

Rule(s):

8-002; 8-106; Appendix B to Rule 8-106 10); and 8-500

Description of Change:

Add Ontario Amendment to permit the use of other types of energy management systems in addition to electric vehicle energy management system (EVEMS).

Submitted by:

Electrical Safety Authority

Background:

The 2018 Canadian Electrical Code accepted a proposal to Section 8 to recognize the use of electric vehicle energy management systems (EVEMS). These rules were included in the 27th edition of the Ontario Electrical Safety Code (OESC) when it was enforced in May of 2019.

Rationale:

The technology used for managing the electric vehicle supply equipment has shown promise to also manage other loads at a property and ensure that the service or feeders are not overloaded as identified in Rule 8-104, when it is installed as a component of the distribution equipment. Expanding this technology to address other loads provides options for sites or projects where increasing the service or feeders may not be possible or practicable for multiple reasons. By removing the limitations of this accepted practice, it will assist the industry in addressing the electrification of the Province as we pivot to more sustainable energy and reduce the collective carbon footprint. The technology for energy management coupled with renewable energy and storage can be a dynamic opportunity for designers to meet the ever-changing industry, and the needs of the consumers to incorporate additional loads into established infrastructure.

For clarity, the first section shows the modifications being proposed to the existing rules in the OESC and the second section is a clean copy.

Proposed Change:

Amend CE Code Rule 8-002, Rule 8-106 10) and associated Appendix B note, Rule 8-106 11), title of Subsection with Rule 8-500 and Rule 8-500.

Rule 8-002 Special terminology (see Appendix B)

In this Section, the following definitions shall apply:

No change for any of the other definitions.

Electric vehicle eEnergy management system — a means used to control electric ~~vehicle supply equipment~~ loads through the process of connecting, disconnecting, increasing, or reducing electric power to the loads and consisting of any of the following: a monitor(s), communications equipment, a controller(s), a timer(s), and other applicable device(s).

Rule 8-106 Use of demand factors (see Appendix B)

No change for Subrules 1) to 9).

10) Where ~~electric vehicle supply equipment~~ loads are controlled by an ~~electric vehicle~~ energy management system, the demand load for the ~~electric vehicle supply~~ equipment shall be equal to the maximum load allowed by the ~~electric vehicle~~ energy management system.

11) For the purposes of Rules 8-200 1) a) vi), 8-202 1) a) vii), 8-202 3) d), 8-204 1) d), 8-206 1) d), 8-208 1) d), and 8-210 c), the demand load for the electrical ~~vehicle supply~~ equipment shall not be required to be considered in the determination of the calculated load where an ~~electric vehicle~~ energy management system as described in Subrule 10) performs the functions of

- a) monitoring the consumer's service, feeders, and branch circuits; and
- b) controlling the electric ~~vehicle supply~~ equipment loads in accordance with Rule 8-500.

Appendix B**Rule 8-106 10)**

It is intended by this Subrule that the loads of the ~~electric vehicle supply~~ equipment controlled by an ~~electric vehicle~~ energy management system should be considered to have a demand within the maximum limits allowed by the ~~electric vehicle~~ energy management system.

The ~~electric vehicle~~ energy management system is provided with a maximum load rating, which determines the branch circuit, feeder, and service loading.

~~Electric vehicle e~~Energy management systems**8-500 ~~Electric vehicle e~~Energy management systems**

- 1) ~~Electric vehicle e~~energy management systems shall be permitted to monitor and control electrical loads ~~and to control electric vehicle supply equipment loads.~~
- 2) An ~~electric vehicle~~ energy management system shall not cause the load of a branch circuit, feeder, or service to exceed the requirements of Rule 8-104 5) or 6).
- 3) An ~~electric vehicle~~ energy management system shall be permitted to control electrical power by remote means.