (assembled in Canada)		<b>FY 2017-2018</b> (4/17-3/18)	<b>FY 2018-2019</b> (4/18-3/19)	<b>FY 2019-2020</b> (4/19-9/19)	<b>FY 2019 - 2020</b> (4/19-3/20)	<b>FY 2020-2021</b> (4/20-3/21)
			<b>ACTUAL</b>	<b>ACTUAL</b>	<b>ACTUAL</b>	<b>EST.</b>	<b>EST.</b>
1	Light- Duty Vehicles (made-in-Canada)	PHEVs	11,600 (5,000)	20,200 (8,000)	13,000 (3,000)	22,000 (5,000)	30,000 (5,000)
2	“	BEVs	10,500	25,200	22,500	43,000	55,000
3	“	EVs	22,100	45,200	35,500	65,000	85,000
4	eBuses Transit				110		500
5	eBuses School				80		300
6	Trucks				10		300

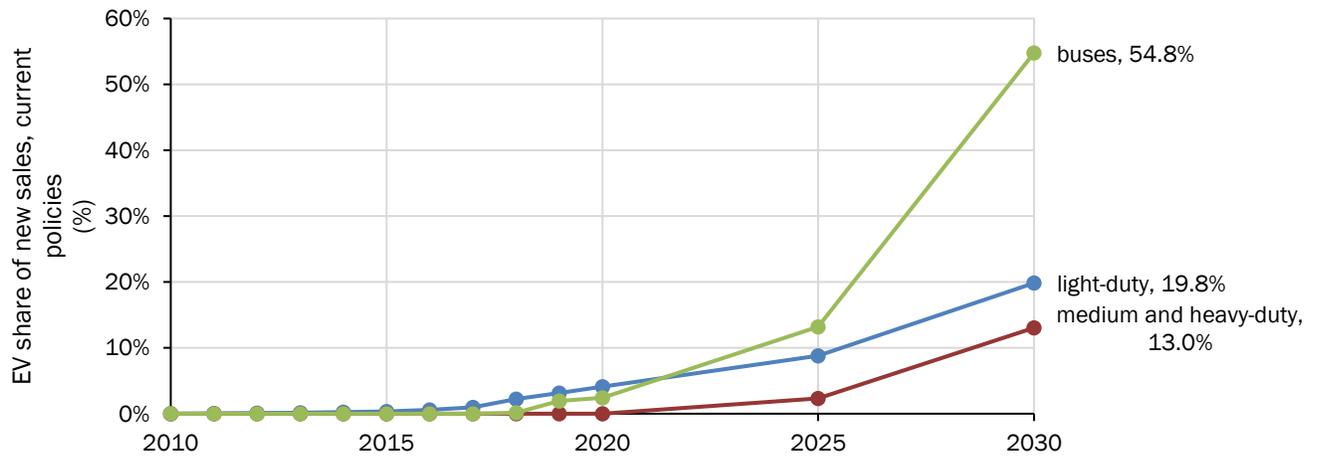
Canada has set important zero emission vehicle light duty vehicle (LDV) sales targets as follows:

- 10% by 2025;
- 30% by 2030; and
- 100% by 2040.

Achieving, and, ideally, beating these targets is essential. Canada has made important progress in decarbonizing its economy, but still faces a gap of approximately 79MT in achieving its Paris targets by 2030.

The forecasts suggest we will not meet Canada's 2030 target of 30% LDV sales, and that meeting the 10% target by 2025 is also in serious doubt— it would require a tripling of current sales in a very short time frame. This indicates a strong need for immediate and resolute actions to accelerate EV sales across Canada and achieve federal targets. Below, we suggest actions related to light-duty vehicles and also medium and heavy-duty vehicle sales that we believe can support achievement of these federal targets. The actions needed should extend beyond light-duty vehicles and include support for trucks and buses.

Figure 2: PEV share of new sales by segment through 2030, based on current policies



### Electrifying transportation has significant economic benefits

By the end of 2019, there will be an estimated 151,000 plug-in electric vehicles are on Canadian roads. Globally there are an estimated 5.1 million electric vehicles on the road as of 2018<sup>4</sup>.

Based on EMC's EV Canadian Industry Directory, there are now more than 250 Canadian businesses (not including utilities) involved in the EV sector and 30 universities, colleges, and research centres involved in the electrification of transportation across Canada. These are principally located in Quebec, Ontario, and British Columbia but are starting to grow in other parts of the country as well, with significant recent investments in charging station infrastructure and programs in Alberta and Atlantic Canada.

In 2019, Electric Mobility Canada commissioned Navius Research to quantify the contribution of the EV industry to Canada's economy.<sup>5</sup> In its report published in September 2019, Navius predicts that EVs are expected to contribute \$15.8 billion (\$2010) and 155,000 employees to the Canadian economy in 2030. These data are derived from StatsCan data, such as EVs manufactured in Canada, which does not yet properly identify EV-related activities such as those undertaken by utilities, meaning it likely understates overall economic potential. Further, achieving Canada's target of 30% EVs by 2030 would further boost this contribution.

<sup>4</sup> International Energy Agency. 2019. *Global EV Outlook 2019*. Available from: <https://www.iea.org/gevo2019/>

<sup>5</sup> The contribution of EVs to Canada's economy – September 2019 – Report by Navius Research

**EMC Recommendations for the 2020 Federal Budget**

EMC recommends that the following measures be incorporated in the budget for the fiscal year 2020-2021. Data and assumptions used in calculating the budget impacts are summarized in Attachment 1.

#	Recommendations	Estimated Budget Impact for fiscal year 2020-21 <i>(see Attachment 1 for supporting data)</i>
1	<p><b>Incentives to buyers of EVs</b></p> <p>Increase the current incentive program announced in the March 19, 2019 budget from \$5,000 to \$7,000 for the acquisition of light-duty EVs and increase the cap from \$45,000 to \$55,000 for consumers. This will increase the effectiveness of the program and ensure that more Canadians can take advantage of this important measure. It is also important to ensure that funding assigned is sufficient for the anticipated consumer demand in the long term as start/stop gaps in funding distort markets, can undermine positive growth trends of EVs and cause customer and dealer confusion.</p> <p>We fully expect that electric pick-up trucks will be available in the very near future and incentives for these vehicles will benefit rural Canadians that depend on these vehicles. Planning for such incentives should begin now.</p>	\$452.5M
2	<p><b>Expand network of fast charging stations across Canada</b></p> <p>Add new money to build an EV fast charging network along Canada's major highways and in urban and rural areas. Aim for up to 5,000 additional public stations (over and above those previously announced during the last government) over 3 to 4 years, starting with 1500 locations in the first year with higher funding for higher capacity stations. These stations should be usable by all fast-charge capable EVs, meaning they are not locked to one brand of vehicle. They should also be upgradable to accommodate future needs.</p>	Up to \$600M

#	Recommendations	Estimated Budget Impact for fiscal year 2020-21 <i>(see Attachment 1 for supporting data)</i>
3	<p><b>Financial Support for Heavy Duty Vehicles</b></p> <p>In addition to the financial support recommended below, we also recommend that your government adopt targets and time-lines for converting the following heavy-duty vehicle modes to electric drive.</p> <p>The initiatives proposed below for heavy-duty vehicles, a major part of the GHG emissions from transportation, will allow this sector to reduce its emissions over time.</p> <p><u>Part A – Electric Transit Buses</u></p> <p>In addition to any federal funding programs to municipalities for transit buses, provide financial incentive for 80% of the price differential for zero emission (all electric) transit buses capped at \$150K per bus for 5 years. For private sector cases, allow one-year depreciation for purchase costs. Additionally, include incentives for critical charging infrastructure, up to \$50,000 per bus.</p> <p><u>Part B – School Buses</u></p> <p>Provide financial incentives at 80% of the price differential for electric school buses to private school bus operators and to school boards capped at \$150K per vehicle in FY2020-21 declining to \$75k over 3 years. Aim for 5,000 buses by 2025. Additionally, include incentives for critical charging infrastructure at 80% of each unit capped at \$50,000 per station.</p> <p><u>Part C – Trucks &amp; Agricultural vehicles</u></p> <p>Provide financial incentive at 80% of the price differential for electric trucks to a maximum of \$30K for Class 3 trucks rising to \$150K for Class 8 trucks to support early stage implementation for any all-electric truck. Additionally, include incentives for critical charging infrastructure at 80% of each unit capped at \$50,000 per vehicle.</p> <p>The electrification of off-road vehicles, including farming vehicles, is happening and we would be pleased to discuss funding options for these vehicles.</p>	<p>\$75 M for transit buses</p> <p>\$75 M for school buses</p> <p>\$30 M for trucks</p>

#	Recommendations	Estimated Budget Impact for fiscal year 2020-21 <i>(see Attachment 1 for supporting data)</i>
	For the three categories of vehicles noted above, we would welcome some indication of Canadian content as part of the funding eligibility.	
4	<p><b>GST Exemption on the purchase of new and used EVs and EV Charging Equipment.</b> Exempt electric vehicles (EVs) and EV charging equipment (EVSE) from the Goods and Services Tax (GST). This would apply to sale prices of up to \$55,000 for new light duty vehicles and \$27,500 for used light-duty vehicles. The government should encourage all provinces to at least match this financial contribution on a per-vehicle basis.</p>	\$213 M
5	<p><b>Support for Electric Mobility Canada</b> Financial support for EMC in the amount of \$4 million over a two-year period to increase its capacity as an industry sounding board and policy support organization for the government and to promote &amp; grow the EV business. Also, to grow its annual conference as the national gathering place for EV decision makers and to identify/promote R &amp; D needs in the Canadian context.</p>	\$2M
6	<p><b>Public Awareness of EVs</b> Invest \$25 million into a 5-year national public education and awareness campaign on EVs. This program could also be structured as a matching program to new or existing provincial EV education programs.</p>	\$5 M
7	<p><b>Incentives to buyers of used EVs</b> Establish a new all electric used vehicles rebate of \$2,000 for 3 and 4 years old used all-electric as set out in mandate letters to the Ministers of ISI and Natural Resources.</p>	\$3 M
8	<p><b>Excise Tax Exemption</b> Exempt new and used EVs from 6.1% Excise Tax on cars not manufactured in North America.</p>	\$116 M

#	Recommendations	Estimated Budget Impact for fiscal year 2020-21 <i>(see Attachment 1 for supporting data)</i>
9	<p><b>Federal Government to adopt its own fleet electrification program</b></p> <p>Such a program would gradually replace a growing number of gasoline and diesel vehicles towards zero emission vehicles (light, medium and heavy-duty) where possible across all Departments and their agencies. Include targets for both EVs and EV charging stations.</p> <p>Also:</p> <ul style="list-style-type: none"> <li>• Install EV chargers at all federally owned parking facilities.</li> <li>• Make all new or retrofitted federally owned or leased buildings EV-ready.</li> <li>• Allow federal employees to charge their own electric vehicles at these buildings.</li> <li>• Train federal employees on the benefits and the use of EVs and related infrastructure.</li> <li>• Replace existing shuttle buses on Parliament Hill with ebuses.</li> <li>• Look for ways to electrify all Crown Corporation operations.</li> </ul>	

We remain available to discuss this letter further with you and your staff. We also look forward to presenting our views to the Finance Committee.

Sincerely,



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**Data and assumptions used for each of the recommendations contained in the letter.**

Recommendation #	Details
1	<p><b>Incentives to Buyers of EVs</b></p> <ul style="list-style-type: none"> <li>• 85,000 EVs sold in FY 2020-21, of which 30,000 are PHEVs</li> <li>• Incentive capped at \$7,000 per BEVs and \$2,500 for PHEVs</li> <li>• 55,000 x 7,000 = \$385M</li> <li>• 30,000 x 2,250 = \$67.5M</li> <li>• Total cost for FY 2020-21 = \$452.5M</li> </ul>
2	<p><b>Expand network of fast charging stations along main highways</b></p> <ul style="list-style-type: none"> <li>• Mandate letters refer to 5,000 over 5 years</li> <li>• EMC recommends 1,500 in FY 2020-21</li> <li>• = \$480M is recommended to accommodate average costs.</li> </ul>
3	<p><b>Financial support for heavy duty vehicles</b></p> <p>A - For Electric Transit Buses</p> <ul style="list-style-type: none"> <li>• Incentive at \$150,000 per bus, in addition to other financial support available now for transit buses</li> <li>• Assume 500 buses delivered in FY 2020-21</li> <li>• 500 x \$150,000 = \$75,000,000</li> </ul> <p>B - For School Buses</p> <ul style="list-style-type: none"> <li>• Incentive at 80% of cost with a cap at \$150,000</li> <li>• Assume 500 delivered in FY2020-21</li> <li>• 500 x \$150,000 = \$75,000,000</li> </ul> <p>C- For Trucks</p> <ul style="list-style-type: none"> <li>• Incentive at 80% of cost with a cap at \$150,000 for Class 8 declining to \$30,000 for class 3.</li> <li>• Assume 300 delivered in FY2020-21 with an average incentive of \$100,000</li> <li>• 300 x \$100,000 = \$30,000,000</li> </ul>
4	<p><b>GST exemption on the sale of EVs</b></p> <p><b>Light duty vehicles</b></p> <ul style="list-style-type: none"> <li>• 75,000 new light duty EVs @ average sale price of \$45,000 each at 5% GST share = \$168.7M</li> <li>• 1,000 used light duty EVs @ \$20,000 each at 5% GST share = \$1M</li> </ul>

	<p><b>Transit Buses</b></p> <ul style="list-style-type: none"> <li>• Average sale price at \$900,000</li> <li>• Assume 500 sold in FY2020-21</li> <li>• \$900,000 x 500 x 0.05 = \$22,500,000</li> </ul> <p><b>School buses</b></p> <ul style="list-style-type: none"> <li>• Average sale price at \$500,000</li> <li>• Assume 500 delivered in FY2020-21</li> <li>• \$500,000 x 500 x 0.05 = \$12,500,000</li> </ul> <p><b>Trucks</b></p> <ul style="list-style-type: none"> <li>• Average sale price \$500,000</li> <li>• Assume 250 delivered in FY2020-21</li> <li>• \$500,000 x 250 x 0.05 = \$6,250,000</li> </ul> <p>Total of above \$ 213,700,000</p>
5	<p><b>Support for Electric Mobility Canada</b> \$4 million over 2 years</p>
6	<p><b>Public Awareness of EVs</b></p> <ul style="list-style-type: none"> <li>• Proposal is for \$25,000,000 over 5 years</li> <li>• FY2020-21 is proposed at \$5,000,000</li> </ul>
7	<p><b>Incentives of buyers of used EVs</b></p> <ul style="list-style-type: none"> <li>• Incentive of 10% of the retail price to a maximum of \$2,000 per vehicle</li> <li>• Assume delivery of 1,500 in FY2020-21</li> <li>• \$2,000 x 1,000 = \$3,000,000</li> </ul>
8	<p><b>Excise Tax Exemption</b></p> <ul style="list-style-type: none"> <li>• Assume delivery of 85,000 EVs in year one.</li> <li>• Assume 50% come from outside NAFTA countries</li> <li>• Assume import cost of remaining 42,500 @ \$45,000 each</li> <li>• Excise tax is 6.1%</li> <li>• 42,500 x 45,000 x 0.06 = \$116,662,000</li> </ul>
9	<p><b>Federal Government to adopt its own ambitious fleet electrification program</b> At the discretion of your government.</p>