

## Scope

This document is prepared by the Alberta distribution utilities for the use of IEEE standard 1547-2018 in the province of Alberta. It outlines specific changes to the IEEE 1547-2018 standard that were agreed to by the participating distribution utilities. It does not supersede interconnection requirements specified by each distribution utility.

When using IEEE Standard 1547-2018 in Alberta the base 1547 shall be used with along with the following changes specified in this document. All references to sections, tables and figures in this document are with regards to the IEEE 1547-2018 standard.

## Overall Document Changes

1. Where ANSI C84.1 is cited, the citation shall be removed and replaced by CSA C235.

## Section 2 Changes

Additional normative references:

1. CSA C235:19, Preferred voltage levels for AC systems up to 50000V.
2. CSA IEC 61000-4-15:12, Electromagnetic compatibility (EMC) - Part 4-15: Testing and measurement techniques - Flickermeter - Functional and design specifications (Adopted IEC 61000-4-15:2010, edition 2.0, 2010-08)

## Section 3 Changes

Definitions clarifications and common terminology substitution in Section 3.1. Note these definitions do not change in the standard they are only offered for clarity:

1. Area Electric Power System (EPS) Operator: This is the same as the distribution facility operator (DFO) which is the same as the distribution utility. The DFO may or may not own the facilities which it is operating.
2. DER Operator: This is the same as the generation facility owner (GFO).
3. Reference point of applicability (RPA): Typically, a point of common coupling (PCC) or point of connection (PoC).

## Section 5 Changes







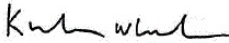
1. Section 5.1 Table 6: volt-watt mode is required for Category A DERs.
2. Section 5.4.1 shall be changed to: Category A and Category B DER shall, as specified in Table 6, provide a voltage regulation capability by changes of active power. Enabling/disabling this function is at the discretion of the Area EPS operator. The default is that this function is disabled.

## Section 6 Changes

1. Section 6.1 addition: The IEEE default ride through requirements shall be adhered to except where the ISO or DFO requires otherwise.
2. Section 6.4.1 Addition: A third overvoltage element, where required by the Area EPS Operator, shall be provided with an additional adjustable overvoltage element to enforce compliance with CSA C235 at the PCC. The pickup shall be adjustable between 106% and 110% and the time shall be adjustable between 45 seconds to 2 minutes.
3. Section 6.4.1 Table 11, 12 and 13 shall be changed to: “Nominal system voltages stated in CSA C235, Table 1 or as otherwise defined by the Area EPS operator. The ranges of allowable settings do not mandate a requirement for the DER to ride through this magnitude and duration of abnormal voltage condition. The Area EPS operator may specify the voltage thresholds and maximum clearing times within the ranges of allowable settings; settings outside of these ranges shall only be allowed as necessary for DER equipment protection [or to comply with Area EPS protection / compliance requirements](#). [For deviations specified by the Area EPS operator for DER equipment protection](#), the settings shall not conflict with the voltage disturbance ride through requirements specified in 6.4.2. [For deviations specified by the Area EPS operator to comply with Area EPS protection / compliance requirements](#), the settings may conflict with the voltage disturbance ride through requirements specified in 6.4.2. For the overvoltage (OV) and undervoltage (UV) trip functions clearing time ranges and for the OV trip functions voltage ranges, the lower value is a limiting requirement (the setting shall not be set to lower values), and the upper value is a minimum requirement (the setting may be set above this value). For the UV trip functions voltage ranges, the upper value is a limiting requirement (the setting shall not be set to greater values) and the lower value is a minimum requirement (the setting may be set to lower values).”
4. Section 6.5.2.7.2: The frequency droop operation shall be enabled or disabled at the direction of the ISO.

### Acknowledgement and Signatures

This document was created through the joint efforts of ATCO Electric, City of Lethbridge, City of Medicine Hat, City of Red Deer, EPCOR, ENMAX Power and FortisAlberta.

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