

Attachment 5.06

Reliability and Performance Licence Conditions for DNSP, Minister for Energy, commencing 1 July 2014

May 2014





The Hon Anthony Roberts MP

Minister for Resources and Energy
Special Minister of State

V13/4655

Mr Vince Graham
Chief Executive Officer
Networks NSW
PO Box 6366
BLACKTOWN NSW 2148

RECEIVED

13 JAN 2014

Dear Mr Graham

I write to you as Chief Executive Officer of Networks NSW and of the three electricity distributors in regard to the review of the standards for design and reliability performance imposed on the electricity distributors as part of their licence conditions. I thank you for your organisation's assistance in conducting the review.

As you are aware, reliability standards were introduced in August 2005 (revised 1 December 2007) through licence conditions, pursuant to clause 6(1)(b) of Schedule 2 of the Act. The recent review outcome is a recommendation to amend the licence conditions aimed at more efficiently meeting the reliability targets.

I have now completed the required consultation with the Treasurer, the Minister administering the *Protection of the Environment Administration Act 1987* and your organisation and have considered any matters raised.

Accordingly, I have advised IPART (the licencing regulator) that the Reliability & Performance Licence Conditions for Electricity Distributors attached are imposed as conditions of licences held by electricity distributors, with effect on and from 1 July 2014.

Should you have any questions in relation to this issue, please feel free to contact me, or your officers may contact Adrian Amey, Manager Supply & Networks Policy, Energy Branch, NSW Trade & Investment, Division of Resources & Energy, on telephone 8281 7449.

Yours sincerely

Anthony Roberts MP
Minister for Resources and Energy
Special Minister of State

**RELIABILITY AND PERFORMANCE
LICENCE CONDITIONS
for
ELECTRICITY DISTRIBUTORS**

**THE HON ANTHONY ROBERTS MP
MINISTER FOR RESOURCES & ENERGY**

**COMMENCEMENT DATE
1 JULY 2014**

EXPLANATORY NOTE

Purpose of the reliability and performance conditions:

On 1 August 2005, the then Minister for Energy imposed additional conditions pursuant to item 6 (1) (b) of Schedule 2 of the *Electricity Supply Act 1995* relating to reliability performance on licences held by electricity distributors under the *Electricity Supply Act 1995*.

On 1 December 2007 following a review by the *Minister*, the conditions were varied with effect on and from that date.

Following a further review by the *Minister*, the conditions were varied with effect on and from 1 July 2014.

The purpose of the revised conditions is to facilitate the delivery of a reliable and cost-effective supply of electricity. The conditions impose reliability and performance standards on electricity distributors.

Electricity distributors will be required to report to the *Minister* to ensure compliance with the conditions. The standards are as follows:

Network overall reliability standards:

The purposes of the *network overall reliability standards* are to:

- define minimum average reliability performance, by *feeder type*, for a distributor across its distribution network; and
- provide a basis against which a distributor's reliability performance can be assessed.

Individual feeder standards:

The purposes of the *individual feeder standards* are to:

- specify minimum standards of reliability performance for individual *feeders*;
- require a distributor to focus continually on improving the reliability of its *feeders where economically justifiable*; and
- enable the reliability performance of individual *feeders* to be monitored over time.

Customer service standards:

The purpose of the *customer service standards* is to provide financial recognition to eligible *customers* who have experienced poor supply reliability from a distributor.

Commencement:

This document sets out the revised licence conditions relating to reliability and performance that are to take effect from 1 July 2014.

Relationship with existing conditions and other obligations:

These conditions are additional to conditions that the *Minister* has previously imposed on licences held by electricity distributors and licence conditions imposed under the *Electricity Supply Act 1995* and other regulatory instruments. These conditions replace the design, reliability and performance licence conditions imposed by the Minister on 1 August 2005 (as amended on 1 December 2007).

These conditions are also supplementary to obligations imposed on electricity distributors by the *Electricity Supply Act 1995*, the *Electricity Supply (General) Regulation 2001*, the *Electricity Supply (Safety and Network Management) Regulation 2008*, and other regulatory instruments.

Network management generally:

Network management requires long-term planning, investment decisions and prioritisation of work to ensure, as far as is reasonably practicable, an economic and reliable supply. The *licence holder* has discretion to plan its investment for compliance with these licence conditions to suit its individual circumstances.

These conditions do not reduce or alter the responsibility of *licence holders* under their Network Management Plans to assure delivery of a safe and reliable supply. Key operating and risk management requirements to meet reliability outcomes also need to be addressed when developing network management plans.

Enforcement:

These conditions are enforceable under the *Electricity Supply Act 1995* by *IPART* and the *Minister*. These conditions are not intended to create standards which are enforceable against a *licence holder* by individual *customers*.

Consultation:

Before amending the existing conditions the *Minister* undertook consultation with key stakeholders including the *licence holders* and the *Minister* administering the *Protection of the Environment Administration Act 1991*. The *Minister* has given due consideration to submissions received during consultation.

Reporting:

Performance and audit reports will be required under these licence condition. Reliability performance reporting will continue to be implemented under the *Electricity Supply (Safety and Network Management) Regulation 2008*.

Review:

The *Minister* may, at his discretion, review the licence conditions at any time in accordance with the *Electricity Supply Act 1995*.

RELIABILITY AND PERFORMANCE CONDITIONS

14. .Repealed

15. Network overall reliability standards

- 15.1 A *licence holder* must not, when *excluded interruptions* are disregarded, exceed in a financial year the SAIDI average standards that apply to its feeder types.
- 15.2 A *licence holder* must not, when *excluded interruptions* are disregarded, exceed in a financial year the SAIFI average standards that apply to its feeder types.

16. Individual feeder performance

- 16.1 This condition applies where one or more of the *feeders* of a *licence holder* exceed the relevant *individual feeder standards* for any 12 month period ending at the end of March, June, September or December, when *excluded interruptions* are disregarded.
- 16.2 A *licence holder* must:
- (a) investigate the causes for each *feeder* exceeding the *individual feeder standards*;
 - (b) by the end of the quarter following the quarter in which the *feeder* first exceeded the *individual feeder standards*, complete an investigation report identifying the causes and as appropriate, any action required to improve the performance of each *feeder* to the *individual feeder standards*;
 - (c) complete any operational actions identified in the investigation report to improve the performance of each *feeder* to the *individual feeder standards* by the end of the third quarter following the quarter in which each *feeder* first exceeded the *individual feeder standards*;
 - (d) except as permitted by condition 16.2(e), where the investigation report identifies actions, other than operational actions, required to improve the performance of each *feeder* to the *individual feeder standards*, develop a project plan, including implementation timetable, and commence its implementation by the end of the second quarter following the quarter in which the *feeder* first exceeded the *individual feeder standards*;
 - (e) consider non-network strategies which provide reliable outcomes for *customers*. Where found by the investigation report to be equal or more cost-effective than the lowest cost feasible network option such strategies shall be adopted rather than network augmentation options;
 - (f) ensure that the implementation timetable for the network project plan or alternative non-network solutions is as short as is reasonably practicable;
 - (g) where all reasonable steps to improve supply reliability have been taken, the costs of further actions to rectify the non-compliance must be subject to a cost benefit analysis. Where such analysis does not provide a positive benefit, no further action will be taken to improve the *feeder's* performance and the ongoing non-conformance with the *individual feeder standards* will be reported to the *Minister*.

16.3 The investigation report is to include a documented rectification plan where action is found to be justified in order to improve the performance of a *feeder* to the *individual feeder* standards. The action that is required may involve work to other network elements, or may involve only repair or maintenance work where capital works are not warranted and take into account any one-off events and previous performance trends.

17. Customer service standards

17.1 A *licence holder* must pay the sum of \$80 to a *customer* where the *licence holder* exceeds the *interruption duration standard* at the *customer's* premises and the *customer* has made a claim to the *licence holder* within three months of the interruption.

17.2 A *licence holder* must pay the sum of \$80 to a *customer* where the *licence holder* exceeds the *interruption frequency standard* at the *customer's* premises in a *financial year* and the *customer* has made a claim to the *licence holder* within three months of the end of the *financial year* to which the interruptions relate.

17.3 A *licence holder* must determine a claim for payment under condition 17, and notify the *customer* of the determination in writing, within one month of receipt of a claim. For *customers* eligible for payment, the notice of determination must include the amount to be paid, the manner of payment and the timing of payment. Where the claim is not paid (whether in part or in full), the notice of determination must include reasons for the decision.

17.4 A *licence holder* is required to take reasonable steps to make *customers* aware of the availability of payments on the terms set out in condition 17. Reasonable steps include, as a minimum, publication of information on the *licence holder's* website and annual newspaper advertisements. On request from a *customer*, a *licence holder* must provide written information on the availability of payments on the terms set out in condition 17.

17.5 A *licence holder* is required to make only one payment of \$80 to a *customer* per premises in a financial year for exceeding the *interruption frequency standard*.

17.6 A *licence holder* is required to pay no more than \$320 under condition 17 to a *customer* per premises in any one financial year.

17.7 A payment under this condition does not:

- (a) In any way alter or diminish any rights that a *customer* may have against any person under any trade practices or other applicable legislation, common law or contract;
- (b) Represent any admission of legal liability by the *licence holder*; or
- (c) Alter, vary or exclude the operation of section 119 of the *National Electricity Law* or any other statutory limitations on liability or immunities applicable to a *licence holder*.

- 17.8 *Customers* who are eligible for payments under this clause are limited to those *customers* who are supplied electricity through a metered connection point on an electricity distributor's system.

18. Performance monitoring and reporting

18.1 Repealed

Network overall reliability standards report

- 18.2 A *licence holder* must submit a *network overall reliability standards* quarterly report to the *Minister* within one month of the end of each *quarter*.
- 18.3 Each *network overall reliability standards* report must include the following matters for the previous 12 month period to the end of that *quarter*:
- (a) performance against the *SAIDI average standards* and *SAIFI average standards* by *feeder type*, disregarding *excluded interruptions*;
 - (b) reasons for any non-compliance by the *licence holder* with the *network overall reliability standards* and plans to improve performance; and
 - (c) any other matter formally notified by the *Minister* in writing.

Individual feeder standards report

- 18.4 A *licence holder* must submit, within one month of the end of each *quarter*, a quarterly *individual feeder standards* report to the *Minister* on *feeders* that exceeded the relevant *individual feeder standards* during the previous 12 month period to the end of that *quarter*, together with, for each *feeder*:
- (a) the date at which the *feeder* first exceeded the relevant *individual feeder standard*, together with the actual *SAIDI* and *SAIFI* performance of the *feeder* for the 12 month period;
 - (b) details of the remedial action that the *licence holder* intends taking, or has taken, to improve the performance of those *feeders*; and
 - (c) the date of completion, or the date of planned completion, of the remedial action plan. or
 - (d) details of the investigation and action proposed or undertaken leading to the decision to advise the *Minister* that it is not economically justifiable to bring the *feeder* performance into compliance with the *individual feeder standards*.

Customer service standards report

- 18.5 A *licence holder* must submit a quarterly *customer service standards* report to the *Minister* on the following matters within one month of the end of each *quarter*, for the preceding *quarter* and for the previous 12 month period to the end of that *quarter*:

- (a) the number of payments given under condition 17 to *customers* by each type of area listed in Column 1 of Table 1 and by the type of standard, as shown in Columns 2 and 3 of Table 1.
- (b) the number of claims not paid (whether in part or full) under condition 17 by each type of area listed in Column 1 of Table 1 and by the type of standard, as shown in Columns 2 and 3 of Table 1.

Major network incident reporting

- 18.6 A *licence holder* must report to the *Minister* within 24 hours any *major network incidents* involving significant injury to persons, loss of property or widespread supply interruptions. *High level severity network incidents* are to be advised immediately.

Independent audit report

- 18.7 An independent audit must be conducted after the end of each financial year to audit the *licence holder's* performance against the:
- (a) Repealed
 - (b) *network overall reliability standards*;
 - (c) *individual feeder standards*; and
 - (d) *customer service standards*.
- 18.8 A *licence holder* is required to nominate a person to conduct the independent audit by notice in writing to IPART. The *licence holder* must give notice in accordance with any time specified by IPART in writing to the *licence holder*, or, if no time has been specified, no later than 1 July of the year in which the report is to be submitted to the *Minister* and IPART.
- 18.9 The person nominated is to be a person who is:
- (a) independent of the *licence holder*; and
 - (b) competent to exercise the functions of an auditor in respect of the matters to be audited.
- 18.10 The nomination of an auditor by a *licence holder* ceases to have effect if IPART advises the *licence holder*, by notice in writing, that the nomination is not acceptable or has ceased to be acceptable.
- 18.11 IPART may nominate an auditor to carry out an audit, and the person so nominated is taken to have been nominated by the *licence holder*, if:
- (a) the nomination of an auditor by the *licence holder* ceases to have effect; or
 - (b) the *licence holder* fails to nominate an auditor to carry out the audit in accordance with any requirements specified by IPART by notice in writing to the *licence holder*.

- 18.12 A *licence holder* must provide a copy of the auditor's report by 30 September each year to IPART and the *Minister*.

General matters concerning reports

- 18.13 Where the *Minister* determines the format of a report required by this condition, a *licence holder* must submit the report in that format.
- 18.14 The *Minister* may from time to time establish guidelines to be followed by the *licence holder* in complying with reports required by this condition and the *licence holder* must comply with any such guidelines.
- 18.15 The *Minister* may from time to time require, by notice in writing to the *licence holder*, further reports relating to these licence conditions including, without limitation, reports relating to capital expenditure works, network refurbishment and maintenance programs.
- 18.16 A *licence holder* must provide a report submitted to the *Minister* under this condition to IPART, if requested to do so by IPART by notice in writing.

19 Interpretation and definitions

- 19.1 These licence conditions are imposed by the *Minister* pursuant to item 6(1)(b) of Schedule 2 of the *Act*.
- 19.2 These licence conditions replace the design, reliability and performance licence conditions imposed by the *Minister* on electricity distributors on 1 August 2005 (as amended on 1 December 2007).
- 19.3 These licence conditions are in addition to other licence conditions imposed by the *Minister*, licence conditions under the *Act* or *Regulations*, and other obligations imposed on *licence holders* by the *Act* and *Regulations*.
- 19.4 These revised conditions take effect from 1 July 2014.
- 19.5 Expressions used in these licence conditions that are defined in the *Act* or the *Regulations* made under the *Act* have, unless otherwise stated, the meanings set out in the *Act* or the *Regulations*.
- 19.6 The Explanatory Note to these licence conditions does not form part of the licence conditions.
- 19.7 Repealed

19.8 In these licence conditions:

<i>Act</i>	means the <i>Electricity Supply Act 1995</i> .
<i>CBD Sydney feeder</i>	means a <i>feeder</i> forming part of the triplex 11kV cable system supplying predominantly commercial high-rise buildings, within the City of Sydney.
<i>customer</i>	means a wholesale or retail customer who is supplied electricity through a connection point on an electricity distributor's system.
<i>customer service standards</i>	means the customer service standards in Schedule 5 to these conditions.
<i>Department</i>	means the <i>Department of Trade and Investment, Regional Infrastructure and Services</i> .
<i>Emergency service organisation</i>	has the same meaning as in section 3 of the <i>State Emergency and Rescue Management Act 1989</i> .
<i>excluded interruptions</i>	means excluded <i>interruptions</i> listed in Schedule 4 to these conditions.
<i>feeder</i>	means a high-voltage line operating at over 1kV and generally at or below 22kV that connects between a <i>zone substation</i> and a <i>distribution substation</i> , excluding short radial sections off the trunk <i>feeder</i> used to supply a small number of <i>distribution substations</i> (eg a spur line into a peninsula or valley).
<i>feeder type</i>	means a <i>CBD Sydney feeder</i> , <i>long rural feeder</i> , <i>short rural feeder</i> or <i>urban feeder</i> as the case may be.
<i>financial year</i>	means the period commencing on 1 July and ending 30 June the following calendar year.
<i>high level severity</i>	means as defined by the Department's Significant Electrical Network Incident reporting scheme.
<i>individual feeder standards</i>	means the individual <i>feeder</i> standards in Schedule 3 to these conditions.
<i>interruption</i>	<i>means any</i> temporary unavailability of electricity supply to a <i>customer</i> associated with an outage of the distribution system including outages affecting a single premises, but does not include disconnection.
<i>interruption duration standards</i>	means the <i>interruption</i> duration standards set out in Schedule 5 to these conditions.
<i>interruption frequency standards</i>	means the <i>interruption</i> frequency standards set out in Schedule 5 to these conditions.

<i>IPART</i>	means the Independent Pricing and Regulatory Tribunal established under the <i>Independent Pricing and Regulatory Tribunal Act 1992</i> .
<i>licence holder</i>	means the holder of an electricity distributor's licence.
<i>local government area</i>	has the same meaning as in the <i>Local Government Act 1993</i>
<i>long rural feeder</i>	means a <i>feeder</i> with a total <i>feeder</i> length greater than 200 km which is not a <i>CBD Sydney feeder</i> or an <i>urban feeder</i> .
<i>major event day</i>	means a day determined under Schedule 6.
<i>major network incident</i>	means as defined by the Department's Significant Electrical Network Incident reporting scheme.
<i>metropolitan</i>	means the areas comprising the <i>local government areas</i> and <i>suburbs</i> listed in Schedule 7.
<i>Minister</i>	means the Minister administering the <i>Act</i> .
<i>non-metropolitan</i>	means areas in NSW other than areas defined as <i>metropolitan</i> .
<i>non-urban</i>	means areas which are not <i>urban</i> .
<i>planned interruption</i>	means an interruption for which advance notice has been provided or which has been requested by a customer in accordance with the meaning contained in the <i>National Energy Retail Law (Adoption) Regulation 2013</i> .
<i>quarter</i>	means a period of three months commencing 1 January, 1 April, 1 July and 1 October and concluding on the following 31 March, 30 June, 30 September and 31 December dates respectively, as the case may be.
<i>Regulations</i>	means Regulations made under the <i>Act</i> .
<i>regulatory period</i>	means the period for which the economic regulator provides for a price path for network income and for the purpose of this document will be taken to be a period of five years.
<i>network overall reliability standards</i>	means the requirements imposed under condition 15 of these conditions.
<i>SAIDI</i>	means the average derived from the sum of the durations of each sustained <i>customer</i> interruption (measured in minutes), divided by the total number of <i>customers</i> (averaged over the <i>financial year</i>) of the <i>licence holder</i> .

<i>SAIFI</i>	means the average derived from the total number of sustained <i>customer</i> interruptions divided by the total number of <i>customers</i> (averaged over the <i>financial year</i>) of the <i>licence holder</i> .
<i>SAIDI average standards</i>	means the standards set out in item 1, Schedule 2.
<i>SAIFI average standards</i>	means the standards set out in item 2, Schedule 2.
<i>SAIDI individual feeder standards</i>	means the standards set out in item 1, Schedule 3.
<i>SAIFI individual feeder standards</i>	means the standards set out in item 2, Schedule 3.
<i>Severe thunderstorm or severe weather</i>	means weather given this classification by the Bureau of Meteorology.
<i>short rural feeder</i>	means a <i>feeder</i> with a total <i>feeder</i> route length less than 200 km, and which is not a <i>CBD Sydney feeder</i> or an <i>urban feeder</i> .
<i>suburb</i>	means an area defined by boundaries determined and gazetted by the Geographical Names Board of New South Wales.
<i>table 1</i>	means Table 1 in Schedule 5 to these conditions.
<i>table 2</i>	means Table 2 in Schedule 5 to these conditions.
<i>third party</i>	does not include a person or body contracted or authorised by the <i>licence holder</i> to take action, or any animal or plant life.
<i>transmission system</i>	means a network as defined in the <i>National Electricity Rules</i> .
<i>urban feeder</i>	means a <i>feeder</i> with actual maximum demand over the reporting period per total <i>feeder</i> route length greater than 0.3 MVA/km and which is not a <i>CBD Sydney Feeder</i> .

SCHEDULE 1 – Repealed

SCHEDULE 2 – NETWORK OVERALL RELIABILITY STANDARDS

1. SAIDI Average Reliability Duration Standards (Minutes per customer)

<i>SAIDI (Minutes per customer)</i>	
AUSGRID	
Feeder Type	
<i>CBD Sydney</i>	45
<i>Urban</i>	80
<i>Short-rural</i>	300
<i>Long-rural</i>	700
ENDEAVOUR ENERGY	
<i>Urban</i>	80
<i>Short-rural</i>	300
<i>Long-rural</i>	n/a
ESSENTIAL ENERGY	
<i>Urban</i>	125
<i>Short-rural</i>	300
<i>Long-rural</i>	700

2. SAIFI Average Reliability Interruption Standards (Number per customer)

<i>SAIFI (Number per customer)</i>	
AUSGRID	
Feeder Type	
<i>CBD Sydney</i>	0.3
<i>Urban</i>	1.2
<i>Short-rural</i>	3.2
<i>Long-rural</i>	6
ENDEAVOUR ENERGY	
<i>Urban</i>	1.2
<i>Short-rural</i>	2.8
<i>Long-rural</i>	n/a
ESSENTIAL ENERGY	
<i>Urban</i>	1.8
<i>Short-rural</i>	3.0
<i>Long-rural</i>	4.5

SCHEDULE 3 – INDIVIDUAL FEEDER STANDARDS

1. SAIDI Individual Feeder Average Reliability Duration Standards (Minutes per customer)

SAIDI (Minutes per customer)	
AUSGRID	
Feeder Type	
<i>CBD Sydney</i>	100
<i>Urban</i>	350
<i>Short-rural</i>	1000
<i>Long-rural</i>	1400
ENDEAVOUR ENERGY	
<i>Urban</i>	350
<i>Short-rural</i>	1000
<i>Long-rural</i>	1400
ESSENTIAL ENERGY	
<i>Urban</i>	400
<i>Short-rural</i>	1000
<i>Long-rural</i>	1400

2 SAIFI Individual Feeder Standards Average Reliability Interruption Standards (Number per customer)

SAIFI (Number per customer)	
AUSGRID	
Feeder Type	
<i>CBD Sydney</i>	1.4
<i>Urban</i>	4
<i>Short-rural</i>	8
<i>Long-rural</i>	10
ENDEAVOUR ENERGY	
<i>Urban</i>	4
<i>Short-rural</i>	8
<i>Long-rural</i>	10
ESSENTIAL ENERGY	
<i>Urban</i>	6
<i>Short-rural</i>	8
<i>Long-rural</i>	10

SCHEDULE 4 – EXCLUDED INTERRUPTIONS

The following types of *interruptions* (and no others) are *excluded interruptions*:

- (a) an *interruption* of a duration of one minute or less;
- (b) an *interruption* resulting from:
 - (i) load shedding due to a shortfall in generation;
 - (ii) a direction or other instrument issued under the *National Electricity Law, Energy and Utilities Administration Act 1987*, the *Essential Services Act 1988* or the *State Emergency and Rescue Management Act 1989* to interrupt the supply of electricity;
 - (iii) automatic shedding of load under the control of under-frequency relays following the occurrence of a power system under-frequency condition described in the *Power System Security and Reliability Standards* made under the National Electricity Rules;
 - (iv) a failure of the shared *transmission system*;
- (c) a *planned interruption*;
- (d) any *interruption* to the supply of electricity on a *licence holder's* distribution system which commences on a *major event day*; and
- (e) an *interruption* caused by a *customer's* electrical installation or failure of that electrical installation.

SCHEDULE 5 – CUSTOMER SERVICE STANDARDS

Interruption duration standard:

1. The *interruption duration standard* is the maximum duration, set out in column 2 of *table 1*, of an *interruption* to a *customer's* premises located in the relevant area in column 1 of *table 1*.

Interruption frequency standard:

2. The *interruption frequency standard* is the maximum number of *interruptions* in a financial year set out in column 3 of *table 1*, to a *customer's* premises located in the relevant area in column 1 of *table 1*:

Table 1

Column 1	Column 2	Column 3
Type of area in which <i>customer's</i> premises is located	<i>Interruption duration standard</i> (hours)	<i>Interruption frequency standard</i> (number of interruptions and hours of duration)
<i>metropolitan</i>	12	4 interruptions of greater than or equal to 4 hours
<i>non-metropolitan</i>	18	4 interruptions of greater than or equal to 5 hours

Interruptions to be disregarded

3. In calculating the *interruption duration standard* or the *interruption frequency standard* the following types of *interruptions* (and no others) are excluded:
 - (a) an *interruption* resulting from the following external causes:
 - (i) a shortfall in generation;
 - (ii) a failure or instability of the shared *transmission system*;
 - (iii) a request or direction from an *emergency service organisation*;
 - (b) a *planned* interruption;
 - (c) an *interruption* within a region in which a natural disaster has occurred and:
 - (i) the responsible Minister has made a declaration of a Natural Disaster enabling the NSW Disaster Assistance Arrangements to apply in respect of that natural disaster for that region; and

- (ii) the *interruption* occurred during the period for which a declaration of a Natural Disaster and NSW Disaster Assistance Arrangements were in effect;
- (d) an *interruption* caused by the effects of a *severe thunderstorm* or *severe weather* as advised by the Bureau of Meteorology. These effects may include the necessary operation of a circuit protection device which interrupts supply to *customers* in areas not directly impacted by the *severe thunderstorm* or *severe weather*.
- (e) an *interruption* caused by *third party* actions other than animal or vegetation interference (e.g. vehicle-hit-pole, vandalism) where the interruption is not also caused by any failure of the *licence holder* to comply with relevant plans, codes, guides or standards (e.g. low conductor clearance).

SCHEDULE 6 – MAJOR EVENT DAY

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Explanation and Purpose

The following process ("**Beta Method**") is used to identify *major event days* which are to be excluded from the *network overall reliability standards* and *individual feeder standards*.

Its purpose is to allow major events to be studied separately from daily operation, and in the process, to better reveal trends in a daily operation that would be hidden by the large statistical effect of major events.

A *major event day* under the Beta Method is one in which the daily total system (i.e. not on a feeder type basis) SAIDI value ("**daily SAIDI value**") exceeds a threshold value, T_{MED} . The SAIDI is used as the basis of determining whether a day is a *major event day* since it leads to consistent results regardless of utility size and because SAIDI is a good indicator of operational and design stress.

In calculating the daily total system SAIDI, any *interruption* that spans multiple days is deemed to accrue on the day on which the *interruption* begins. That is, all minutes without supply resulting from an *interruption* beginning on a *major event day* are deemed to have occurred in the *major event day*, including those minutes without supply occurring on following days.

Determining a major event day

The *major event day* identification threshold value T_{MED} is calculated at the end of each *financial year* for each *electricity distributor* for use during the next *financial year* as follows:

- Collect daily SAIDI values for the last five *financial years*. If fewer than five years of historical data are available, use all available historical data for the lesser period.
- Only those days that have a daily SAIDI value will be used to calculate the T_{MED} (i.e. days that did not have any *interruptions* are not included).
- Take the natural logarithm (\ln) of each daily SAIDI value in the data set.
- Find α (Alpha), the average of the logarithms (also known as the log-average) of the data set.
- Find β (Beta), the standard deviation of the logarithms (also known as the log-standard deviation) of the data set.
- Complete the major event day threshold T_{MED} using the following equation:

$$T_{MED} = e^{(\alpha + 2.5\beta)}$$

- Any day with daily SAIDI value greater than the threshold value T_{MED} which occurs during the subsequent *financial year* is classified as a *major event day*.

Treatment of a major event day

To avoid doubt, a *major event day*, and all *interruptions* beginning on that day, are excluded from the calculation of an *electricity distributor's* SAIDI and SAIFI in respect of all of its *feeder types*.

SCHEDULE 7 – LIST OF METROPOLITAN AREAS

1. Local Government Areas		
ASHFIELD	HUNTERS HILL	PITTWATER
AUBURN	HURSTVILLE	RANDWICK
BANKSTOWN	KOGARAH	ROCKDALE
BAULKHAM HILLS	KU-RING-GAI	RYDE
BLACKTOWN	LAKE MACQUARIE	SHELLHARBOUR
BOTANY BAY	LANE COVE	STRATHFIELD
BURWOOD	LEICHHARDT	SUTHERLAND
CAMDEN	LIVERPOOL	SYDNEY
CAMPBELLTOWN	MANLY	WARRINGAH
CANTERBURY	MARRICKVILLE	WAVERLEY
CANADA BAY	MOSMAN	WILLOUGHBY
FAIRFIELD	NEWCASTLE	WOLLONGONG
GOSFORD	NORTH SYDNEY	WOOLLAHRA
HOLROYD	PARRAMATTA	WYONG
HORNSBY	PENRITH	

2. Suburbs	
A. Blue Mountains area	
BLACKHEATH	LINDEN
BLAXLAND	MEDLOW BATH
BULLABURRA	MOUNT RIVERVIEW
FAULCONBRIDGE	MOUNT VICTORIA
GLENBROOK	SPRINGWOOD
HAWKESBURY HEIGHTS	VALLEY HEIGHTS
HAZELBROOK	WARRIMOO
KATOOMBA	WENTWORTH FALLS
LAPSTONE	WINMALEE
LAWSON	WOODFORD
LEURA	YELLOW ROCK

B. Cessnock-Bellbird area	
ABERDARE	CESSNOCK
BELLBIRD	KEARSLEY
BELLBIRD HEIGHTS	NULKABA
C. Kiama area	
BOMBO	KIAMA HEIGHTS
KIAMA	MINNAMURRA
KIAMA DOWNS	
D. Kurri Kurri-Weston area	
ABERMAIN	PELAW MAIN
HEDDON GRETA	STANFORD MERTHYR
KURRI KURRI	WESTON
NEATH	
E. Maitland area	
ABERGLASSLYN	MOUNT DEE
ASHTONFIELD	OAKHAMPTON
BOLWARRA	OAKHAMPTON HEIGHTS
BOLWARRA HEIGHTS	PITNACREE
EAST MAITLAND	RAWORTH
HORSESHOE BEND	RUTHERFORD
LARGS	SOUTH MAITLAND
LORN	TELARAH
LOUTH PARK	TENAMBIT
MAITLAND	THORNTON
METFORD	WOODBERRY
MORPETH	

F. Newcastle Industrial area	
FERN BAY	WILLIAMTOWN
FULLERTON COVE	
G. Port Stephens area	
CORLETTE	SALAMANDER BAY
FINGAL BAY	SHOAL BAY
NELSON BAY	SOLDIERS POINT
H. Raymond Terrace area	
HEATHERBRAE	TOMAGO
RAYMOND TERRACE	
I. Richmond-Windsor area	
BLIGH PARK	NORTH RICHMOND
CLARENDON	RICHMOND
HOBARTVILLE	SOUTH WINDSOR
MCGRATHS HILL	VINEYARD
MULGRAVE	WINDSOR