

**Proposal Number: 2018-OA-005**

**Rule 2-010(1)**

**Description of Change:**

- A) Add requirements for Plan Review of energy storage installations**
- B) Add requirements for Plan Review of standby generation that supports life safety loads**

**Proposed by: Electrical Safety Authority**

**A) Add requirements for Plan Review of energy storage installations**

**Background:**

There has been a significant rise in the number of energy storage installations across the province. Although these installations are often designed similar to photovoltaic installations, utilizing much of the same technology, it is unclear if they are considered to be “electric-power generating equipment”, and as such, if plan review is required as defined in Subrule (1)(d).

**Rationale:**

This proposal is to clearly define plan review requirements for energy storage installations, following the same submittal guidelines as electrical-power generating equipment greater than 10kW and operating in parallel with the supply authority. As these installations typically operate in parallel with the supply authority and can be complex in nature, there are safety concerns with the potential of back-feeding into the supply authority grid. It is important these installations are submitted for review to identify these potential safety risks at the design stage.

**B) Add requirements for Plan Review of standby generation that supports life safety loads**

**Background:**

Rule 46-108(4) requires all wiring for life safety systems to be installed entirely independent from all other wiring and systems. This requirement is very difficult for an inspector to confirm once the installation is complete and expensive for the customer to change if a non-compliance issue is identified during the inspection. This confirmation is much better accomplished at the plan review stage. The current wording in Rule 2-010(1) would only require submittal where the standby generation equals or exceeds 400A 3 phase, or 600A single phase. With the current wording, standby generation supplying life safety loads is not required to submit for review even though the same degree of complexity exists as those meeting submittal requirements.

**Rationale:**

This proposal is to include a new item to Subrule (1) that would require the submittal of the electrical design for standby generation that supports life safety loads, regardless of circuit ampere rating. There is value to having these types of installations reviewed, in advance of the installation, where there is often clearer definition to the separation of life safety and non-life safety wiring.

**Proposed Change:**

***Amend Rule 2-010(1)***

**2-010 Plans and specifications (see Appendix B)**

(1) Electrical work on any electrical installation shall not commence until plans have been submitted and examined by the inspection department where the electrical installation involves

- (a) a three-phase consumer service or standby generation, equal to or in excess of 400 A circuit capacity;
- (b) a single-phase consumer service or standby generation equal to or in excess of 600 A;
- (c) a feeder greater than 1000 A;

**(d) an emergency power supply for life safety systems, excluding unit equipment**

~~(de)~~ any installations involving electric-power-generating equipment **or energy storage systems**, with a rating in excess of 10 kW (Micro size) as defined by the OEB, and operating in parallel with a supply authority system; or

**(ef)** any installation operating in excess of 750 V, excluding

- (i) installations of pole lines exclusively within the scope of Section 75;
- (ii) that portion of an underground installation between a supply authority-owned transformer and the related supply authority-owned switch; or
- (iii) replacement of electrical equipment as permitted by Subrule (4).