



ELECTRICITY DISTRIBUTION CODE

May 2012

Version 7

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Revisions to this Code

Version No.	Date	Nature of Amendment
3	March 2008	To implement the Commission's final decision on the security of supply to the Melbourne central business district, the following: <ul style="list-style-type: none">▪ new clauses have been inserted: 3.1A, 3.5.1(c), 3.5.3A▪ clauses have been amended: 3.1(c), 19
4	August 2009	Insertion of clause 9.1.14 imposing an obligation on distributors to notify customers that they may be reassigned to a time of use tariff
5	April 2010	To implement the Commission's Review of Distributors' Communications in Extreme Supply Events Final Decision, the following: <ul style="list-style-type: none">▪ new clauses have been inserted: 5.6.3, 5.7, 8.2, 9.1.2A▪ clauses have been amended: 8 and 19
6	January 2011	To implement the Commission's Smart Meter Regulatory Review Final Decision, clause 6.3.4 has been amended
6	April 2011	To implement the Commission's Smart Meter Regulatory Review Final Decision: <ul style="list-style-type: none">▪ the following clauses have been amended: 6.3.4, 12.3, 12.4, 13.1.2 and 19▪ clause 9.1.13.1 has been inserted
7	May 2012	Clause 13 is amended for the avoidance of doubt, to make explicit that a distributor is not obliged to reconnect a customer at any time unless the distributor reasonably believes that it can do so safely.

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1 THIS CODE

1.1 Purpose

The purpose of this Code is to regulate the following activities so that they are undertaken in a safe, efficient and reliable manner:

- (a) the *distribution* of electricity by a *distributor* for *supply* to its *customers*;
- (b) the *connection* of a *customer's electrical installation* to the *distribution system*;
- (c) the *connection* of *embedded generating units* to the *distribution system*; and
- (d) the transfer of electricity between *distribution systems*.

1.2 Date of effect

This Code will take effect on 25 January 2010 with the exception of clauses 12.3(b) and (c), 12.4(b) and (c) and 13.1.2(c), which take effect on 1 April 2011. This Code replaces the Electricity Distribution Code published in February 2010 to take effect from 1 April 2010.

1.3 To whom and how this Code applies

- 1.3.1 Each *distributor* and each *retailer* must comply with this Code under its *distribution licence* or *retail licence* (as the case may be).
- 1.3.2 An *embedded generator* holding a *generation licence* must comply with this Code under its *generation licence*.
- 1.3.3 A person exempted from holding a *generation licence* must comply with the Code if a condition of the exemption requires the person to do so.
- 1.3.4 Each *customer* must comply with this Code to the extent that an obligation to do so is included as a term or condition in a contract for the *supply* of electricity by a *distributor* or the sale of electricity by a *retailer*, to the *customer* or in a *deemed distribution contract*.
- 1.3.5 A person who is exempt from holding a *distribution licence* must, if a condition of the exemption requires the person to comply with this Code, comply with this Code except for clauses 2.1.2, 2.2, 3.1(c), 3.2 to 3.5 (inclusive), 4.1, 4.2.6 to 4.2.7 (inclusive), 4.9, 5.1, 5.2, 5.4.1(a), 5.4.1(b), 6.1 to 6.4 (inclusive), 7, 9.1.1 to 9.1.6 (inclusive), 9.1.11, 9.1.12, 9.2, 9.3, 10.1.2(b) and 15. To the extent that a person who is exempt from holding a *distribution licence* is a *customer* of another *distributor*, the person must comply with this Code as provided in clause 1.3.4.
- 1.3.6 An agreement for the *distribution* of electricity between an *embedded generator* and a *distributor* or an agreement for the sale of electricity between an *embedded generator* and a *retailer* must include a term obliging the *embedded generator* to comply with this Code.

1.4 Deemed compliance

- 1.4.1 Despite clause 1.3, a *customer* is deemed to comply with an obligation under this Code unless the *customer* is expressly informed of the non-compliance or otherwise becomes aware of the non-compliance or could reasonably have been expected to be aware of the non-compliance.

- 1.4.2 Where a breach of the Code by a **distributor** is found to be caused by a **customer** not complying with the Code, the **distributor** is deemed to have complied with the Code unless the **distributor** does not act in accordance with clause 11 to seek the **customer's** compliance.

1.5 A tenant's obligations

- 1.5.1 Where a **domestic customer** has been advised of non-compliance with this Code in accordance with clause 11.2.2 and is unable to remedy the non-compliance as they are not the owner for the **supply address**, the **customer** must use **best endeavours** to have the owner or other person responsible for the **supply address** fulfil the obligation.
- 1.5.2 On request, the **customer** must provide the **distributor** with evidence that they have notified the owner, or other person responsible, of the non-compliance and of the requirement to comply with this Code.

1.6 Variation by written agreement

- 1.6.1 A **distributor** or a **customer** may seek a written agreement with the other party to expressly vary their respective rights and obligations under this Code.
- 1.6.2 If such an agreement is sought, the **customer** and the **distributor** must negotiate in good faith.
- 1.6.3 An agreement entered into under this clause must not reduce the rights or increase the obligations of the **customer** without giving benefits of equal value, whether financial or otherwise.
- 1.6.4 Where such an agreement is entered into, this Code is deemed to apply to:
- (a) that **distributor** in relation to that **customer**; and
 - (b) that **customer** in relation to that **distributor**,
- as varied by the agreement.

1.7 Amendment

- 1.7.1 The **Commission** may amend this Code on its own initiative or in response to a proposal by a **distributor**, the **Commission's** Customer Consultative Committee or other interested persons if it considers the amendment would better achieve the **Commission's** objectives in the *Essential Services Commission Act 2001* or the **Act** or any relevant statement of government policy.
- 1.7.2 The **Commission** will effect an amendment by applying the **Commission's** common seal to a document detailing the amendment.
- 1.7.3 Unless the **Commission** is satisfied on reasonable grounds that an amendment is urgently required, the **Commission** will not amend this Code unless and until:
- (a) all licensed **distributors**, all licensed **retailers**, the **Commission's** Customer Consultative Committee and other interested persons have been given a reasonable opportunity to make representations to the **Commission** concerning the amendment; and
 - (b) those representations have been taken into account.

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- 1.7.4 The date specified on the amendment must not be earlier than the date on which the amendment is made without prior agreement from all licensed *distributors*, all licensed *retailers* and the *Commission's* Customer Consultative Committee.
- 1.7.5 The *Commission* will notify all licensed *distributors*, all licensed *retailers*, the *Commission's* Customer Consultative Committee and other interested persons of any amendment the *Commission* makes to this Code.

1.8 Other applicable laws and codes

- 1.8.1 This Code does not set out comprehensively all rights and obligations of *distributors, retailers, customers* and *embedded generators* relating to the *supply* of electricity to a *customer's supply address* or to or from an *embedded generator's supply address*.
- 1.8.2 Deleted.

2 CONNECTION OF SUPPLY

2.1 Equipment

- 2.1.1 In respect of each *supply address* which is in a *distributor's distribution area*, the *distributor* must provide, install and maintain standard metering and necessary associated equipment, at a suitable location to be provided by the *customer* in respect of that *supply address*, unless the *customer's retailer* is *eligible* to choose and chooses a different service provider to install a *meter* and associated equipment in accordance with the applicable *metering code*.

2.2 New connection

Subject to clauses 2.3.1 and 2.6.1, where a *connection* request has been made by a *customer* or a *retailer* on behalf of a *customer*, a *distributor* must use *best endeavours* to *connect* the *customer* at a new *supply address* on the date agreed with the *customer* or with the *retailer* on behalf of the *customer*. Where no date is agreed, the *distributor* must *connect* the *supply address* within 10 *business days* after the request.

2.3 No energisation

- 2.3.1 A *distributor* must not *energise* a *customer's supply address* unless:
- (a) a request to do so is made by:
 - a *customer's retailer*;
 - a *customer*, if the *customer* is a *market customer* in the *wholesale market*;
 - (b) there is a relevant *emergency*; or
 - (c) *energisation* is otherwise expressly authorised or required by this Code or by law.
- 2.3.2 If a *customer* contacts a *distributor* to request *energisation* and the *customer* is not a *market customer* in the *wholesale market*, the *distributor* must:
- (a) advise the *customer* that the request must be made by the *customer's retailer*; and
 - (b) if the *customer* does not have a *retailer* for that *supply address*, the *distributor* must inform the *customer* in accordance with any applicable *guidelines* that the *customer* has a choice of *retailer*.

2.4 Connection without energisation

Subject to clause 2.6.1, where a *connection* request has been made by a *customer* and the *customer's supply address* cannot be *energised* due to the operation of clause 2.3.1(a), a *distributor* must use *best endeavours* to *connect* but not *energise* a new *supply address* on the date agreed with the *customer*. Where no date is agreed, the *distributor* must perform its obligations under this clause 2.4 within 20 *business days* after the request.

2.5 Previous connection

Where a *customer* only requires *energisation* and the *customer* provides *acceptable identification* to the *distributor* or the *customer's retailer*, a *distributor* must use

best endeavours to *energise* the *customer's supply address* within one *business day* of a request being made by a *customer's retailer* (or, where clause 2.3.1 permits, the *customer*) if such request has been made to the *distributor* (orally or in writing) by 3 p.m.

2.6 Conditions for connection

2.6.1 The *distributor's* obligations under clauses, 2.2 and 2.4 are subject to:

- (a) an adequate *supply* of electricity being available at the required *voltage* at the boundary of the new *supply address*;
- (b) a *Certificate of Electrical Safety* being provided to the *distributor* in respect of the *customer's electrical installation* at the *customer's supply address*;
- (c) the *customer* complying with clauses 3.3.2 and 3.3.3;
- (d) the *customer* complying with reasonable technical requirements required by the *distributor*; and
- (e) the *customer* providing *acceptable identification*.

2.6.2 Where a *distributor* is not obliged to comply with its obligation under clauses 2.2 or 2.4 by virtue of clause 2.6.1, the *distributor* must comply with such obligations as soon as practicable after the removal or elimination of the reason for which *connection* or *connection* without *energisation* was not made.

3 ASSET MANAGEMENT

3.1 Good asset management

EXPLANATORY NOTE: Clause 3.1 defines elements of good asset management which are designed to encourage innovation in the provision of **distribution** services and not prescribe **distributors'** practices in detail. The **Commission** may, however, undertake detailed examination of a **distributor's** practices if there is a substantial decline in the **quality** or **reliability of supply**, or evidence of a significant risk that such a decline may occur in the future when compared to the licensee's historical performance and its performance targets.

A **distributor** must use best endeavours to:

- (a) assess and record the nature, location, condition and performance of its **distribution system** assets;
- (b) develop and implement plans for the acquisition, creation, maintenance, operation, refurbishment, repair and disposal of its **distribution system** assets and plans for the establishment and **augmentation** of **transmission connections**:
 - to comply with the laws and other performance obligations which apply to the provision of **distribution** services including those contained in this Code;
 - to minimise the risks associated with the failure or reduced performance of assets; and
 - in a way which minimises costs to **customers** taking into account **distribution losses**; and
- (c) develop, test or simulate and implement contingency plans (including where relevant plans to strengthen the security of supply) to deal with events which have a low probability of occurring, but are realistic and would have a substantial impact on **customers**.

3.1A Melbourne CBD Security of Supply

3.1A.1 Without limiting clause 3.1, the **Melbourne CBD distributor** must take steps to strengthen the security of supply in the Melbourne CBD in accordance with this clause 3.1A.

3.1A.2 A **Melbourne CBD distributor** must not more than 30 days after receiving a notice from the Commission, submit to the Commission a plan that:

- (a) specifies strengthened security of supply objectives for the Melbourne **CBD** and a date or dates by which those objectives must be met;
- (b) specifies the capital and other works proposed by the **Melbourne CBD distributor** in order to achieve the security of supply objectives for the Melbourne CBD that are specified in the plan; and
- (c) meets the **regulatory test**.

3.1A.3 If the Commission:

- (a) is satisfied that a plan submitted under clause 3.1A.2 meets the requirements of clause 3.1A.2, that plan shall be the ***CBD security of supply upgrade plan***;
- (b) is not satisfied that a plan submitted under clause 3.1A.2 meets the requirements of clause 3.1A.2, the Commission may require the ***Melbourne CBD distributor*** to submit a revised plan within a reasonable period advised by the Commission, in which case clause 3.1A.2 and this clause 3.1A.3 will apply to that revised plan.

3.1A.4 The ***Melbourne CBD distributor*** may amend the ***CBD security of supply upgrade plan***:

- (a) without the approval of the Commission if the amendment does not prejudice the achievement of the security of supply objectives, or result in a reduction of the standard of works, that are specified in the ***CBD security of supply upgrade plan*** in effect immediately before that amendment; or
- (b) in any other case, only with the prior written approval of the Commission.

3.1A.5 The ***Melbourne CBD distributor*** must:

- (a) carry out the capital and other works specified in the ***CBD security of supply upgrade plan*** in accordance with that plan;
- (b) ensure that the Melbourne CBD distribution system meets the security of supply objectives specified in the ***CBD security of supply upgrade plan*** on and from the dates specified in the ***CBD security of supply upgrade plan***; and
- (c) otherwise implement the ***CBD security of supply upgrade plan*** in accordance with its terms.

3.2 Customer's electrical installation and equipment

3.2.1 A ***customer*** must use best endeavours to ensure that:

- (a) the ***customer's electrical installation*** and any equipment within it:
 - complies with this Code; and
 - is maintained in a safe condition; and
- (b) protection equipment in the ***customer's electrical installation*** is at all times effectively coordinated with the electrical characteristics of the ***distribution system***.

3.2.2 A ***customer*** must use best endeavours to:

- (a) ensure that the ***distribution system*** and the ***reliability*** and ***quality of supply*** to other ***customers*** are not adversely affected by the ***customer's*** actions or equipment;
- (b) not allow a ***supply*** of electricity to its ***electrical installation*** to be used other than at the ***customer's*** premises nor ***supply*** electricity to any other person except in accordance with the ***Act***;
- (c) not take electricity ***supplied*** to another ***supply address*** at the ***customer's supply address***;
- (d) not allow electricity ***supplied*** to the ***supply address*** to bypass the meter;
- (e) not allow electricity ***supplied*** under a ***domestic*** tariff to be used for non-***domestic*** purposes; and

- (f) not allow electricity *supplied* under a specific purpose tariff (such as an off peak storage water tariff) to be used for another purpose.

3.3 Distributor's equipment on customer premises

3.3.1 A *customer* must:

- (a) not interfere, and must use best endeavours not to allow interference with the *distributor's distribution system* including any of the *distributor's* equipment installed in or on the *customer's* premises; and
- (b) provide and maintain on the *customer's* premises any reasonable or agreed facility required by its *distributor* to protect any equipment of the *distributor*.

3.3.2 Provided official identification is produced by the *distributor's* representatives on request, a *customer* must provide to the *distributor's* representatives at all times convenient and unhindered access:

- (a) to the *distributor's* equipment for any purposes associated with the *supply*, metering or billing of electricity; and
- (b) to the *customer's electrical installation* for the purposes of:
 - the inspection or testing of the *customer's electrical installation* for the purpose of assessing whether the *customer* is complying with this Code; or
 - *connecting, disconnecting or reconnecting supply*,

and safe access to and within the *customer's* premises for the purposes described in this clause 3.3.2.

3.3.3 If necessary, the *customer* must provide safety equipment and appropriate safety instructions to representatives of the *distributor* to ensure safe access to the *customer's* premises.

3.3.4 In cases other than *emergencies*, a *distributor* must use best endeavours to access a *customer's* premises at a time which is reasonably convenient to both the *customer* and the *distributor*.

3.4 Transmission Connection Planning Report

3.4.1 Together with each other *distributor*, a *distributor* must submit to the *Commission* a joint annual report called the '*Transmission Connection Planning Report*' detailing how together all *distributors* plan to meet predicted *demand* for electricity *supplied* into their *distribution networks* from *transmission connections* over the following ten calendar years.

3.4.2 The report must include the following information:

- (a) the historical and forecast *demand* from, and capacity of, each *transmission connection*;
- (b) an assessment of the magnitude, probability and impact of loss of *load* for each *transmission connection*;
- (c) each *distributor's* planning standards;
- (d) a description of feasible options for meeting forecast *demand* at each *transmission connection* including opportunities for *embedded generation*

and **demand** management and information on land acquisition where the possible options are constrained by land access or use issues;

- (e) the availability of any contribution from each **distributor** including where feasible, an estimate of its size, which is available to **embedded generators** or **customers** to reduce forecast **demand** and defer or avoid **augmentation** of a **transmission connection**; and
- (f) where a preferred option for meeting forecast **demand** has been identified, a description of that option, including its estimated cost, to a reasonable level of detail.

3.4.3 Each **distributor** must publish the *Transmission Connection Planning Report* on its website and, on request by a **customer**, provide the **customer** with a copy. The **distributor** may impose a charge (determined by reference to its **approved statement of charges**) for providing a **customer** with a copy of the report.

3.5 Distribution System Planning Report

3.5.1 A **distributor** must submit to the **Commission** an annual report called the '*Distribution System Planning Report*' detailing how it plans over the following five calendar years:

- (a) to meet predicted **demand** for electricity **supplied** through its subtransmission lines, zone substations and high voltage lines;
- (b) to improve reliability to its **customers**; and
- (c) in the case of the **Melbourne CBD distributor** only, to implement any **CBD security of supply upgrade plan**.

3.5.2 In fulfilling the requirements of clause 3.5.1(a), the report must include the following information:

- (a) the historical and forecast **demand** from, and capacity of, each zone substation;
- (b) an assessment of the magnitude, probability and impact of loss of **load** for each subtransmission line and zone substation;
- (c) the **distributor's** planning standards;
- (d) a description of feasible options for meeting forecast **demand** including opportunities for **embedded generation** and **demand** management;
- (e) where a preferred option for meeting forecast **demand** has been identified, a reasonably detailed description of that option, including estimated costs; and
- (f) the availability of contributions from the **distributor** to **embedded generators** or **customers** to reduce forecast **demand** and defer or avoid **augmentation** of the **distributor's distribution system**.

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

- (a) a description of the nature, timing, cost and expected impact on performance of the **distributor's** reliability improvement programs; and
- (b) an evaluation of the reliability improvement programs undertaken in the preceding year.

- 3.5.3A In fulfilling the requirements of clause 3.5.1(c) (if applicable), the report must include the following information:
- (a) an outline of the capital and other works carried out in the preceding year in implementing the Melbourne ***CBD security of supply upgrade plan***;
 - (b) an evaluation of whether the relevant security of supply objectives specified in the Melbourne ***CBD security of supply upgrade plan*** have been achieved in the preceding year; and
 - (c) an outline of the capital and other works connected with the security of supply objectives proposed to be carried out in the following 5 years.
- 3.5.4 Each ***distributor*** must publish the *Distribution System Planning Report* on its website and, on request by a ***customer***, provide the ***customer*** with a copy. The ***distributor*** may impose a charge (determined by reference to its ***approved statement of charges***) for providing a ***customer*** with a copy of the report.

4 QUALITY OF SUPPLY

4.1 Supply frequency

4.1.1 *NEMMCO* is responsible for the frequency of each *distributor's distribution system*, having an obligation under the *National Electricity Rules* to use reasonable endeavours to maintain *system* frequency at 50 Hz, subject to the allowable variations set out in that Code.

4.1.2 A *distributor* has no obligation in respect of the frequency of its *distribution system*.

4.2 Voltage

4.2.1 Subject to clause 4.2.2, a *distributor* must maintain a nominal *voltage* level at the *point of supply* to the *customer's electrical installation* in accordance with the *Electricity Safety (Network Assets) Regulations 1999* or, if these regulations do not apply to the *distributor*, at one of the following standard nominal *voltages*:

- (a) 230V;
- (b) 400 V;
- (c) 460 V;
- (d) 6.6 kV;
- (e) 11 kV;
- (f) 22 kV; or
- (g) 66 kV.

4.2.2 Variations from the relevant standard nominal *voltage* listed in clause 4.2.1 may occur in accordance with Table 1.

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	
< 1.0	+10% - 6%	+14% - 10%	Phase to Earth +50%-100% Phase to Phase +20%-100%	6 kV peak
1-6.6	± 6 %	± 10%	Phase to Earth +80%-100%	60 kV peak
11	(± 10 %		Phase to Phase +20%-100%	95 kV peak
22	Rural Areas)			150 kV peak
66	± 10%	± 15%	Phase to Earth +50%-100% Phase to Phase +20%-100%	325 kV peak

4.2.3 A *distributor* must control over *voltage* in accordance with *IEC 60364-4-443*.

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- 4.2.4 A **distributor** must use best endeavours to minimise the frequency of **voltage** variations allowed under clause 4.2.2 for periods of less than 1 minute.
- 4.2.5 A **distributor** may send, in accordance with **IEC** 1000-2-2, signals for the following:
- (a) ripple control systems; or
 - (b) medium-frequency power-line carrier systems; or
 - (c) radio-frequency power-line carrier systems.
- 4.2.6 A **distributor** must monitor and record:
- steady state **voltages** and **voltage** variations at each zone substation in its **distribution system** which are outside the limitations specified in Table 1; and
 - steady state **voltages** and **voltage** variations of a duration of more than one minute which are outside the range of steady state **voltages** specified in Table 1 at the extremity of one feeder **supplied** from each of those zone substations.
- 4.2.7 Without limiting the liability of a **distributor** under any other provision of this Code, a **distributor** must compensate any person whose property is damaged due to **voltage** variations outside the limits prescribed by Table 1 in accordance with any relevant **guideline**¹.

4.3 Power factor

- 4.3.1 A **customer** must ensure that the **customer's demand** for **reactive power** does not exceed the maximum level allowed by applying the **power factor** limits specified in Table 2 to the **customer's** maximum **demand** for **apparent power** (measured in kVA) or **active power** (measured in kW).
- 4.3.2 If, for the purposes of clause 4.3.1, the **customer's** maximum **demand** for **apparent power** (R_{max}) is used, then the **customer's** allowable **demand** for **reactive power** (Q_{max}) is calculated using the formula $Q_{max} = R_{max} * (1 - pf_{min}^2)^{1/2}$, where pf_{min} is the minimum power factor specified in Table 2.
- 4.3.3 If, for the purposes of clause 4.3.1, the **customer's** maximum **demand** for **active power** (P_{max}) is used, then the **customer's** allowable **demand** for **reactive power** (Q_{max}) is calculated using the formula $Q_{max} = (P_{max} / pf_{min}) * (1 - pf_{min}^2)^{1/2}$, where pf_{min} is the minimum power factor specified in Table 2.
- 4.3.4 If the **customer's** network tariff includes a charge for the maximum **demand** for **apparent** or **active power**, then, for the purposes of this clause 4.3, the **customer's** maximum **demand** for **apparent** or **active power** is to be taken to be the maximum **demand** for which it was most recently billed.
- 4.3.5 Despite clause 4.3.1, a **customer** must use best endeavours to keep the **power factor** of its **electrical installation** within the relevant range set out in Table 2 when the **customer's demand** for **active** or **apparent power** is at or more than 50% of the **customer's** maximum **demand**.

¹ Clause 4.2.7 should be read in conjunction with clause 16(c) of this Code.

Table 2

POWER FACTOR LIMITS						
Supply Voltage in kV	Power Factor Range for Customer Maximum Demand and Voltage					
	Up to 100 kVA		Between 100 kVA - 2 MVA		Over 2 MVA	
	Minimum Lagging	Minimum Leading	Minimum Lagging	Minimum Leading	Minimum Lagging	Minimum Leading
< 6.6	0.75	0.8	0.8	0.8	0.85	0.85
6.6 11 22	0.8	0.8	0.85	0.85	0.9	0.9
66	0.85	0.85	0.9	0.9	0.95	0.98

4.4 Harmonics

- 4.4.1 A **distributor** must ensure that the harmonic levels in the **voltage** at **point of common coupling** nearest to a **customer's point of supply** comply with the levels specified in Table 3.

Table 3

VOLTAGE HARMONIC DISTORTION LIMITS			
Voltage at point of common coupling	Total harmonic distortion	Individual voltage harmonics	
		Odd	Even
< 1 kV	5%	4%	2%
> 1 kV and ≤ 66 kV	3%	2%	1%

- 4.4.2 Subject to clause 4.4.1, a **distributor** must comply with the **IEEE** Standard 519-1992 '*Recommended Practices and Requirements for Harmonic Control in Electrical Power Systems*'.
- 4.4.3 A **customer** must keep harmonic currents below the limits specified in Table 4 and otherwise comply at its nearest **point of common coupling** with the **IEEE** Standard 519-1992 '*Recommended Practices and Requirements for Harmonic Control in Electrical Power Systems*'.

Table 4

CURRENT HARMONIC DISTORTION LIMITS						
I _{sc} /I _L	Maximum Harmonic Current Distortion in Percent of I _L					Total Harmonic Distortion
	Individual Harmonic Order “h” (Odd Harmonics)					
	<11	11 ≤ h <17	17 ≤ h < 23	23≤ h < 35	35 ≤ h	
<20*	4.0%	2.0%	1.5%	0.6%	0.3%	5.0%
20<50	7.0%	3.5%	2.5%	1.0%	0.5%	8.0%
50<100	10.0%	4.5%	4.0%	1.5%	0.7%	12.0%
100<1000	12.0%	5.5%	5.0%	2.0%	1.0%	15.0%
>1000	15.0%	7.0%	6.0%	2.5%	1.4%	20.0%

Notes:

1. Even harmonics are limited to 25% of the odd harmonics listed above.
2. Current distortions that result in a DC offset, e.g. half-wave converters, are not allowed.
3. *All power generation equipment is limited to these values of current distortion, regardless of actual I_{sc}/I_L .
4. I_{sc} = maximum short-circuit current at **point of common coupling**.
5. I_L = maximum **demand** load current (fundamental frequency component) at **point of common coupling**.

4.5 Inductive interference

- 4.5.1 A **distributor** must ensure that inductive interference caused by its **distribution system** is within the limits specified in AS/NZ 2344-1997.

4.6 Negative sequence voltage

- 4.6.1 Subject to clause 4.6.2 a **distributor** must maintain the negative sequence **voltage** at the **point of common coupling** to a **customer's** three phase **electrical installation** at a level at or less than 1%.
- 4.6.2 The negative sequence **voltage** may vary above 1% of an applicable **voltage** level, but not beyond 2% for a total of 5 minutes in every 30 minute period.

4.7 Load balance

- 4.7.1 A **customer** must ensure that the current in each phase of a three phase **electrical installation** does not deviate from the average of the three phase currents:
- (a) by more than 5% for a standard nominal **voltage** up to 1 kV; and
 - (b) by more than 2% for a standard nominal **voltage** above 1 kV.
- 4.7.2 Despite clause 4.7.1, deviations are permissible for periods of less than 2 minutes:
- (a) up to 10% for a standard nominal **voltage** up to 1 kV; and
 - (b) up to 4% for a standard nominal **voltage** above 1 kV.

4.8 Disturbing loads

- 4.8.1 A *distributor* must maintain *voltage* fluctuations at the *point of common coupling* at a level no greater than the levels specified in AS/NZ 61000.3.5:1998 and AS/NZ 61000.3.7:2001 as appropriate.
- 4.8.2 Subject to clause 4.8.3, a *customer* must ensure that the *customer's* equipment does not cause *voltage* fluctuations at the *point of common coupling* greater than the levels specified in AS/NZ 61000.3.5:1998 and AS/NZ 61000.3.7:2001 as appropriate.
- 4.8.3 If two or more *customers' electrical installations* are *connected* at the same *point of common coupling*, the maximum permissible contribution to *voltage* fluctuations allowable from each *customer* is to be determined in proportion to their respective maximum *demand*, unless otherwise agreed.

4.9 Monitoring quality of supply

Each *distributor* must monitor *quality of supply* in accordance with the principles applicable to good asset management as contemplated by clause 3.1.

5 RELIABILITY OF SUPPLY

5.1 Distributor's targets

5.1.1 Before 31 December each year, a *distributor* must publish on its website, and in a newspaper circulating in the area in which its *distribution system* is located, its targets for *reliability of supply* for the following year.

5.1.2 As a minimum, these targets must include:

- (a) for *customers supplied* from *CBD feeders, urban feeders, short rural feeders* and *long rural feeders*:
 - average minutes off *supply* per *customer* (*SAIDI*) due to planned *interruptions*;
 - average minutes off *supply* per *customer* (*SAIDI*) due to unplanned *interruptions*;
 - average number of unplanned *interruptions* per *customer* (*SAIFI*), excluding *momentary interruptions*;
 - average number of *momentary interruptions* per *customer* (*MAIFI*); and
 - average duration of unplanned *interruptions* (*CAIDI*); and
- (b) estimates of the number of *customers* the *distributor* expects will be entitled to payments under clause 6.3.

5.2 Reliability of supply

A *distributor* must use best endeavours to meet targets required by the *Price Determination* and targets published under clause 5.1 and otherwise meet reasonable *customer* expectations of *reliability of supply*.

5.3 A distributor's right to interrupt supply

A *distributor* may interrupt *supply* at any time for the following reasons:

- (a) planned maintenance, repair, or *augmentation* of the *distribution system*;
- (b) unplanned maintenance or repair of the *distribution system* in circumstances where, in the opinion of the *distributor*, the *customer's electrical installation* or the *distribution system* poses an immediate threat of injury or material damage to any person, property or the *distribution system*;
- (c) to shed *energy* because the total *demand* for electricity at the relevant time exceeds the total *supply* available;
- (d) as required by *NEMMCO, VENC Corp* or the *system operator*;
- (e) the installation of a new *supply* to another *customer*;
- (f) in the case of an *emergency*; or
- (g) to restore *supply* to a *customer*.

5.4 Unplanned interruptions

5.4.1 In the case of an unplanned *interruption* or an *emergency*, a *distributor* must:

- (a) within 30 minutes of being advised of the *interruption* or *emergency*, or otherwise as soon as practicable, make available, by way of a 24 hour telephone service and by way of frequently updated entries on a prominent part of its website, information on the nature of the *interruption* and an estimate of the time when *supply* will be restored or when reliable information on restoration of *supply* will be available;
- (b) provide options for *customers* who call the service to be directly connected to a telephone operator if required; and
- (c) use best endeavours to restore the *customer's supply* as soon as possible making allowance for reasonable priorities.

5.4.2 Wherever reasonable and practicable, a *distributor* must provide prior information to *customers* who may be interrupted by *load* shedding.

5.5 Planned interruptions

5.5.1 In the case of a planned *interruption*, the *distributor* must provide each affected *customer* with at least 4 *business days* written notice of the *interruption*. The notice must:

- (a) specify the expected date, time and duration of the *interruption*; and
- (b) include a 24 hour telephone number for enquiries.

5.5.2 The *distributor* must use best endeavours to restore the *customer's supply* as quickly as possible.

5.6 Special needs

5.6.1 Where a *customer* or a *retailer* provides a *distributor* with confirmation from a registered medical practitioner or a hospital that a person residing at the *customer's supply address* requires a life support machine, the *distributor* must:

- (a) register the *supply address* as a life support machine *supply address*;
- (b) not *disconnect supply* to the *customer's supply address* while the *supply address* remains registered as a life support machine *supply address*; and
- (c) give the *customer*:
 - at least 4 *business days* written notice of any planned *interruption* to *supply* at the *supply address* (the 4 *business days* to be counted from the *date of receipt* of the notice), unless a longer period of notice is requested by the *customer* and provided that the longer period of notice:
 - is reasonably necessary; and
 - can be accommodated by the *distributor*;
 - advice to assist the *customer* to prepare a plan of action in case an unplanned *interruption* should occur; and
 - an emergency telephone contact number.

5.6.2 A *customer* whose *supply address* has been registered by a *distributor* in accordance with clause 5.6.1, must inform the *distributor* or the *customer's retailer* if the person for whom the life support machine is required vacates the *supply address* or no longer requires the life support machine. The *distributor* may then

cancel the registration of the *supply address* as a life support machine *supply address*.

- 5.6.3 At least once in each year a **distributor** must take all reasonable steps to ensure the accuracy and completeness of its register kept under clause 5.6.1(a).

5.7 Informing Government Departments

- 5.7.1 In a *widespread supply event*, a *distributor* must:

- (a) inform the Victorian Department of Human Services and the Victorian Department of Health of the street address of any *point of supply* (unless the *distributor* is satisfied that it is a non-residential *point of supply*) immediately upon forming the view that a *sustained interruption* at that location will persist for more than 24 hours
- (b) provide the information under subclause (a) to the Department:
 - within 28 hours of a *sustained interruption* occurring and for every 12 hours thereafter until the *sustained interruption* has been resolved; and
 - in a manner and format agreed from time to time between the Department and the *distributor*.

6 GUARANTEED SERVICE LEVELS

EXPLANATORY NOTE: Clause 6 specifies the minimum guaranteed service levels required to be provided by *distributors*. *Distributors* may undertake to provide enhanced guaranteed service levels.

6.1 Appointments

- 6.1.1 Where a *distributor* makes an appointment with a *customer*, if the *distributor* is more than 15 minutes late for the appointment, the *distributor* must pay the *customer* \$20.
- 6.1.2 Where a *distributor* makes an appointment with a *customer*, the *distributor* must specify a period during which the *distributor* will attend (“an appointment window”):
- no greater than 2 hours where the *customer* or their representative is required, or has advised their choice, to be in attendance; and
 - no greater than 1 day where the *customer* or their representative is not required, and does not advise their choice, to be in attendance, unless an alternative appointment window has been agreed to by the *customer* or their representative.
- 6.1.3 A request from a *retailer* for a *special meter read* relating to the move in of a new *customer* to an existing premise is not considered to be an appointment for the purposes of this clause 6.1 unless the *customer* or their representative is required, or has advised their choice, to be in attendance.
- 6.1.4 An appointment window must be specified to the *customer* or their representative by no later than 5 pm on the *business day* prior to the appointment.

6.2 Failure to supply

Where a *distributor* does not *supply* electricity to a *customer’s supply address* on the day agreed with the *customer*, the *distributor* must pay to the *customer* \$50 for each day that it is late, up to a maximum of \$250.

6.3 Supply restoration and low reliability payments

- 6.3.1 A *distributor* must make a *supply restoration payment* to a *customer* of:
- (a) \$100 where the *customer* experiences more than 20 hours of unplanned *sustained interruptions* per year; or
 - (b) \$150 where the *customer* experiences more than 30 hours of unplanned *sustained interruptions* per year; or
 - (c) \$300 where the *customer* experiences more than 60 hours of unplanned *sustained interruptions* per year;
- not counting the period of an event to which clause 6.3.3 or 6.3.4 applies.
- 6.3.2 A *distributor* must make a *low reliability payment* to a *customer* of:
- (a) \$100 where the *customer* experiences more than 10 unplanned *sustained interruptions* per year; or

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- (b) \$150 where the **customer** experiences more than 15 unplanned *sustained interruptions* per year; or
- (c) \$300 where the **customer** experiences more than 30 unplanned *sustained interruptions* per year; and
- (d) \$25 where the **customer** experiences more than 24 *momentary interruptions per year*; or
- (e) \$35 where the **customer** experiences more than 36 *momentary interruptions per year*,

not counting an event to which clause 6.3.3 or 6.3.4 applies.

6.3.3 Despite clauses 6.3.1 and 6.3.2:

- (a) a *supply restoration payment* is not required to be made by a **distributor**:
 - for a planned *interruption* effected with the prior agreement of a **customer**; or
 - for an unplanned *interruption* which is not restored within the time specified in clause 6.3.1 at the request of the **customer**.
- (b) a planned *interruption* requested by a **customer** is not to be counted in determining whether a *low reliability payment* must be made by a **distributor**.

6.3.4 Also despite clauses 6.3.1 and 6.3.2, on application from a **distributor** the **Commission** will excuse the **distributor** from making a *supply restoration payment* or a *low reliability payment* if the **Commission** is satisfied that the obligation to make the payment arises from an *event* which relates to:

- (a) *load* shedding due to a shortfall in generation, but excluding a shortfall in *embedded generation* that has been contracted to provide network support, except where prior approval has been obtained from the **Commission**;
- (b) *supply interruptions* caused by a failure of the shared transmission network;
- (c) *supply interruptions* caused by a failure of *transmission connection* assets, to the extent that the *interruptions* were not due to inadequate planning of *transmission connections*;
- (d) *supply interruptions* on a day where the unplanned *interruption* frequency exceeds the threshold as set out in the following table:

DISTRIBUTION BUSINESS	Daily unplanned interruption frequency threshold (effective 1 January 2011)
Jemena Electricity Networks Ltd	0.120
CitiPower Pty	0.066
Powercor Australia Ltd	0.110
SPI Electricity Pty Ltd	0.190
United Energy Distribution Pty Ltd	0.100

- (e) where prior approval has been obtained from the *Commission*, *load* shedding due to a shortfall in demand response initiatives.

6.3.5 A *distributor* who wishes to exclude an event under clause 6.3.4 must apply in writing to the *Commission*, within 30 *business days* of the event occurring identifying:

- (a) the relevant event;
- (b) the impact of the event on the *distributor's* reliability performance;
- (c) the proposed extent of the exclusion; and
- (d) reasons explaining why the *Commission* should consider the event as an exclusion.

6.4 Time for payment

Any payments required to be made by the *distributor* to a *customer* under this clause 6 must be paid by the *distributor* as soon as practicable after the obligation arises under clauses 6.1 or 6.2 and as soon as practicable following the end of the year in which the obligation arises under clause 6.3.

7 EMBEDDED GENERATORS

7.1 Agreement to connect

- 7.1.1 A *distributor* must ensure that its *distribution system* is able to receive a *supply* of electricity from an *embedded generating unit connected* to its *distribution system*, in accordance with an agreement with the *embedded generator* on the terms and conditions of dispatch, *connection* and *disconnection*.
- 7.1.2 If such an agreement is sought by an *embedded generator*, the *distributor* and *embedded generator* must negotiate in good faith.
- 7.1.3 Despite clause 7.1.1, if two or more *embedded generating units* are *connected* in parallel, their obligations under clauses 7.5, 7.6, 7.7 and 7.8 of this Code apply to the *point of common coupling* and the maximum permissible contribution of each *embedded generating unit* is to be determined in proportion to their capacity, unless otherwise agreed.
- 7.1.4 For the avoidance of doubt, a *distributor* is not liable for any loss of income by an *embedded generator* for being unable to receive a *supply* of electricity from an *embedded generating unit connected* to its *distribution system* because of any supply interruption arising under clause 5.3 of this Code.

7.2 Supply frequency

An *embedded generator* must ensure that the *embedded generating unit* is capable of continuous uninterrupted operation at the *system* frequency of 50 Hz and permitted variations in accordance with clause 4.1.1.

7.3 Co-ordination and compliance of embedded generating units

An *embedded generator* must ensure that:

- (a) the *embedded generating unit*, and any equipment within it that is *connected* to a *distribution system*:
- complies with this Code;
 - complies with *Electricity Safety Act 1998* and the associated Safety Regulations;
 - complies with all relevant Australian Standards;
 - is maintained in a safe condition; and
- (b) protection equipment is at all times effectively coordinated with the electrical characteristics of the *distribution system*.
- (c) A distributor may disconnect, or request the owner of an *embedded generator* to disconnect, any *embedded generating unit* from the *distribution system* if the *embedded generating unit* breaches *Electricity Safety Act 1998*, any safety regulations, or is not in compliance with the relevant Australian Standards.
- (d) If requested under (c), the owner of an *embedded generator* must disconnect the *embedded generating unit* from the *distribution system*.

7.4 Minimum requirements for embedded generating units (synchronous type)

7.4.1 An *embedded generating unit* over 1 MW must have:

- (a) an *excitation control system* including *voltage* regulator; and
- (b) a *governor system* responsive to *system* frequency changes.

7.4.2 An *embedded generator* must ensure that each of its *embedded generating units* with a nameplate rating over 10 MW complies with the *National Electricity Rules* requirements for *generating units* with a nameplate rating over 30 MW with regard to:

- (a) response to disturbances;
- (b) safe shutdown without external electricity *supply*;
- (c) restart following loss of external electricity *supply*; and
- (d) frequency responsiveness and governor stability.

7.5 Negative sequence voltage

An *embedded generator* must ensure that an *embedded generating unit's* contribution to the negative sequence *voltage* at the point of *connection* between the *embedded generating unit* and the *distribution system* is less than 1%.

7.6 Harmonics

7.6.1 An *embedded generator* must ensure that an *embedded generating unit's* contribution to the harmonic distortion levels in the *supply voltage* at the *point of connection* between the *embedded generating unit* and the *distribution system* is within the limits specified in Table 3.

7.6.2 An *embedded generator* must comply with *IEEE* Standard 519-1992 'Recommended Practices and Requirements for Harmonic Control in Electrical Power Systems' and the current harmonic limits in Table 4.

7.7 Inductive interference

An *embedded generator's embedded generating unit* must not cause inductive interference above the limits specified in AS/NZ 2344-1997.

7.8 Fault levels

An *embedded generator* must design and operate its *embedded generating unit* so that it does not cause fault levels in the *distribution system* to exceed the levels specified in Table 5.

Table 5

DISTRIBUTION SYSTEM FAULT LEVELS		
Voltage Level kV	System Fault Level MVA	Short Circuit Level kA
66	2500	21.9
22	500	13.1
11	350	18.4
6.6	250	21.9
<1	36	50.0

7.9 Register for embedded generators

A *distributor* must maintain a record of all *embedded generators* connected to its networks after 1 October 2007. As a minimum, the register must contain the name of the original owner, or the person who have a relevant connection agreement with the *distributor*, the associate National Metering Identifier (NMI) of the *embedded generator* and the connection address. All historical records maintained by the *distributor* prior to 1 October 2007 must be transferred to the register of *embedded generators* where available.

8 EMERGENCY RESPONSE PLANS

8.1 Distributors' own plans

A *distributor* must develop and periodically test emergency response plans in co-ordination with relevant organisations.

8.2 Single industry spokesperson protocol

A *distributor* must comply with the protocol, which has been agreed to with *AEMO* from time to time, published by *AEMO* dated October 2009 titled "Single Industry Spokesperson Process in Victoria" and must co-operate with *AEMO*, other *distributors* and the Government Department administering the *Act* in ongoing development, amendment and implementation of that protocol.

9 PROVISION OF INFORMATION

9.1 Distributor's obligations

9.1.1 A *distributor* must provide information about its targets under clause 5.1 to a *customer* or a *retailer* on request.

9.1.2 A *distributor* must promptly provide a Customer Charter to each *customer* and the *Commission*:

- (a) on request; and
- (b) at least once every 5 years,

and to each *customer* at the time the *customer* is *connected* at the *customer's supply address*.

9.1.2A Prior to the end of December of each year, a *distributor* must notify each of its *customers* in writing about its role in relation to maintenance of *supply*, *emergencies* and restoration after *interruptions* and the *distributor's* contact details and website address.

9.1.3 The *distributor's* Customer Charter must summarise all current rights, entitlements and obligations of *distributors* and *customers* relating to the *supply* of electricity, including:

- (a) the identity of the *distributor*; and
- (b) the *distributor's* guaranteed service levels,

and other aspects of their relationship under this Code and other applicable laws and codes.

9.1.3A A *distributor* must provide written communication with the owners of *small embedded generators* contained on the *distributors* respective register required under clause 7.8 on initial connection and entry into the register, and at no more than three-yearly intervals to advise the owners of *small embedded generators* their obligations under this Code and the circumstances in which the *distributor* has the right to disconnect unsafe *small embedded generators*.

9.1.4 On request by a *customer*, a *distributor* must give to a *customer* a copy of this Code (which, if so requested, must be a large print copy). The *distributor* may impose a charge (determined by reference to its *approved statement of charges*) for this. A *distributor* must also inform and provide an explanation in plain English to a

customer of any amendment to this Code that materially effects the *customer's* rights, entitlements and obligations as soon as practicable after this Code is amended.

- 9.1.5 On request by a *customer* or by a *retailer* on behalf of a *customer*, the *distributor* must provide a *customer* with information on the *quality of supply* provided to that *customer*. That information must be provided free of charge and within 10 *business days* of the *customer's* request (unless it is not practical to provide the information within that time in which case the *distributor* must inform the *customer* within 10 *business days* of the steps it is taking to provide such information).
- 9.1.6 On request by a *customer* or by a *retailer* on behalf of a *customer*, a *distributor* must provide information on *reliability of supply* including where applicable an explanation for any *interruption* to *supply* (whether planned or unplanned) to the *customer's supply address*. If the *customer* requests that such information or explanation be in writing, it must be given in writing within 20 *business days* of the request.
- 9.1.7 If a *distributor* is required to undertake a specific test under clause 9.1.5 to determine a *customer's quality of supply*, a *distributor* may charge a fee for this service in accordance with its *approved statement of charges*.
- 9.1.8 If the results of the test under clause 9.1.7 show that a *distributor* is not complying with its obligations under the Code, it must:
- (a) take action in accordance with 11.2.1 of this Code; and
 - (b) refund any fee paid by the *customer* for the test.
- 9.1.9 On request by a *customer* or by a *retailer* on behalf of a *customer*, a *distributor* must provide the *customer* or the *customer's electrician* with reasonable information on the *distributor's* requirements in relation to any proposed new *electrical installation* of the *customer* or changes to the *customer's* existing *electrical installation*, including advice about *supply* extensions.
- 9.1.10 On request by a *customer* or by a *retailer* on behalf of a *customer*, a *distributor* must provide the *customer* with advice on:
- (a) the facilities required to protect the *distributor's* equipment;
 - (b) how the *customer* should use the electricity *supplied* at the *customer's supply address* so that it does not interfere with the *distributor's distribution system* or with *supply* to any other *electrical installation*; and
 - (c) where the *customer* may obtain a copy of the standards which are given force by this Code.
- 9.1.11 A *distributor* must install, maintain and make available to a *retailer* a system which facilitates the timely electronic transfer of information between the *retailer* and the *distributor* in respect of the *connection, disconnection or reconnection* of *supply* to a *customer's supply address* as permitted under this Code or the *Energy Retail Code*.
- 9.1.12 A *distributor* must provide access to multi-lingual services to meet the reasonable needs of its *customers*.
- 9.1.13 When *disconnecting* the *supply address* of a *customer* who is vacating or has vacated the *supply address*, a *distributor* must leave at the *supply address* a document provided by the *Commission* which sets out:

- (a) to whom the occupant must address any request to **connect** the **supply address**;
- (b) what the occupant's options are for entering into a contract for the sale of electricity with a **retailer**; and
- (c) a list of current **retailers**.

9.1.13.1 Clause 9.1.13 does not apply where the **disconnection** occurs remotely and the **distributor's** 24 hour telephone number is set out on the meter

9.1.14 The **distributor** must twice advise each **customer**, who has an annual electricity consumption of less than 20 MWh, that their electricity network tariffs in the future may be set on the basis of **time of use tariffs**. The first advice must be sent at least 20 **business days** prior to the meter exchange and the second advice at least 4 **business days** prior to the meter exchange.

The words to be inserted by the **distributor** in the notification are:

"The rollout of smart meters may result in your tariff being changed in future to a time of use tariff. Your retailer will notify you of any change and implications for your retail prices and charges."

9.2 Customer's obligations

A **customer** must inform its **distributor** or its **retailer** as soon as practicable if there is any:

- (a) proposed change to wiring or plant or equipment in the **customer's electrical installation** which may affect the **quality** of the **supply** of electricity to any other person;
- (b) change to the major purpose for which the electricity is used at the **customer's supply address**;
- (c) change affecting access to a **distributor's** equipment located at the **customer's supply address**.
- (d) major change to the amount of electricity likely to be used by the **customer** at the **customer's supply address**.

9.3 Planning information

9.3.1 A **customer, embedded generator or retailer** must, on request from a **distributor**, provide details of **loads connected** or planned to be **connected** to the **distribution system** which are required for the purpose of the **distributor** planning its **distribution system**, including:

- (a) the location of **load** in the **distribution system**;
- (b) existing **loads**;
- (c) existing **load** profile;
- (d) changes in **load** scheduling;
- (e) planned outages;
- (f) forecasts of **load** growth;
- (g) anticipated new **loads**; and

- (h) anticipated *redundant loads*.

9.3.2 A *distributor* must on request from another *distributor* provide such information concerning a *point of common coupling* as the other *distributor* may reasonably require for the purpose of the integrated planning of the *system*.

9.4 Confidentiality

9.4.1 A *distributor* to whom *confidential information* is provided:

- (a) must not disclose or give access to that *confidential information* to any person except as permitted by this Code; and
- (b) must only use or reproduce the *confidential information* for the purpose for which it was provided under this Code or a purpose permitted under this Code, or a purpose consented to by the discloser.

9.4.2 This clause 9.4 does not prevent:

- (a) **(public domain):** the disclosure, use or reproduction of information if the relevant information is at the time generally and publicly available other than as a result of breach of confidence by the *distributor* or a related body corporate (as defined by the Corporations Act 2001 (Cth)) who wishes to disclose, use or reproduce the information or any person to whom the *distributor* has disclosed the information;
- (b) **(employees and advisers):** the disclosure of information to:
 - an employee or officer of the *distributor* or a related body corporate (as defined in the Corporations Act 2001 (Cth)) of the *distributor* subject to any relevant *guideline*; or
 - a legal or other professional adviser, auditor or other consultant of the *distributor*, which require the information for the purposes of the Code, or for the purpose of advising the *distributor*, or for the purpose of planning or augmenting the *distribution system*;
- (c) **(consent):** disclosure, use or reproduction of information with the informed written consent of the person or persons who provided the relevant information under the Code;
- (d) **(law):** the disclosure, use or reproduction of information to the extent required by law or by a lawful requirement of:
 - any government or governmental body, authority or agency having jurisdiction over a *distributor* or its related bodies corporate; or
 - any stock exchange having jurisdiction over a *distributor* or its *related bodies corporate*;
- (e) **(disputes):** the disclosure, use or reproduction of information if required in connection with legal proceedings, arbitration, expert determination or other dispute resolution mechanism, or for the purpose of advising a person in relation thereto;
- (f) **(trivial):** the disclosure, use or reproduction of information which is trivial in nature;
- (g) **(safety):** the disclosure of information if required to protect the safety of personnel or equipment;

- (h) **(potential investment):** the disclosure, use or reproduction of information by or on behalf of a *distributor* to the extent reasonably required in connection with the *distributor's* financing arrangements, investment in that *distributor* or a disposal of that *distributor's* assets;
 - (i) **(regulator):** the disclosure of information to the ACCC or any other regulatory authority having jurisdiction over a *distributor*, pursuant to this Code or otherwise; or
 - (j) **(aggregate sum):** the disclosure, use or reproduction of information as an unidentifiable component of an aggregate sum.
- 9.4.3 In the case of a disclosure under clause 9.4.2(b) or 9.4.2(h), prior to making the disclosure the *distributor* who wishes to make the disclosure must inform the proposed recipient of the confidentiality of the information and must take appropriate precautions to ensure that the recipient keeps information confidential in accordance with the provisions of this clause and does not use the information for any purpose other than that permitted under clause 9.3.

10 COMPLAINTS AND DISPUTE RESOLUTION

- 10.1.1 A *distributor* must handle a *complaint* by a *customer* in accordance with the relevant *Australian Standard* on Complaints Handling or the '*Benchmarks for Industry Based Customer Dispute Resolution Schemes*'.² The *distributor* must include information on its *complaint* handling processes in the *distributor's* Customer Charter.
- 10.1.2 When a *distributor* responds to a *customer's complaint*, the *distributor* must inform the *customer*:
- (a) that the *customer* has a right to raise the *complaint* to a higher level within the *distributor's* management structure; and
 - (b) if, after raising the *complaint* to a higher level the *customer* is still not satisfied with the *distributor's* response, the *customer* has a right to refer the *complaint* to the Energy and Water Ombudsman (Victoria) Ltd. or other relevant external dispute resolution body. This information must be given in writing.
- 10.1.3 A *distributor* must include information about the Energy and Water Ombudsman (Victoria) Ltd. on any *disconnection* warning issued by the *distributor*.
- 10.1.4 A person who is exempt from holding a *distribution licence* need not comply with this clause 10 where a process of dispute resolution is specified in the applicable exemption.

² Released by the federal Minister for Customs and Consumer Affairs, August 1997

11 NON-COMPLIANCE WITH THE CODE

11.1 Distributor's obligation to remedy

If a *distributor* breaches this Code, it must remedy that breach as soon as practicable.

11.2 Notification to customers

11.2.1 If a *distributor* becomes aware of its failure to comply with any obligation under the Code, which can reasonably be expected to have a material, adverse impact on a *customer*, it must:

- (a) notify each *customer* likely to be adversely affected by the non-compliance within 5 *business days*;
- (b) undertake an investigation of the non-compliance as soon as practicable but in any event within 20 *business days*; and
- (c) advise the *customer* of the steps it is taking to comply.

11.2.2 If a *distributor* becomes aware of a breach of this Code by a *customer*, which is not of a trivial nature, the *distributor* must notify the *customer*, in writing and as far as possible using plain English, of:

- (a) details of the non-compliance and its implications, including any impact on the *distributor* and other *customers*;
- (b) actions that the *customer* could take to remedy the non-compliance;
- (c) a reasonable time period in which compliance must be demonstrated;
- (d) any consequences of non-compliance; and
- (e) the *distributor's* procedure for handling *complaints*.

11.3 Customer's obligation to remedy

A *customer* must use best endeavours to remedy any non-compliance with this Code within the time period specified in any notice of non-compliance sent by a *distributor* in accordance with clause 11.2.2.

12 DISCONNECTION OF SUPPLY

12.1 Non-compliance

A *distributor* may *disconnect supply* to a *customer's supply address* if:

- (a) the *customer* has not fulfilled an obligation to comply with this Code as notified under clause 11.2.2; and
- (b) the *distributor* has given the *customer 5 business days'* written notice of *disconnection* (such notice to be in addition to the notice referred to in clause 11.2.2); and
- (c) the *customer* fails to comply with the notice or enters into an arrangement to comply but fails to comply with that arrangement.

12.2 Health, safety or emergency

12.2.1 A *distributor* may *disconnect supply* to a *customer's supply address* if *supply* otherwise would potentially endanger or threaten to endanger the health or safety of any person or the environment or an element of the environment or if there is otherwise an *emergency*.

12.2.2 Except in the case of an *emergency*, or where there is a need to reduce the risk of fire or where relevant regulations require otherwise, a *distributor* must not *disconnect a customer's supply address* under clause 12.2.1 unless the *distributor* has:

- (a) given the *customer* written notice of the reason;
- (b) allowed the *customer 5 business days* from the *date of receipt* of the notice to eliminate the cause of the potential danger; and
- (c) at the expiration of those *5 business days* given the *customer* by way of a written *disconnection* warning another *5 business days* notice of its intention to *disconnect the customer* (the *5 business days* is to be counted from the *date of receipt* of the notice).

12.3 Retailer's request

- (a) A *distributor* must *disconnect supply* to a *customer's supply address* if the *customer's retailer* has requested *disconnection*.
- (b) Upon the receipt of a valid request by the *customer's retailer*, where the *distributor* is able to *disconnect supply* to the *customer's supply address* by de-energising the *customer's supply address* remotely and reasonably believes that it can do so safely, subject to clause 12.6, the *distributor* must use its best endeavours to *disconnect supply* to the *customer's supply address* within two hours.
- (c) Paragraph (b) does not apply to a request for *disconnection* at a scheduled time.

12.4 Customer's request

- (a) A *distributor* must *disconnect supply* to a *customer's supply address* if the *customer* has requested *disconnection* and must use best endeavours to *disconnect supply* in accordance with the *customer's* request.

- (b) Upon such a request, where the *distributor* is able to *disconnect supply* to the *customer's supply address* by de-energising the *customer's supply address* remotely and reasonably believes that it can do so safely, subject to clause 12.6, the *distributor* must use its best endeavours to *disconnect supply* to the *customer's supply address* within two hours of a request being validated by the *distributor*.
- (c) Paragraph (b) does not apply to a request for *disconnection* at a scheduled time.

12.5 Illegal supply

A *distributor* may *disconnect supply* to a *customer's supply address* immediately if:

- (a) the *supply* of electricity to a *customer's electrical installation* is used other than at the *customer's* premises, except in accordance with the *Act*;
- (b) a *customer* takes at the *customer's supply address* electricity *supplied* to another *supply address*;
- (c) a *customer* tampers with, or permits tampering with, the meter or associated equipment; or
- (d) a *customer* allows electricity *supplied* to the *customer's supply address* to bypass the meter.

12.6 No disconnection

12.6.1 A *distributor* must not *disconnect supply* to a *customer's supply address* except in the case of an *emergency* or under clause 12.5 or otherwise as agreed with a *customer*:

- (a) after 2 pm (for a *domestic customer*) or 3 pm (for a *business customer*) on a weekday; or
- (b) on a Friday, a weekend, *public holiday* or on the day before a *public holiday*.

12.6.2 Despite any other provision of this Code, a *distributor* must not *disconnect supply* to a *customer*:

- (a) if the *customer's supply address* is registered as a life support machine *supply address* except in the case of an *emergency*; or
- (b) for non compliance under clause 12.1 if:
 - the *customer* is a tenant and is unable to remedy the non-compliance as it is not the owner of the *supply address*, and has met the requirements of clause 1.5; or
 - there is a dispute between the *customer* and the *distributor* which has been notified by the *customer* under clause 10 and is still being dealt with by the *distributor* under that clause, or is the subject of proceedings before the Energy and Water Ombudsman (Victoria) Ltd. or other relevant external disputes resolution body; or
- (c) if the *distributor* reasonably considers that *disconnecting supply* would in any way immediately endanger the health or safety of any person.

13 RECONNECTION OF SUPPLY

13.1.1 If a *distributor* has *disconnected* a *customer* as a result of:

- (a) non-compliance with this Code under clause 12.1 and within 10 *business days* of *disconnection* the *customer* has remedied the non-compliance;
- (b) danger under clause 12.2.1 and within 10 *business days* of *disconnection* the *customer* has eliminated the cause of the danger; or
- (c) a request from a *retailer*,

on request by the *customer* or by a *retailer* on behalf of the *customer*, but subject to other applicable laws and codes and the *customer* paying any *reconnection* charge (determined by reference to its *approved statement of charges*), the *distributor* must *reconnect* the *customer*.

13.1.2 Subject to clause 13.1.4, if a *customer*, or a *retailer* on behalf of a *customer*, makes a request for *reconnection* under clause 13.1.1 to a *distributor*:

- (a) before 3 pm on a *business day*, the *distributor* must *reconnect* the *customer* on the day of the request; or
- (b) after 3 pm on a *business day*, the *distributor* must *reconnect* the *customer* on the next *business day* or if the request also is made before 9 pm and the *customer* pays any applicable additional after hours *reconnection* charge, on the day requested by the *customer* or *retailer* and
- (c) where the *distributor* is able to *reconnect* the customer by re-energising the *customer's supply address* remotely, subject to paragraphs (a) and (b), the *distributor* must use its best endeavours to *reconnect* the *customer* within two hours of a request being validated by the *distributor*.

13.1.3 A *distributor* and a *customer* may agree that later times are to apply to the *distributor*.

13.1.4 A *distributor* is not obliged to *reconnect* a *customer* under clause 13.1.2 unless the *distributor* reasonably believes that it can do so safely.

14 ELECTRICITY CUSTOMER METERING CODE

A *distributor* and a *customer* must comply with the *Electricity Customer Metering Code*.

15 ADDITIONAL DISTRIBUTION CHARGES

A *distributor* may only impose a charge where it is expressly provided for in a term or condition set out in the *distributor's distribution licence* (or a regulatory instrument with which the *distributor* must comply by virtue of the licence) or in this Code.

16 LIABILITY

- (a) A **distributor** must not include any term or condition in its **deemed distribution contract** with a **customer** the effect of which is to limit the liability of the **distributor** to the **customer**:
 - (1) for any breach by the **distributor** of the contract; and
 - (2) for any negligence by the **distributor** in relation to the contract.
- (b) Clause 16(a) does not prevent the inclusion of a term or condition in the **deemed distribution contract**:
 - (1) of the sort contemplated by section 68A of the *Trade Practices Act* 1974 (Cth) or section 97 of the *Goods Act* 1958 (Vic) or any other similar statutory provision;
 - (2) under which the **customer** acknowledges the extent of the **distributor's** responsibility for the quality and reliability of electricity **supply** under their contract; or
 - (3) confirming that, under the contract, there is no variation or exclusion the operation of section 117 of the **Act** or section 78 of the *National Electricity Law* (if that is the case).
- (c) A **business customer** must take reasonable precautions to minimise the risk of loss or damage to any equipment, premises or business of the **business customer** which may result from poor quality or reliability of electricity **supply**.

17 INDEMNITY

A **distributor** must not include an indemnity or other term or condition in its **deemed distribution contract** with a **customer** the effect of which is to entitle the **distributor** to recover from the **customer** in respect of:

- (a) any breach by the **customer** of the contract; or
- (b) any negligence by the **customer** in relation to the contract,

any greater amount than that which, under the common law (including in equity) or statute, the **distributor** is entitled to as compensation for the **customer's** breach of contract or negligence.

18 CONTRACTUAL FORCE MAJEURE

- (a) If but for this clause 18 a *distributor* or a *customer* would commit a *force majeure breach* of their *deemed distribution contract*:
 - (1) the obligations of the *distributor* or the *customer* under their contract are suspended to the extent to which they are affected by the *force majeure event* as long as the *force majeure event* continues; and
 - (2) the *distributor* or the *customer* must give the other prompt notice of that fact including full particulars of the *force majeure event*, an estimate of its likely duration, the obligations affected by it and the extent of its effect on those obligations and the steps taken to remove, overcome or minimise its effects.
- (b) For the purposes of clause 18(a)(2), if the effects of a *force majeure event* are widespread the *distributor* will be deemed to have given a *customer* prompt notice if it makes the necessary information available by way of a 24 hour telephone service within 30 minutes of being advised of the *force majeure event* or otherwise as soon as practicable.
- (c) A *distributor* may agree with a *customer* that the *distributor* is not to have the benefit of clause 18(a) in respect of any *force majeure event*.
- (d) A *distributor* or a *customer* claiming a *force majeure event* must use its best endeavours to remove, overcome or minimise the effects of the *force majeure event* as quickly as possible. However, this does not require the *distributor* or the *customer* to settle any industrial dispute in any way it does not want to.
- (e) Nothing in this clause 18 nor in any term or condition of a *distributor* and *customer's deemed distribution contract* which is not inconsistent with this clause 18 varies or excludes the operation of section 117 of the *Act* or section 78 of the *National Electricity Law*.

19 DEFINITIONS

In this Code:

+50% means 1.5 times the relevant *voltage*.

-100% means 0 *Volts*.

+20% means 1.2 times the relevant *voltage*.

+80% means 1.8 times the relevant *voltage*.

acceptable identification –in relation to:

- (a) a **domestic customer** includes one of the following: a driver's licence, a current passport or other form of photographic identification, a Pensioners Concession Card other current entitlement card issued by the Commonwealth or a birth certificate;
- (b) a **business customer** which is a sole trader or a partnership includes one of the forms of identification for a **domestic customer** for each of the individuals that conduct the business; or
- (c) a **business customer** which is a company, the company's Australian Company Number or Australian Business Number.

Act means the *Electricity Industry Act 2000*.

active energy means the time integral for the product of *voltage* and the in-phase component of current flow.

active power means the rate at which *active energy* is *supplied*.

apparent power means the square root of the sum of the squares of the *active power* and the *reactive power*.

approved statement of charges has the same meaning as an approved statement within the meaning given to that term in the *distributor's distribution licence*.

augmentation in relation to the *transmission connection* assets or the *distributor's distribution system*, means the process of upgrading the *transmission connection* assets or the *distribution system* by replacing or enhancing existing plant and equipment or by adding new plant or equipment and includes modifying any of the *distributor's distribution fixed assets*.

AEMO means the Australian Energy Market Operator Limited, ACN 072 010 327

AER means the *Australian Energy Regulator*, which is established under section 44AE of the *Trade Practices Act 1974 (Cth)*.

Australian Standard or "AS" or "AS/NZ" means a standard published by Standards Australia.

avoided costs means the payment described in clause 6.7(i) of the *price determination*.

best endeavours in relation to a person, means the person must act in good faith and do what is reasonably necessary in the circumstances.

business day means a day, other than a Saturday or Sunday, or a **Public Holiday** appointed under the *Public Holidays Act 1993*.

business customer means a **customer** who is not a **domestic customer**.

CAIDI means the ‘*Customer Average Interruption Duration Index*’ which is the average time taken for **supply** to be restored to a **customer** when an unplanned **interruption** has occurred, calculated as the sum of the duration of each **customer interruption** (in minutes), divided by the total number of **customer interruptions** (**SAIDI** divided by **SAIFI**). Unless otherwise stated **CAIDI** excludes **momentary interruptions**.

CBD means a central business district.

CBD feeder means a **feeder supplying** Melbourne **CBD** as determined from zone substation coverage maps and as agreed by the **Commission**.

CBD security of supply upgrade plan means a plan approved under clause 3.1A.3(a) as amended from time to time in accordance with clause 3.1A.4.

Certificate of Electrical Safety means a certificate of that name as required under the *Electrical Safety Act 1998*.

Commission means the Essential Services Commission established by the *Essential Services Commission Act 2001* (Vic).

complaint means a written or verbal expression of dissatisfaction about an action, a proposed action, or a failure to act by a **distributor**, its employees or contractors. This includes failure by a **distributor** to observe its published practices or procedures.

confidential information means any information about a **customer** or information provided to the **distributor** under an obligation of confidence.

connect means the making and maintaining of contact between the electrical systems of two persons allowing the **supply** of electricity between those systems and includes **energisation** unless expressly excluded and **reconnect** has a corresponding meaning.

customer, unless the context otherwise permits or requires, means a person whose **electrical installation** is **connected** to the **distributor’s distribution system** or who may want to have its **electrical installation connected** to the **distributor’s distribution system** and includes an **embedded generator**.

date of receipt in relation to a notice given by a **distributor**, means:

- (a) if the **distributor** hands the notice, or sends a facsimile of the notice, to the **customer**, the date the **distributor** does so;
- (b) if the **distributor** leaves the notice at the **customer’s supply address**, the date the **distributor** does so;
- (c) if the **distributor** gives the notice by post, a date 2 business days after the date the **distributor** posts the notice.

deemed distribution contract means the contract deemed to have been entered between the **distributor** and each “retail **customer**” by section 40A(5) of the *Act*.

demand means the *active power* or *apparent power* consumed by a *customer* in respect of an *electrical installation* integrated over a fifteen or thirty minute period.

distributor means a person who holds a *distribution licence* under the *Act* or in respect of those obligations under this Code which are not excluded under clause 1.3.5, a person who is exempt from holding a *distribution licence* under the *Act*.

distribute in relation to electricity, means to distribute electricity using a *distribution system*.

distribution area means the area in which a *distributor* is licensed, or exempt from the requirement to hold a licence, to *distribute* and *supply* electricity under the *Act*.

distribution fixed assets means any fixed assets used by a *distributor* to *supply* electricity including those which have been allocated to the *distributor* by an allocation statement made under section 117 of the *Electricity Industry (Residual Provisions) Act* 1993 and dated 29 September 1993, even though they may be located in another *distributor's distribution area*.

distribution licence means a licence to *distribute* and *supply* electricity granted under the *Act*.

distribution losses means electrical energy losses incurred in *distributing* electricity over a *distribution system*.

distribution system in relation to a *distributor*, means a system of electric lines and associated equipment (generally at nominal *voltage* levels of 66 kV or below) which that *distributor* is licensed to use to distribute electricity for supply under its *distribution licence* or exemption granted under the *Act*, excluding *public lighting assets*.

domestic customer means a *customer* who purchases electricity principally for personal, household or domestic use at the relevant *supply address*.

electrical installation means any electrical equipment at a *customer's* site that is *connected* to, but not part of, a *distribution system*.

electrician means:

- (a) an electrical mechanic licensed under the *Electricity Safety (Installations) Regulations* 1999 ; or
- (b) an electrical contractor registered under *the Electrical Safety (Installations) Regulations* 1999.

Electricity Customer Metering Code means the industry code of that name certified by the *Commission*.

Energy Retail Code means the Code of that name setting out terms and conditions relevant to contracts for the *supply* or sale of electricity certified by the *Commission* under section 36(1) of the *Act*.

Electricity System Code means the industry code of that name which is certified by the *Commission*.

eligible means eligible under any relevant applicable law or code including any listed in appendix 1.

embedded generating unit means a ***generating unit*** which is ***connected*** to a ***distribution system***.

embedded generator means a generator whose ***embedded generating units*** are ***connected*** to a ***distribution system***.

emergency means an emergency due to the actual or imminent occurrence of an event which in any way endangers or threatens to endanger the safety or health of any person or which destroys or damages, or threatens to destroy or damage, any property.

energisation means the act of the insertion of a fuse or the operation of switching equipment which results in there being a non-zero ***voltage*** beyond a ***point of supply***.

energy means active and reactive electrical energy.

excitation control system in relation to an ***embedded generating unit***, means the automatic control system that provides the field excitation for the ***embedded generating unit*** (including excitation limiting devices and any power system stabiliser).

feeder means an electric line and associated equipment at a normal ***voltage*** level between 6.6kV and 22kV which a ***distributor*** uses to ***distribute*** electricity.

force majeure breach means a breach by a ***distributor*** or a ***customer*** of their ***deemed distribution contract*** which, but for clause 18, the ***distributor*** or the ***customer*** would commit arising only through a ***force majeure event***.

force majeure event means an event outside the reasonable control of a ***distributor*** or a ***customer*** (as the case may be).

generating unit means an electricity generator and related equipment essential to its operation, which together function as a single unit.

generation licence means a licence to generate electricity for ***supply*** and sale granted under the ***Act***.

generator means a person who holds, or is exempt from holding, a ***generation licence*** under the ***Act***.

governor system means the automatic control system which regulates energy input (for example, steam, gas or water) into the turbine of an ***embedded generating unit***.

guideline means a guideline published by the ***Commission***.

IEC means the International Electrotechnical Commission, Switzerland.

IEEE means the Institute of Electrical and Electronic Engineers, New York.

impulse voltage means a wave of ***voltage*** which, without appreciable oscillations, rises rapidly to a maximum value and falls, usually less rapidly, to zero with small, if any, loops of opposite polarity.

interruption means the temporary unavailability of ***supply*** from the ***distribution network*** to a ***customer***, but does not include ***disconnection*** under clause 12.

interval meter means a meter that is capable of recording ***energy*** consumption in intervals of 30 minutes or less.

long rural feeder means a **feeder**, which is not a **CBD feeder** or an **urban feeder**, with total length greater than 200 km.

low reliability payment means the payment described in clause 6.3.

load means a **customer's demand** for electricity at a **supply point**.

MAIFI means the 'Momentary Average Interruption Frequency Index' which is the total number of **momentary interruptions** that a **customer** could, on average, expect to experience in a year, calculated as the total number of **momentary interruptions**, divided by the total number of **connected customers** averaged over the year.

market customer has the meaning given to the term in the **NER** (which at the date of this Code is "a **customer** who has classified any of its **loads** as a **market load** and who is also registered with NEMMCO as a Market Customer under Chapter 2 [of the **NER**]").

Melbourne CBD distributor means a distributor whose distribution system includes the Melbourne **CBD**.

metering code means the laws, codes or other regulatory instruments about metrology applicable to a particular **customer** which may include one or more of the:

- (a) **National Electricity Rules**;
- (b) **Metrology Procedure**; and
- (c) **Electricity Customer Metering Code**.

momentary interruption means an **interruption** continuing for a period of less than one minute.

Metrology Procedure means the Victorian Electricity Supply Industry Metrology Procedure published under the **National Electricity Rules** as amended from time to time.

National Electricity Rules or **NER** has the meaning given to it in the *National Electricity (Victoria) Act 2005*.

NEMMCO means the National Electricity Market Management Company Limited ACN 072 010 327.

point of common coupling means the nearest point in a **distributor's distribution system** that **connection** is made between:

- (a) the **distributor's distribution system** and another **distributor's distribution system**; or
- (b) two or more **customers' electrical installations**.

point of connection in relation to an **embedded generating unit**, means the point at which the **embedded generating unit** is **connected** to the **distributor's distribution system**.

point of supply

- (a) in relation to a low **voltage** electric line, means:

- (i) in the case of an underground line (unless sub-paragraph (iii) applies), the point at which that line crosses the boundary of the land; and
 - (ii) in the case of an overhead line (unless sub-paragraph (iii) applies), the first point of **connection** of that line on the land, being either:
 - A) if the line is carried onto the land by one or more poles, the first pole on the land carrying that line;
 - B) if the line is **connected** directly to premises on that land, that **connection** to the premises; or
 - C) if it is not possible to determine a point of **supply** in accordance with sub-sub-paragraph (A) or (B), the point at which the line crosses the boundary of the land; and
 - (iii) in the case of a line **connected** to a **distributor's** assets, the point at which the line is **connected** to a **distributor's** assets; and
- (b) in relation to a high **voltage** electric line, means the point agreed between the relevant **distributor** and the **customer supplied** by that electric line.

power factor means the ratio of **active power** to **apparent power**.

price determination means the **Commission's** Electricity Distribution Price Determination 2006-10 (as re-determined from time to time) or any other price determination in force.

public holiday means a public holiday appointed under the *Public Holidays Act* 1993.

public lighting assets means all assets of a **distributor** which are dedicated to the provision of public lighting including lamps, luminaries, mounting brackets and poles on which the fixtures are mounted, supply cables and control equipment (for example, photoelectric cells and control circuitry) but not including the **distributor's** protection equipment (for example, fuses and circuit breakers).

quality of supply means the measure of the ability of the **distribution system** to provide **supply** that meets the **voltage** quality requirements of this Code.

reactive energy means the time integral of the product of **voltage** and the out of phase component of current flow.

reactive power means the rate at which **reactive energy** is **supplied**.

reliability of supply means the measure of the ability of the **distribution system** to provide **supply** to **customers**.

redundant load means a **load connected** to the **distribution system** that is planned to be permanently **disconnected**.

Regulatory test means the regulatory test developed and published by the **Australian Energy Regulator (AER)** from time to time pursuant to clause 5.6.5A of the *National Electricity Rules (NER)*.

retailer means a person who holds, or is exempt from holding, a **retail licence** under the *Act*.

retail licence means a licence granted under the *Act* to sell electricity otherwise than through the wholesale electricity market.

rural area means an area **supplied** electricity by an electric line which:

- (a) forms part of a **distribution system**; and
- (b) is a single feeder the length of which measured from the relevant zone substation is at least 15 kms.

SAIDI means the ‘System Average Interruption Duration Index’ which is the total minutes, on average, that a **customer** could expect to be without electricity over a specific period of time, calculated as the sum of the duration of each **customer interruption** (in minutes), divided by the total number of **connected customers** averaged over the year.

SAIFI means the ‘System Average Interruption Frequency Index’ which is the number of occasions per year when each **customer** could, on average, expect to experience an unplanned **interruption**, calculated as the total number of **customer interruptions**, divided by the total number of **connected customers** averaged over the year. Unless otherwise stated, SAIFI excludes **momentary interruptions**.

short rural feeder means a **feeder**, which is not a **CBD feeder** or an **urban feeder**, with total length less than 200 km.

small embedded generator means an **embedded generator** meeting either or both of the following conditions:

- (a) the **embedded generator** has or proposes to have **embedded generating units** at a **point of connection** with power transfer capability of not more than 2kW;
- (b) the **embedded generator** has or proposes to have **embedded generating units** that meet the standards for the grid connection of energy systems via inverters prescribed in Australian Standard AS4777.

special meter read has the meaning given to it in the *Electricity Customer Metering Code*.

supply in relation to electricity, means the delivery of electricity.

supply address means the address where the **customer** is being **supplied** with electricity.

supply restoration payment means the payment described in clause 6.3.

sustained interruption means an **interruption** of duration longer than one minute.

system means the network for the generation, transmission and **distribution** of electricity in the eastern states of Australia.

system operator means a person who **NEMMCO** has appointed as its agent under Chapter 4 of the *National Electricity Rules* and who is registered as a **system operator** with **NEMMCO** under Chapter 2 of the *National Electricity Rules*.

time of use network tariff means a distribution tariff as determined in accordance with the **Commission’s** or the **AER’s** prevailing distribution determination (as the case may be) or transmission tariff as determined in accordance with the **AER’s**

prevailing transmission determination that has varying components for the time that electricity consumption occurs.

total harmonic distortion means the ratio of the root-mean-square of the harmonic content to the root-mean-square of the fundamental quantity, expressed as a percent of the fundamental.

transmission connection means those parts of an electricity transmission network which are dedicated to the ***connection*** of ***customers*** at a single point, including transformers, associated switchgear and plant and equipment.

urban feeder means a ***feeder***, which is not a ***CBD feeder***, with load density greater than 0.3 MVA/km

VENCorp means the Victorian Energy Networks Corporation established under Part 8 of the *Gas Industry Act* 2001.

voltage means (except in the case of impulse voltage) the root mean square (RMS) of the phase to phase voltage.

wholesale market means the market for wholesale trading in electricity operated by ***NEMMCO*** under the ***National Electricity Rules***.

widespread supply event means any event where the Single Industry Spokesperson has been activated by AEMO in accordance with the “Single Industry Spokesperson Process in Victoria” referred to under clause 8.2

20 INTERPRETATION

- 20.1.1 In deciding whether a person has used best endeavours, regard will be had to all relevant factors including whether the person has acted in good faith and has done what is reasonably necessary in the circumstances.
- 20.1.2 In this Code, a reference to a request or an agreement made by a **customer** includes a request or an agreement by an authorised agent or representative of the **customer**.
- 20.1.3 In this Code, unless the context otherwise requires:
- (a) headings are for convenience only and do not affect the interpretation of this Code;
 - (b) words importing the singular include the plural and vice versa;
 - (c) an expression importing a natural person includes any company, partnership, trust, joint venture, association, corporation or other body corporate and any governmental agency and vice versa.;
 - (d) a reference to any thing includes a part of that thing;
 - (e) a reference to a clause or appendix is to a clause or appendix of this Code;
 - (f) a reference to any statute includes all statutes varying, consolidating, re-enacting, extending or replacing them and a reference to a statute includes all regulations, proclamations, ordinances, by-laws and determinations issued under that statute;
 - (g) a reference to a document or a provision of a document includes an amendment or supplement to, or replacement of or novation of, that document or that provision of that document;
 - (h) a reference to a person includes that person's executors, administrators, successors, substitutes (including, without limitation, persons taking by novation) and permitted assigns;
 - (i) other parts of speech and grammatical forms of a word or phrase defined in this Code have a corresponding meaning;
 - (j) a period of time:
 - which dates from a given day or the day of an act or event is to be calculated exclusive of that day; or
 - which commences on a given day or the day or an act or event is to be calculated inclusive of that day;
 - (k) a reference to:
 - time is a reference to Standard Time within the meaning of the *Summer Time Act 1972* and not Summer Time within the meaning of that Act;
 - a day is a reference to a period commencing immediately after midnight and ending the following midnight;
 - a month is a reference to a calendar month; and
 - a year is a reference to a calendar year.

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- (l) an event which is required under this Code to occur on or by a stipulated day which is not a ***business day*** may occur on or by the next ***business day***.