

AMENDMENTS TO THE ELECTRICITY DISTRIBUTION CODE: TECHNICAL AMENDMENTS AND UPDATE TO REFERENCE DOCUMENTS

**April 2020 Amendments made by the Essential Services Commission
on 3 April 2020**

1 Nature and commencement of this instrument

- (1) This instrument amends the Electricity Distribution Code.
- (2) This instrument comes into operation on 3 April 2020.

2 Table of amendments

Clause 1—This code

- (1) In clause 1.2, at the end of the clause insert new paragraph:

Version 11 amendments to this Code will take effect on 3 April 2020.

Clause 3—Asset management

- (2) In clause 3.5.1 after “detailing” delete “how it plans over the following five calendar years”.
- (3) In clause 3.5.1(a) before “to” insert “how it plans over the following five calendar years”.
- (4) In clause 3.5.1(b):
 - a. before “to” insert “how it plans over the following five calendar years”;
 - b. delete “and”.
- (5) In clause 3.5.1(c):

- a. before “to” insert “how it plans over the following five calendar years”;
- b. delete “.” and insert “;”.

(6) In clause 3.5.1(d):

- a. before “to” insert “how it plans over the following five calendar years”;
- b. delete “.” and insert “;”.

(7) After clause 3.5.1(d) insert new clause (e):

- (e) its use of *advanced metering infrastructure* technology.

(8) After clause 3.5.3B insert new clause 3.5.3C:

3.5.3C In fulfilling the requirements of clause 3.5.1(e), the report must include the following information:

- (a) how information generated by *advanced metering infrastructure* is being used to better support life support customers;
- (b) how information generated by *advanced metering infrastructure* is being used to guide network planning and demand side response initiatives;
- (c) how information generated by *advanced metering infrastructure* is being used to support network reliability initiatives; and
- (d) the *quality of supply* information described in schedule 1.

Clause 4—Quality of supply

(9) In clause 4.2.1 delete “*Electricity Safety (Network Assets) Regulations 1999*” and insert

“Electricity Safety (General) Regulations 2019”.

(10) In clause 4.2.2 delete Table 1 and insert:

Table 1

STANDARD NOMINAL VOLTAGE VARIATIONS					
	Voltage Level in kV	Voltage Range for Time Periods			Impulse Voltage
		Steady State	Less than 1 minute	Less than 10 seconds	
1	< 1	AS 61000.3.100*			6 kV peak
2		+13% - 10%		Phase to Earth +50%, -100% Phase to Phase +20%, -100%	
3	1-6.6	± 6 %	± 10%	Phase to Earth +80%, -100% Phase to Phase +20%, -100%	60 kV peak
4	11	(± 10 %			95 kV peak
5	22	Rural Areas)			150 kV peak
6	66	± 10%	± 15%	Phase to Earth +50%, -100% Phase to Phase +20%, -100%	325 kV peak

Notes:

* The voltage range for time periods less than 1 minute and less than 10 seconds do not apply to AS 61000.3.100

* For the purposes of clause 4.2.7, which deals with the circumstances in which a *distributor* must compensate a person whose property is damaged due to *voltage* variations, rows 2 to 6 apply

* Row 2 values (steady state, less than 1 minute, and less than 10 seconds) and not row 1 values are applicable for the purposes of clause 4.2.7. In this way, the row 2 values operate separately from the AS 61000.3.100 requirements.

(11) In clause 4.2.3 delete “IEC 60364-4-443” and insert “IEC 60364-4-44”.

(12) In clause 4.2.4 after “minute” insert “(other than in respect of AS 61000.3.100 where the time period of less than one minute does not apply)”.

(13) In clause 4.2.5 delete “IEC 1000-2-2” and insert “AS/NZ 61000.2.2”.

(14) In clause 4.2.6:

- a. in the first dot point, after the semi-colon delete “and”;
 - b. in the second dot point, delete “.” and insert “;”;
 - c. insert the following dot point after the second dot point:
 - the *voltages* and *voltage* variations in accordance with AS 61000.3.100 using information generated by *advanced metering infrastructure*.
- (15) In clause 4.2.7:
- a. after “by” insert “rows 2 to 6 of”;
 - b. insert new sentence at the end of the clause: “Schedule 2 provides additional information.”.
- (16) In clause 4.2.7, footnote 1 before “Clause 4.2.7” insert new sentence:
- Guideline 11 – Voltage variation compensation.
- (17) In clause 4.3.5, Table 2, in the second column of the row commencing “<6.6” delete “0.75” and insert “0.8”.
- (18) In clause 4.4.1 delete “in Table 3” and insert “by the system standard set out in Schedule 5.1a, clause S5.1a.6 of the *NER*”.
- (19) In clause 4.4.1 delete Table 3 and insert “Table 3 - Not used”.
- (20) In clause 4.4.2 delete the text appearing from and including “*IEEE*” and insert “system standard set out in Schedule 5.1a, clause S5.1a.6 of the *NER*, in particular the establishment of the ‘planning level’ by the *distributor*.”
- (21) In clause 4.4.3 delete “*IEEE* Standard 519-1992” and insert “*IEEE* Standard 519-2014”.
- (22) In clause 4.5.1 delete “*AS/NZ* 2344-1997” and insert “*AS/NZ* 2344-2016”.

- (23) In clause 4.6.1:
- a. delete “Subject to clause 4.6.2 a” and insert “A”;
 - b. delete “at a level at or less than 1%” and insert “in accordance with the system standard in Schedule 5.1a, clause S5.1a.7 of the *NER*”.
- (24) In clause 4.6.2 delete the text and insert “Not used.”.
- (25) In clause 4.8.1 delete the text appearing after “in” and insert “accordance with the system standards set out in Schedule 5.1a, clause S5.1a.5 of the *NER*”.
- (26) In clause 4.8.2 delete the text and insert “Not used.”.
- (27) In clause 4.9 after “clause 3.1” insert “and clause 4.2.6”.

Clause 7—Embedded generators

- (28) In clause 7.5 delete “is less than 1%” and insert “does not vary other than in accordance with the system standard set out in Schedule 5.1a, clause S5.1a.7 of the *NER*”.
- (29) In clause 7.6.2 delete “*IEEE* Standard 519-1992” and insert “*IEEE* Standard 519-2014”.
- (30) In clause 7.7 delete “*AS/NZ* 2344-1997” and insert “*AS/NZ* 2344-2016”.
- (31) In clause 7.9 delete the text from and including “As a minimum” to the end of the clause and insert:

This record must include all of the information a *distributor* is required to provide to *AEMO* pursuant to rule 3.7E of the *NER*.

Clause 8—Emergency response plans

- (32) In clause 8.2:

- a. delete “dated October 2009”;
- b. delete “Single Industry Spokesperson Process in Victoria” and insert “Single Industry Spokesperson Protocol for Electricity in Victoria”.

Clause 9—Provision of information

(33) In clause 9.1.3A delete “clause 7.8” and insert “clause 7.9”.

Clause 10—Complaints and dispute resolution

(34) In clause 10.1.1:

- a. after “Schemes” insert “(as revised or replaced from time to time)”;
- b. in footnote 2 delete the text and insert “Most recently published by the Australian Government in February 2015”.

Clause 16—Liability

(35) In clause 16(b)(1) after “by section” delete the text from and including “68A” to and including “(Vic)” and insert: “64A of the Australian Consumer Law (Schedule 2 to the *Competition and Consumer Act 2010* (Cth)) and the Australian Consumer Law (Victoria)”.

(36) In clause 16(b)(3):

- a. after “of” delete “section 117 of the *Act* or”;
- b. delete “78” and insert “120”.

(37) In clause 18(e):

- a. after “of” delete “section 117 of the *Act* or”;
- b. delete “78” and insert “120”.

Clause 19—Definitions

(38) After the definition of “**AEMO**” insert new definition:

advanced metering infrastructure has the meaning given to it in section 46B of the *Act*.

(39) In the definition of “**AER**” delete “*Trade Practices Act 1974 (Cth)*” and insert “*Competition and Consumer Act 2010 (Cth)*”.

(40) Delete the definition of “*avoided costs*”.

(41) In the definition of “**demand**” after “over a” insert “five,”.

(42) In the definition of “**electrician**” in (a) and (b) delete “*Electricity Safety (Installations) Regulations 1999*” and insert “*Electricity Safety (Registration and Licensing) Regulations 2010*”.

(43) In the definition of “**generating unit**” delete the text after “means” and insert “the plant used in the production of electricity and all related equipment essential to its functioning as a single entity.”

(44) After the definition of “**Melbourne CBD distributor**” insert new definition:

Meter means a device complying with the *metering code* which measures and records the production or consumption of electrical energy.

(45) In the definition of “**Metrology Procedure**”:

- a. delete “Victorian Electricity Supply Industry”;
- b. after “published” insert “by **AEMO**”.

(46) In the definition of “**price determination**”:

- a. after “other price” insert “and/or revenue”;

b. after “force” insert “applying to a *distributor*”.

(47) In the definition of “*Regulatory test*”:

a. after “the regulatory” insert “investment”;

b. delete “clause 5.6.5A” and insert “rule 5.17”.

(48) In clause 20.1.3(a):

a. after “headings” insert “and footnotes”;

b. after “convenience” insert “or information”.

Schedule 1 (new)

(49) After clause 21, insert a new part to the Code entitled “Schedules”.

(50) Insert a new Schedule entitled “Schedule 1” as follows:

SCHEDULE 1

In accordance with clause 3.5.1 and 3.5.4, a *distributor* is required to publish annual information and to include in that information the *quality of supply* information in accordance with this schedule.

A *distributor* is required to publish the categories of information identified in Table 6 for each calendar year.

The aggregated 10 minute averaged data used for the purposes of populating Table 6 must be available in an accessible format (such as spreadsheet) separate to the Distribution System Planning Report.

Table 6

Distribution Voltage Information											
Zone substation name	Feeder ID / name	Feeder classification	Voltage Control Section (On-Line Tap Changer)						Additional Voltage Control Sections on Feeder		
			Advanced Metering Infrastructure (AMI) voltage information						Repeat information for each voltage control section as applicable		
			Voltage Control Section information								
		(Urban, short or long rural)	December – February		March – May		June – August			September – November	
			10am - 4pm		10am - 4pm		10am - 4pm			10am - 4pm	
			4pm - 10pm		4pm - 10pm		4pm - 10pm			4pm - 10pm	
			10pm - 4am		10pm - 4am		10pm - 4am		10pm - 4am		
			4am - 10am		4am - 10am		4am - 10am		4am - 10am		

The following requirements apply to the information required to be published:

1. The **voltage** data to be published is the 10-minute averaged **voltage** data over 3 months (for each time period identified in Table 6, which commences on the first day of the month at the start of the relevant 3 month period and ends on the last day of the final month of the relevant 3 month period) of the aggregated **advanced metering infrastructure** population for the “Voltage Control Section” column.
2. **Feeder** information must include:
 - (a) geographic location details of the voltage control devices (for example: closest street name and suburb, landmark identifiers or GPS coordinates)
 - (b) number of **customers** with **advanced metering infrastructure** supplied by the relevant **feeder** voltage control section
 - (c) percentage of **customers** with **advanced metering infrastructure** identified in (b) with a **small embedded generator**
 - (d) any device or equipment deployed within the **feeder** that regulates **voltage** (for example: voltage regulators)
3. Each **feeder** must comprise the voltage control section starting from the **distribution system** zone substation. The voltage control section is defined as any device or equipment which manages the **feeder voltage** starting from the zone substation on-line tap changer.
4. Each reporting year must include all **distribution system feeders** where the **distributor** is the **advanced metering infrastructure** responsible person. This is inclusive of **feeders** not part of the **distribution system**, but where the **distributor** is the responsible person for the **advanced metering infrastructure**.
5. The **distributor** must provide explanatory information on the method used to produce the aggregated 10-minute averaged **voltage** data.
6. The data is to be published on the **distributor’s** website as a rolling 5 year report of the information in table 6.

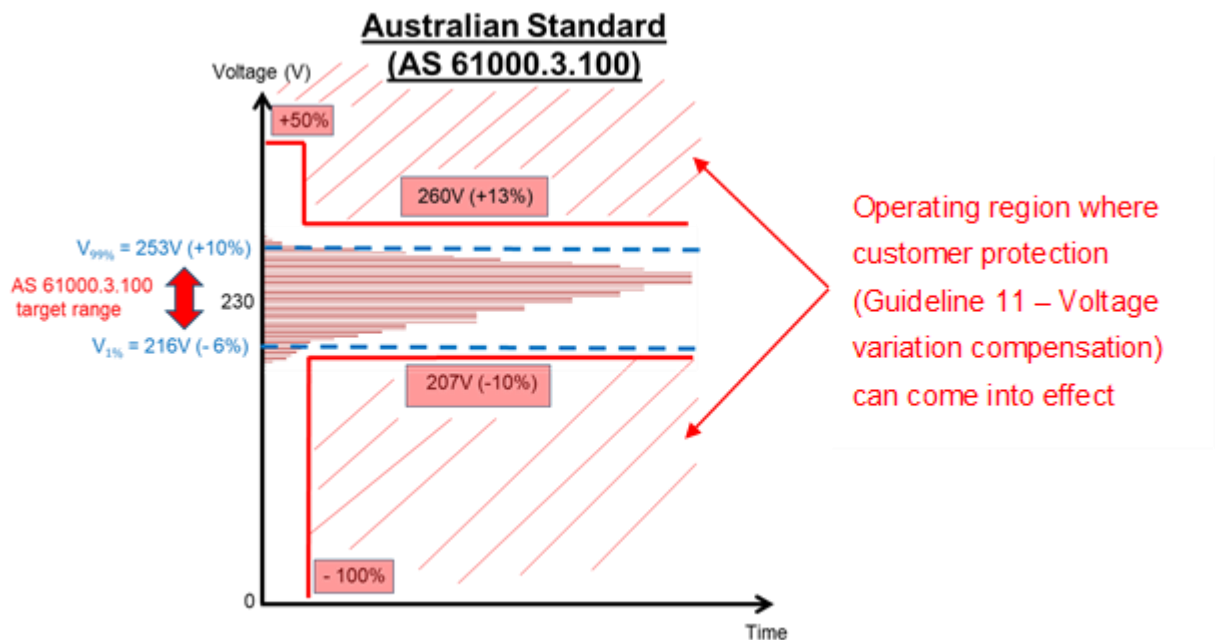
Schedule 2 (new)

(51) Insert a new Schedule entitled “Schedule 2” as follows:

SCHEDULE 2

This schedule is for information purposes. It provides additional information to assist with clarifying the operation of clause 4.2.2 (Table 1) and its interaction with clause 4.2.7.

Figure 1 - AS 61000.3.100 and the fixed limits of clause 4.2.2 (Table 1, row 2 parameters)



- Figure 1 illustrates the mechanics of clause 4.2.2, Table 1. The performance envelope as per AS 61000.3.100 (dashed blue) is overlaid with the parameters of Table 1, row 2 (solid red for single phase).
- *Distributors* would endeavour to operate the network within the dashed blue band area prescribed by AS 61000.3.100.
- If *distributor* supply performance exceeds the limits defined by Table 1, row 2 (solid red) and falls within the red shaded region, and customer equipment damage results, clause 4.2.7 of the code provides for compensation in accordance with Guideline 11 – Voltage variation compensation