

Response to the Ontario Ministry of Municipal Affairs Presentation by Heather Black and Chetan Mistry: Updating Ontario's Building Code re: Electric Vehicles

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Title or Proponent: [The proposed regulations, which would be made under the Building Code Act, 1992, would establish changes for potential inclusion in the next edition of the Building Code](#)

General Comments

Since Electric Vehicle Supply Equipment (EVSE) is specific to different types of cars, it is preferable to have rough-ins with sufficient capacity (typically rated by current in amperes) rather than install EVSE.

Ontario could work with other jurisdictions and electric car and EVSE manufacturers to develop a standard EVSE connection that would work serve all electric cars. This would then facilitate the adoption of installing EVSEs in new multi-unit residential buildings and likely increase consumer adoption of EVs.

To avoid overloading the electrical grid, it is advisable to encourage smart energy management software that can support many users and optimally charge all cars overnight at different times and charging rates based on when the cars are needed.

Control of charging will be a key success factor for the large scale adoption of electric vehicles while avoiding creating an unnecessary burden on the electrical grid.

Specific hardware requirements should be part of the Electrical Code, not the Ontario Building Code.

Currently, the Electrical Code requires capacity for 100 percent of the demand (i.e. it assumes that 100 percent of EV chargers are running 100 percent of the time), which is unrealistic. This will lead to unnecessarily oversizing transformers which will lead to inefficiencies. Appropriate sizing should be modeled after actual experiences in other jurisdictions (e.g. Europe, California, Quebec, Vancouver, etc.).

OSPE supports changes to the Condominium Act such that parking spaces are not designated by title and linked to a specific Condominium. Parking spaces should be able to be allocated as needed and changed by the Building Owner to accommodate EVSEs. Ideally, EVSEs should be near the electrical room where they will be cheaper and easier to install with greater efficiency.

It is recommended that the Ministry of Municipal Affairs consult data from other jurisdictions such as California regarding when, for how long, and in what quantity people typically charge their cars to inform Building Code recommendations.

Additional Considerations

What is the risk of charging station obsolescence?

There are significant risks that the government will establish requirements that are obsolete before deployment. The Ministry needs to consult with industry and constructors to determine the best fit.

What are the benefits of public charging?

Public charging needs to be leveraged to enable the success of the Electric and Hydrogen Vehicle Advancement Partnership (i.e. EV sales, market representation, etc.).

Is hydrogen the best way forward?

Yes, hydrogen can work in partnership with electric vehicles if it is generated from water using renewable sources as an electricity through electrolysis. Large scale manufacturing of hydrogen typically extracts the hydrogen gas from methane, and it generates carbon dioxide and carbon monoxide, which would not be desirable.

Questions & Comments

For questions and/or comments regarding this document, please contact Patrick Sackville, Lead, Policy and Government Relations at (416) 223-9961 ext. 225 or patrick@ospe.on.ca.

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