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Mayor Maire

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The Hon. Jonathan Wilkinson  
Minister of Natural Resources Canada  
580 Booth Street  
Ottawa, Ontario K1A 0E4  
[jonathan.wilkinson@parl.gc.ca](mailto:jonathan.wilkinson@parl.gc.ca)

**RE: Support for Ottawa Energy Evolution Strategy**

Dear Minister Wilkinson,

Climate change is the biggest threat facing our generation, and ambitious action to fight it presents significant economic opportunities for all Canadians. Municipalities realize the importance of their position to catalyze climate action.

In October 2020, Ottawa City Council unanimously approved the Energy Evolution Strategy, an ambitious plan to reduce greenhouse gas emissions in Ottawa to zero by 2050. Reaching this target will require an unprecedented scale of action and investment. It also estimates to yield \$12 billion in net returns to the community over the life of the investments, along with health and resiliency benefits. This colossal work cannot be done without support from senior levels of government.

**Natural Resources Canada can support GHG reductions led by municipalities by implementing the following priority policy changes:**

- **Benchmark energy performance of all existing buildings – offer modernized EnerGuide options that address the needs for more affordable, quicker, and flexible labelling to enable municipal regulations on emissions performance standards;**
- **Strengthen incentives for emission-reducing building retrofits such as enabling homeowners to borrow from their RRSPs for home energy retrofits (similar to the First Time Homebuyers Program) and offering financial incentives for deep retrofits of Part 3 buildings; and**
- **Reduce barriers to the installation of EV charging infrastructure by supporting local distribution companies with economic and technical resources required to meet the City of Ottawa's timeline for 90% EV sales by 2030.**

The existing buildings sector accounts for 46% of Ottawa's community GHG emissions. Meeting Council's emissions targets will require deep retrofits of 98% of these buildings by 2040. The City of Ottawa is rolling out programs to support energy retrofits of buildings. We need support from the Federal and Provincial Building Codes and Ministries to ensure this is done in ways that won't create unintended negative health consequences associated with our warming climate.



NRCan's mandate to provide home energy labeling at the time of sale is a good initiative, however, the City of Ottawa supports an annual energy labeling approach based on data analysis rather than home visits. This is a quick, affordable, and COVID-safe option that provides equitable access to information to all homeowners. It would enable municipalities such as the City of Ottawa to offer more accurate programs and policies.

Transportation accounts for another 42% of GHG emissions in Ottawa. The pathway to decarbonization involves converting all vehicles to zero emissions options, mainly electric. This will require upgrades to electric distribution networks. Support for these investments in capacity are requested.

Municipalities are on the front lines of climate change impacts. Reducing GHGs will ultimately reduce the risks and impacts on municipalities and will improve the health and safety of our residents. Municipal infrastructure and operational expenses are significantly impacted by the increased severity of extreme weather events and the responses required to restore public health and safety. Recognizing this threat and feeling pressured by their constituents to act, Ottawa, along with more than 400 municipalities in Canada, declared a climate emergency in April 2019.

Through land use, transportation, and infrastructure decisions, municipalities have influence over 50% of emissions. The support requested above will allow the City of Ottawa to take a leadership role in implementing community GHG reductions while ensuring efficient use of public funds.

Staff have submitted these ideas with more detail through a submission to the NRCan's EV Grid Integration consultation, which is attached to this.

Steve Willis, General Manager for Planning, Infrastructure and Economic Development, would be pleased to meet with your Deputy Minister to discuss more thoroughly how we can work together to achieve a net-zero country by 2050.

Sincerely,

Jim Watson

Mayor

City of Ottawa

Attachment:

NRCan's EV Grid Integration Consultation Submission

CC: Abba Hanna, Acting Director General, OEE

Jamie Hulan, Director, OEE, Housing & Communities

Kimberly Curran, Deputy Director, OEE



Dean Haslip, Director General, Canmet Energy

Marc Wickham, Director, Canmet Energy

Carol Saab, Chief Executive Officer at FCM

Michael Savage, Mayor of Halifax and Chair of BCMC

Jamie McGarvey, Mayor of Parry Sound and President of AMO

Stephen Willis, General Manager, Planning, Corporate Real Estate and Economic Development,  
City of Ottawa

## Technical Submission to NRCan EV Grid Readiness Consultation

### Implications of accelerated EV Mandate

The challenges related to the increased number of electric vehicles on the distribution grid is tied to the uneven distribution of electric vehicles according to the various demographics in cities. Currently, the vast majority of EV owners have above average income, higher levels of post-secondary education, and also have more than one vehicle ([Electric Vehicle Council](#)). In the future when there are more electric vehicle offerings and there are more used electric vehicle offerings for more people, the prevalence of electric vehicles outside of these traditional demographics will be difficult to track. As different communities will adopt electric vehicles at different rates depending on the availability of vehicles that meet their personal vehicle needs and are affordable to their personal budgets, tracking of where electric vehicles are adopted will be important to manage the impacts on the local distribution equipment.

Additionally, the pressures of building electrification are occurring at the same time as the electrification of transportation sources. This leads to additional pressure on the existing infrastructure to support a growing need for electrical resources at residential and commercial properties. Generally, heating and cooling electrical consumption cannot be deferred to periods of lower demand whereas electric vehicle charging could be shifted to periods of lower electrical demand. There is a lower demand for transportation (and when vehicles are stationary) in the overnight periods which is traditionally where the periods of lower electrical demand occur.

Grid upgrades are expensive and local distribution companies are incented towards more expensive wired solutions and are generally financed by the electricity customer. If vehicle adoption increases at a faster rate than the ability to raise funds to support the needed electrical system upgrades, there will be constraints on the ability to deliver service for all electrical customers.

This also presents opportunities for the existing electrical distribution assets to receive greater levels of utilization if more charging sessions were to occur in off-peak periods. Having large amounts of EVs charging outside of peak periods will extend the life of existing assets, defer the need to upgrade to reinforce the grid, and also provide an opportunity for the addition of Distributed Energy Resources and Grid Management technologies to manage this additional load more effectively.

### Impact on different demographics and Utility-scale solutions

There will be disproportionate impacts for lower-income residents in accessing electric vehicles, as there is currently a limited number of vehicles available that are affordable options for these residents to access. Many low-income households also live in rental accommodations or apartment buildings who have difficulty getting a charging station installed. This is a result of more costly retrofit solutions for these multi-family dwellings, regulations that prevent modifications to common elements, and various layers of decision makers that must be approached to convey these decisions. This is specific to the province of Ontario and does not present the same legislative barriers in provinces such as BC and Quebec.

As a rapidly evolving technology, there are also opportunities for utility companies to adjust to a growing market for electrical resources. Many charging station installations require large upfront capital investments to get started and require a grid-interconnection to support the higher rates of charging.

There are opportunities for utility companies to support this initial capital investment and allow owners to finance the charging station through on-bill utility payments ([Pay As You Save](#)). This would support more charging stations being built, and also provide utility companies with additional sources of revenue that can support a growing business reach.

There are also opportunities for utility companies to enhance their relationship with electrical customers and could adjust their services to address the different and unique needs of electric vehicle drivers. Utilities could collect data from households as well as EVs to provide a greater insight into charging behaviours and support electrical supply improvements across their network as more EVs come online. This data collected could also inform new products that can be offered to consumers that can meet the evolving needs of households with smart home technology.

These data sources can be used to balance the grid and grow revenue, and can be based on proven solutions deployed in other jurisdictions to various extents:

- Managed charging programs between customers and utilities to manage charging sessions and enable charging to business fleets at the cheapest times of day ([Smart Electric Power Alliance](#))
- Offering EV-specific electrical rates that encourage charging at the most economical rates and affect load shifting ([Pacific Gas and Electric](#); [PEPCO](#))
- Vehicle-to-home programs that allow vehicles to act as energy storage mechanisms for homes, and provide emergency backup supports for households during blackouts ([Nissan Power Supply Ecosystem](#); [Peak Power and Hydro One](#))
- Energy Storage Systems at EV Fast Charging Stations to support customer charging demands and reduce grid impacts ([Alfen](#); [Energy Storage Association](#))
- Providing EV infrastructure in households or major traffic areas to help reduce range anxiety and concerns about where to charge vehicles ([GM Community-Based Charging Program](#))

### Federal Government Support

To support the electricity sector efforts to support a greater level of EV adoption and accelerated EV mandates, the federal government can support utility companies in multiple ways. This could include a requirement that utility policies include conditions that place Distributed Energy Resources on an equal footing with traditional wired solutions to address increased electrical loading. This should also include measures within the Canadian Building Code that require new buildings to be constructed with EV-ready infrastructure.

Additionally, the Federal Government can provide additional support to defray the cost of distribution system upgrades with a specific focus on mitigating the charges that are typically passed on to consumers. Finally, in addition to existing and planned financial support for the installation of electric vehicle charging stations, additional funding to support residential upgrades that enable EV adoption including new electrical panels, upgraded electrical service, and products such as [SplitVolt](#) and [DCC10](#) that create additional capacity to install electric vehicle charging stations at home.