

Rule(s):
8-202 3) d)

Description of Change:

Add Ontario amendment to require the addition of electric vehicle supply equipment (EVSE) loads that are supplied from a panelboard within a dwelling unit.

Submitted by:
Electrical Safety Authority

Background:

The current Subrule 8-200 2) does not exclude the demand factors for EVSE loads from being calculated as per Rule 8-202 3) a) i) to v). Having the EVSE loads included together with other loads per Rule 8-202 3) a) i) to v) drastically reduces the EVSE load demand as compared to 100% demand factor.

In the 2024 edition of the Canadian Electrical Code (CE Code), Rule 8-200 2) was changed and has added EVSE supplied from a panelboard installed in the dwelling unit to the list of excluded loads together with heating and air-conditioning. The newly excluded EVSEs loads are not being added back within Subrule 8-202 3) b) to e).

Rationale

In the 2024 edition of the CE Code, Rule 8-200 2) will exclude the EVSE loads together with the electric space heating and air conditioning loads from the applicable demand factors on items 8-202 3) a) i) to v). Additionally, item d) of Rule 8-200 3) has been modified in the 2024 CE Code to add EVSE loads that are not supplied from a panelboard installed in a dwelling unit at 100% demand factor, or as permitted by Rules 8-106 10) and 8-106 11). However, this does not include the EVSE loads that are extracted by the new Rule 8-200 2), which are supplied from a panelboard installed in a dwelling unit.

Proposed Change:

Amend CE Code Rule 8-202 3) d) and add new Appendix B Note to Rule 8-202 3) d).

8-202 Apartment and similar buildings (see Appendix B)

No change to Subrules 1) and 2)

3) The calculated load for the consumer's service or feeder supplying two or more dwelling units shall be based on the calculated load obtained from Subrule 1) a) and the following:

Δ a) excluding any electric vehicle supply equipment loads, electric space-heating loads and any air-conditioning loads, the load shall be considered to be

i) 100% of the calculated load in the unit having the heaviest load; plus

ii) 65% of the sum of the calculated loads in the next 2 units having the same or next smaller loads to those specified in Item i); plus

iii) 40% of the sum of the calculated loads in the next 2 units having the same or next smaller loads to those specified in Item ii); plus

iv) 25% of the sum of the calculated loads in the next 15 units having the same or next smaller loads to those specified in Item iii); plus

v) 10% of the sum of the calculated loads in the remaining units;

b) if electric space heating is used, the sum of all the space-heating loads as determined in accordance with the requirements of Section 62 shall be added to the load determined in accordance with Item a), subject to Rule 8-106 3);

c) if air conditioning is used, the sum of all the air-conditioning loads shall be added, with a demand factor of 100%, to the load determined in accordance with Items a) and b), subject to Rule 8-106 3);

Δ d) except as permitted by Rule 8-106 10) or Rule 8-106 11), any electric vehicle supply equipment loads ~~not supplied from a panelboard installed in a dwelling unit in accordance with Rule 8-202 1) a) vii)~~, shall be added with a demand of 100%; and

e) in addition, any lighting, heating, and power loads not located in dwelling units shall be added with a demand factor of 75%.

No change to Subrule 4)

Add Appendix B Note to Rule 8-202 3) d) as follows:

Rule 8-202 3) d)

Item d) applies to installations when electric vehicle supply equipment is either supplied from a panelboard installed in a dwelling unit or outside of a dwelling unit.