



September 2, 2022

**VIA RESS**

Ontario Energy Board  
P.O. Box 2319,  
2300 Yonge Street, 27<sup>th</sup> Floor  
Toronto, ON M4P 1E4  
Attention: Registrar

Dear Ms. Marconi,

**Re: Framework for Energy Innovation: Distributed Resources and Utility Incentives  
Board File No.: EB-2021-0118**

We are counsel to the Electric Vehicle Society (“**EVS**”) in connection with the Framework for Energy Innovation (“**FEI**”) Distributed Resources and Utility Incentives consultation (the “**Consultation**”).

The number of EVs in Ontario has increased at an accelerating pace over the last several years and the market share of EVs (including zero emission vehicle (ZEV), battery electric vehicles (BEV), and plug-in hybrid electric vehicles) continues to grow. These trends are likely to continue in part as a result of the federal government’s announcement in June 2021 that it is accelerating its goal of 100% sales of zero emission light-duty and passenger trucks by 2040, and setting a mandatory target for all new light-duty cars and passenger trucks to be zero emissions by 2035.<sup>1</sup> This new goal is meant to support Canada’s greenhouse gas (**GHG**) reduction target of 40% to 45% below 2005 levels by 2030. It is now expected that close to 100% of light-duty vehicles on the road will be zero-emission by 2050.

**Electrification Planning**

Many predictions point to exponential growth in EVs over the next few years as a result of extended range, greater variety of makes and models, and improving battery capacity. The IESO forecasts that there will be 6.6 million EVs in Ontario by 2042, with an annual charging demand of 24.4 TWh and a peak demand of 1,200 MW.<sup>2</sup> Furthermore, there are nearly 2,000 public charging stations with over 5,000 charging ports across the province in addition to potential and existing charging points available at most consumer residences.<sup>3</sup> EVs will increasingly play a central role in Ontario’s future electricity system as sources of demand, storage, and energy.

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<sup>1</sup> Transport Canada, “Building a green economy: Government of Canada to require 100% of car and passenger truck sales be zero-emission by 2035 in Canada” (29 June 2021).

<sup>2</sup> IESO “APO: Ontario’s electricity system needs: 2023-2042” (December 2021) available online: <https://www.ieso.ca/-/media/Files/IESO/Document-Library/planning-forecasts/apo/Dec2021/2021-Annual-Planning-Outlook.ashx>.

<sup>3</sup> Ontario, “Charging electric vehicles”, available online at: <https://www.ontario.ca/page/charging-electric-vehicles>.

EVS believes that the Consultation and the FEIWG's Report clearly demonstrate that EVs must be considered as part of the broader DER mix and that their unique capability to be flexibly and widely distributed must inform the Board's DER policies and approach to broader electrification planning, ensuring that it supports incentivising this untapped source of energy storage and distribution capacity. EVS also welcomes the Board's Design of an Optional Enhanced Time-of-Use (TOU) Rate (EB-2022-0074) consultation and its clear application to EV owners.

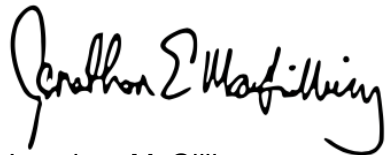
## **EVs and DERs**

EVs provide numerous cost-effective system and consumer benefits including: (i) economic benefits (optimized generator operation, deferred generation capacity investments, reduced ancillary service cost, reduced congestion cost, deferred transmission capacity); (ii) reliability benefits (reduced sustained outages, reduced momentary outages, reduced sags and swells); and (iii) environmental benefits (reduced GHG emissions). Ontario's distribution infrastructure and grid will continue to be impacted by the expected exponential growth in EVs and their integration into Ontario's energy system. In addition, EVs are already having noticeable effects on electricity supply and demand, customer preferences, capital expenditures, operations and maintenance, load, and productivity. EVS recommends that the Board continue to study, whether through the FEIWG or as part of other ongoing or to be convened consultations, the expected impacts of EVs and the best ways to harness their capabilities as potentially easily dispatchable sources of energy storage and the important ways in which they can support the Board's efforts to improve the impacts of temporary unreliability from weather events and other causes of outages — many of which are likely to increase in frequency as a result of the effects of climate change.

## **Recommendation**

EVS recommends that the Board convene an EV-specific consultation centred on understanding the evolving approach of EV-owners as "prosumers" of electricity and the integral part they can play in supporting broad and cost-effective adoption of DERs across Ontario. Local distribution companies and other stakeholders would also benefit from greater regulatory clarity and guidance on approaches to capital and system planning involving EVs and EV infrastructure.

Sincerely,

A handwritten signature in black ink, reading "Jonathan McGillivray". The signature is fluid and cursive, with the first name being more prominent.

Jonathan McGillivray

c. Wilf Steimle, EVS