



# **ELECTRICITY STANDARDS OF SERVICE CODE**

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## **STATEMENT OF REASONS**

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## Glossary of terms

Term	Definition
2.5 Beta Method	Statistical method developed by the IEEE to identify events that are outside the reasonable control of the network service provider.
2014 Network Price Determination	The Price (or revenue) Determination for the 2014-19 regulatory control period under the <i>Electricity Networks (Third Party Access) Act</i> .
AER	Australian Energy Regulator.
DNSP	Distribution network service provider.
ESS	Electricity Standards of Service.
Feeder	Any of the medium-voltage lines used to distribute electric power from a substation to consumers or to smaller substations.
IEEE	US Institute of Electrical and Electronics Engineers.
GSL Code	Guaranteed Service Levels Code effective from 1 January 2012, sets out a scheme by which the network service provider makes payments to customers when service performance is outside a defined threshold.
KM	Kilometre.
MW	Megawatt.
MVA	Megavolt Ampere.
NEM	National Electricity Market.
Power system	Refers to the Darwin-Katherine power system, Tennant Creek power system and/or the Alice Springs power system.
PWC	Power and Water Corporation.
Region	Refers to the Darwin Region, Katherine Region, Tennant Creek Region and/or the Alice Springs Region.
Regulatory Proposal	The regulatory proposal submitted by the network service provider to the Commission to determine prices for network services under <i>Electricity Networks (Third Party Access) Act</i> and as part of the 2014 Network Price Determination.
SAIDI	System Average Interruption Duration Index. The average number of minutes that a customer is without supply in a given period.
SAIFI	System Average Interruption Frequency Index. The average number of times a customer's supply is interrupted in a given period.
TNSP	Transmission network service provider.

# CHAPTER 1

## Introduction

### Background

- 1.1 The Utilities Commission of the Northern Territory (the Commission) is an independent statutory authority responsible for the economic regulation of the electricity supply industry, which is governed by the *Utilities Commission Act* (the Act), the *Electricity Reform Act*, the *Electricity Networks (Third Party Access) Act*, and associated legislation.
- 1.2 Under the Act, the Commission has the power to make codes and rules if authorised to do so under a relevant industry regulation Act or by regulations under the Act. The Act prescribes a code-making process for the creation, variation, and revocation of industry codes, which requires the Commission to (among other things):<sup>1</sup>
  - consult with the Minister (the Treasurer)<sup>2</sup> and representative bodies and participants in the regulated industry;
  - give notice of the making, variation, or revocation of a code to the Minister, and to each licensed entity to which the code applies; and
  - ensure copies of the code are made available for inspection for the public.
- 1.3 On 21 December 2005, the Commission released the Electricity Standards of Service Code (ESS Code), which was made pursuant to the Act, and in accordance with the Commission's powers to do anything necessary or convenient to be done for or in connection with or incidental to the performance of the Commission's functions under:
  - section 91 (1) of the *Electricity Reform Act*, which requires the Commission to make provisions imposing minimum standards of service and safety for non-contestable customers;
  - section 10 of the *Electricity Networks (Third Party Access) Act*; and
  - section 6 of the Act.
- 1.4 In accordance with the introduction of full-retail contestability, the last tranche of non-contestable customers became contestable on 1 April 2010. This means that the Commission's functions in relation to electricity standards of service under section 92 (1) of the *Electricity Reform Act* have become redundant, and the ESS Code was partially ineffective.
- 1.5 On 15 May 2012, the Commission released the proposed ESS Code and an accompanying Consultation Paper for public comment and received submissions from Power and Water Corporation (PWC), ERM Power Retail Pty Ltd (ERM) and the

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<sup>1</sup> S.24, *Utilities Commission Act*.

<sup>2</sup> Administrative Arrangements Order as at 19 October 2012.

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Northern Territory Major Energy Users Group (NTMEU). In the Consultation Paper, the Commission expressed its intention to revoke the existing ESS Code and make a new ESS Code in response to recent regulatory changes, and the (then) Government's priority works program.

- 1.6 On 5 October 2012, the Commission released its Draft Statement of Reasons and a second draft of the proposed ESS Code for public comment. The Commission received submissions from PWC and NTMEU.
- 1.7 All submissions are available on the Commission's website ([www.utilicom.nt.gov.au](http://www.utilicom.nt.gov.au)).

### **Purpose of this paper**

- 1.8 The purpose of this Statement of Reasons is to
  - outline the Commission's final decision on the form and content of the new ESS Code; and
  - address the issues raised in the submissions received during public consultation.
- 1.9 The Commission has considered all submissions by stakeholders and industry participants. The Commission has also considered the advice of ACIL Tasman on the mathematical formulae of performance indicators and the categorisation of distribution feeders.
- 1.10 This Statement of Reasons should be read in conjunction with the ESS Code (including the 'delta' view of the proposed changes) and the following ACIL Tasman reports:
  - independent review of performance indicators; and
  - independent review of distribution network feeder category definitions.
- 1.11 Copies of the independent review reports prepared by ACIL Tasman are available on the Commission's website or by contacting the Commission office.
- 1.12 ACIL Tasman's reports were made available on the Commission's website as part of the consultation process on the second draft of the proposed ESS Code.
- 1.13 The Commission will implement the new ESS Code on 1 December 2012.

### **Key aspects of the new ESS Code**

- 1.1 The new ESS Code will apply to all electricity entities providing generation, network and retail services on the regulated network, excluding Independent Power Producers (IPPs).
  - 1.2 The objectives of the ESS Code are to:
    - establish standards of service and performance measures in the electricity supply industry;
    - develop, monitor, and enforce compliance with and promote improvement in standards of service of supply in the electricity supply industry; and
    - require electricity entities to have adequate systems in place which allow for regular reporting of actual performance in accordance with the Code.
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1.3 Table 1.1 presents a summary of the performance indicators (including segmentation requirements for each performance indicator) for reporting purposes with respect to generators, the network provider and retailers operating in the Territory's electricity supply industry. Table 1.1 also outlines the performance indicators which will have a target standard. Target standards will be applicable to the network service provider and must be met on a best endeavours basis. The target standards will be established under the process specified in the ESS Code.

Table 1.1: Performance indicators for generation, network and retail service providers

Electricity entity	Performance indicator	Report	Segmentation	Target	Segmentation
Generation services performance indicators	Availability Factor (AF)	Yes	Power station	No	N/A
	Unplanned Availability Factor (UAF)	Yes	Power station	No	N/A
	Equivalent Availability factor (EAF)	Yes	Power station	No	N/A
	Forced Outage Factor (FOF)	Yes	Power station	No	N/A
	Equivalent Forced Outage Factor (EFOF)	Yes	Power Station	No	N/A
	System Average Interruption Duration Index (SAIDI)	Yes	Power system; Region	No	N/A
	System Average Interruption Frequency Index (SAIFI)	Yes	Power system; Region	No	N/A
Transmission network services performance indicators	Average Circuit Outage Duration (ACOD) Unadjusted	Yes	Power system	No	N/A
	Average Circuit Outage Duration (ACOD) Adjusted	Yes	Power system	Yes	Transmission network
	Frequency of circuit outages (FCO) unadjusted	Yes	Power system	No	N/A
	Frequency of Circuit Outages (FCO) Adjusted	Yes	Power system	Yes	Transmission network
	Average of Transformer Outage Duration (ATOD) Unadjusted	Yes	Power system	No	N/A
	Frequency of Transformer Outage Duration (ATOD) Adjusted	Yes	Power system	Yes	Transmission network
	Frequency of Transformer Outages (FTO) Unadjusted	Yes	Power system	No	N/A
	Frequency of Transformer Outages (FTO) Adjusted	Yes	Power system	Yes	Transmission network

Electricity entity	Performance indicator	Report	Segmentation	Target	Segmentation
	System Average Interruption Duration Index (SAIDI) Unadjusted	Yes	Power system	No	N/A
	System Average Interruption Duration Index (SAIDI) Adjusted	Yes	Power system	No	N/A
	System Average Interruption Frequency Index (SAIFI) Unadjusted	Yes	Power system	No	N/A
	System Average Interruption Frequency Index (SAIFI) Adjusted	Yes	Power system	No	N/A
Distribution network services performance indicators	System Average Interruption Duration Index (SAIDI) Unadjusted	Yes	Region; Feeder category	No	N/A
	System Average Interruption Duration Index (SAIDI) Adjusted	Yes	Region; Feeder category	Yes	Feeder category
	System Average Interruption Frequency Index (SAIFI) Unadjusted	Yes	Region; Feeder category	No	N/A
	System Average Interruption Frequency Index (SAIFI) Adjusted	Yes	Region; Feeder category	Yes	Feeder category
	Poorly performing feeders	Yes	Individual feeder	No	N/A
Network customer services performance	Connections	Yes	CBD/Urban area; Rural area	No	N/A
	Phone Answering	Yes	NT	No	N/A
	Network Complaints	Yes	Region	No	N/A
	Written Enquiries	Yes	Region	No	N/A
Retail service performance	Phone Answering	Yes	NT	No	N/A
	Complaints	Yes	Region	No	N/A
	Hardship	Yes	Region	No	N/A
	Written enquiries	Yes	Region	No	N/A

## Structure of this paper

1.4 Chapter 2 is structured in the following way:

- the primary concerns raised by industry participants and stakeholders in their submission in the initial round of consultation are outlined;

- the Commission's Preliminary Decision and the Commission's response to submissions are outlined;
  - submissions in response to the Commission's preliminary decision are outlined; and
  - the Commission's response and final decision are outlined.
- 1.5 Appendix A of this Statement of Reasons contains a table, which addresses all other concerns raised by interested parties and stakeholders during consultation (and not addressed in Chapter 2).
- 1.6 Appendix B contains a table which contains explanatory material for the provisions in the new ESS Code.
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## CHAPTER 2

### Electricity Standards of Service Code

2.1 The objectives of the ESS Code are to:

- establish standards of service and performance measures in the electricity supply industry;
- develop, monitor, and enforce compliance with and promote improvement in standards of service of supply in the electricity supply industry; and
- require electricity entities to have adequate systems in place which allow for regular reporting of actual performance in accordance with the Code.

2.2 In making the Code, the Commission has had regard to the need to:

- promote competitive and fair conduct;
- prevent the misuse of monopoly or market power;
- facilitate entry into relevant markets;
- promote economic efficiency;
- ensure consumers benefit from competition and efficiency;
- protect the interests of consumers with respect to reliability and quality of services and supply in regulated industries;
- facilitate maintenance of the financial viability of regulated industries; and
- ensuring an appropriate rate of return on regulated infrastructure assets.<sup>3</sup>

2.3 In achieving these objectives, the ESS Code prescribes:

- the process for adding to or amending the ESS Code, and the creation of guidelines and directions;
- the process for establishing target standards for distribution and transmission network reliability measures;
- the performance indicators for generation services, network services, and retail services with and without a target standard;
- reporting of performance indicators with and without a target standard;
- the mandatory and discretionary obligations on the Commission; and
- the mandatory obligations on electricity entities to which the ESS Code will apply.

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<sup>3</sup> s 6 (2), *Utilities Commission Act*.

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## Statement of Reasons

### Target standards

- 2.4 The proposed ESS Code sought to set out the process and obligations for establishing, amending, and meeting the approved target standards to be met by network service providers.
- 2.5 The proposed ESS Code stated that a network service provider must submit proposed target standards to the Commission, by a date specified by the Commission and notified to the electricity entity, which must include all the network service performance indicators requiring a target (as specified in Schedule 2), be segmented in accordance with clause 6 and contain proposed calculations for the target standards that are either:
- an average of the data from the preceding five financial years;
  - if that type of data is not available, averaging comparable and available data from each of the preceding five financial years; or
  - utilising such other methodology that the Commission considers appropriate.

### Views in submissions for the initial round of consultation

- 2.6 In its submission to the Consultation Paper, PWC made the following suggestions regarding the process for establishing the approved target standards:
- The target standards for the next regulatory control period (commencing 1 July 2014) should be set by 1 January 2013. This would enable the service levels to be incorporated into PWC's Networks' regulatory proposal for the 2014 Network Price Determination under the *Electricity Networks (Third Party Access) Act*.
  - The Commission should consult with System Control in relation to setting and approving the target standards, as System Control would be well placed to make technical comments on the performance of the power system and appropriate standards.

### Commission's response to views in submissions for the initial round of consultation

#### *Date to set the target standards*

- 2.7 In the Draft Statement of Reasons, the Commission responded to PWC's suggestions and noted the following:
- The anticipated commencement date for the new ESS Code is 1 November 2012.
  - Given this commencement date, the Commission is unlikely to set or approve target standards by 1 January 2013.
- 2.8 The Commission noted that the proposed ESS Code incorporates a proposal-approval model for setting target standards, which includes the following:
- the Commission issues a direction specifying the date on which the network service provider must submit its proposed target standards to the Commission;
  - the Commission assesses the network service provider's proposed target standards; and
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- the Commission either approves the proposed target standards, or sets its own target standards based on an alternative methodology.

2.9 The Commission concluded that:

- the date for setting the target standards would depend on the due date for the network service provider's proposed target standards (as directed by the Commission); and
- whether or not the proposed target standards are consistent with the Commission's requirements (and are of an adequate standard) in the first instance.

2.10 The Commission stated that it would liaise with the network service provider prior to issuing a direction specifying the due date for the network service provider's proposed target standards, but would strive to set the due date some months prior to the due date for the network service provider's regulatory proposal under the 2014 Network Price Determination. The Commission noted that the due date would be set to:

- enable the Commission to properly consider the network service provider's proposed target standards;
- provide sufficient time for the Commission to set an alternative methodology for the target standards or set its own target standards if appropriate; and
- provide sufficient time for the network service provider to incorporate the target standards (as set or approved by the Commission) in its regulatory proposal.

*Consult with System Control prior to setting the target standards*

2.11 In the Draft Statement of Reasons, the Commission responded to PWC's suggestions and noted the following:

- the proposed ESS Code requires the network service provider to submit proposed target standards to the Commission;
- in submitting its proposed target standards, the Commission would expect the network service provider to liaise with System Control on any technical and related issues that may impact on the performance of the power system, if appropriate to support the approval of the proposed target standards; and
- clause 3.1.6 of the proposed ESS Code states that the Commission may consult on the target standards more widely with other electricity entities (including System Control)<sup>4</sup>, the Minister and anyone else that the Commission considers should be consulted in the circumstances.

2.12 The Commission considered the proposed approach in clause 3.1.6 of the proposed ESS Code was an appropriate mechanism for System Control to provide input on the target standards.

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<sup>4</sup> The *Electricity Reform Act* defines "electricity entity" as a person licensed under Part 3 to carry on operations in the electricity supply industry. This includes System Control in accordance with section 30 of the Act.

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## **Commission's preliminary decision**

### *Date to set the target standards*

2.13 The Commission's preliminary decision was as follows:

- The Commission did not propose to specify a date to approve or set the target standards.
- The Commission would take PWC's comments into account in issuing a direction specifying the due date for the proposed target standards to be submitted to the Commission for approval.

### *Consult with System Control prior to setting target standards*

2.14 The Commission's preliminary decision was as follows:

- The Commission did not propose to impose any requirement on the Commission for the Commission to consult with System Control prior to setting the target standards.
- The Commission would consult with System Control if required.

## **Views in submissions in response to Draft Statement of Reasons**

### *Date to set the target standards*

2.15 In its submission to the Draft Statement of Reasons, PWC reiterated its view in the initial round of consultation that the target standards for the next regulatory control period (commencing 1 July 2014) should be set by 1 January 2013 so that PWC could incorporate these target standards into its regulatory proposal for the 2014 Network Price Determination.

### *Consult with System Control prior to setting target standards*

2.16 The Commission did not receive further submissions on this point.

### *Target setting and associated changes to new plan and cost implications*

2.17 In its submission to the Draft Statement of Reasons, PWC sought confirmation from the Commission that the target setting process would take into account an appropriate horizon for associated upgrades or additions to existing plan.

### *Methodology for setting target standards*

2.18 In its submission to the Draft Statement of Reasons, NTMEU expressed concern that the methodology for setting target standards would be based on historical performance. NTMEU considered that the methodology should support continuous improvements in service performance that would normally occur in a more competitive environment. NTMEU noted that businesses in a competitive environment have to improve their services over time to maintain their market share, without prices necessarily increasing.

## **Commission' response to views in submissions to Draft Statement of Reasons**

### *Date to set the target standards*

2.19 The Commission notes PWC's view that the target standards for the next regulatory control period (commencing 1 July 2014) should be set by 1 January 2013. However, the Commission notes that it is constrained given that the commencement date for the new ESS Code is 1 December 2012.

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2.20 The Commission also notes that it intends to adopt the approach to feeder categorisation recommended by ACIL Tasman<sup>5</sup> (rather than the Australian Energy Regulator (AER) feeder category definitions), which may impact on the target setting process for SAIDI and SAIFI distribution network performance indicators segmented by feeder category. The Commission will seek PWC Networks' assistance in resolving the treatment of 'mixed feeders'<sup>6</sup>, which may add to the timeframe for setting the target standards under the new ESS Code.

2.21 Therefore, the Commission considers the outcome in its preliminary decision to be appropriate in the circumstances:

- The date for setting the target standards will depend on the due date for the network service provider's proposed target standards (as directed by the Commission) and whether or not the proposed target standards are consistent with the Commission's requirements (and are of an adequate standard) in the first instance.
- The Commission will liaise with the network service provider prior to issuing a direction specifying the due date for the network service provider's proposed target standards, but will strive to set the due date some months prior to the due date for the network service provider's regulatory proposal under the 2014 Network Price Determination.
- The due date will be set to:
  - enable the Commission to properly consider the network service provider's proposed target standards;
  - provide sufficient time for the Commission to set an alternative methodology for the target standards or set its own target standards if appropriate; and
  - provide sufficient time for the network service provider to incorporate the target standards (as set or approved by the Commission) in its regulatory proposal.

#### *Target setting and associated changes to new plan and cost implications*

2.22 The Commission notes PWC's comments regarding the need for the target standards to take into account the timing of upgrades or additions to existing generation plant and equipment.<sup>7</sup> The Commission notes that the new ESS Code will not require generation target standards. The generation performance indicators outlined in Schedule 1 of the new ESS Code are for reporting purposes only.

#### *Methodology for setting target standards*

2.23 The Commission notes NTMEU's comments. The new ESS Code does not limit the setting of target standards solely in reference to average historical performance and could incorporate a methodology that facilitates aspirational or 'glide path' target

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<sup>5</sup> Refer to ACIL Tasman, October 2012, Independent review of distribution network feeder category definition (available on the Commission's website: <http://www.utilicom.nt.gov.au/Pages/default.aspx>)

<sup>6</sup> ACIL Tasman has identified a small number of feeders ('mixed feeders') which cross urban and rural areas.

<sup>7</sup> The PWC submission does not specifically refer to generation. However, this was later clarified during discussions with PWC staff.

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standards under clause 3.1.3(c) of the new ESS Code. However, the Commission notes that the averaging methodology is considered to be common practice and applied widely in other jurisdictions. This will be persuasive in the target setting process.

- 2.24 The Commission will consider this issue further once the network service provider submits its proposed target standards to the Commission for approval. Should these proposed target standards be inappropriate, the Commission may explore other options and methodologies.

### **Commission's final decision**

- 2.25 The Commission's preliminary decision stands. The Commission's final decision is:
- The process for establishing target standards (as outlined in the proposed ESS Code for the second round of consultation) will be adopted in the new ESS Code.
  - The Commission will not specify a date to approve or set the target standards. Target standards will be set through the process stipulated in the new ESS Code.
  - The Commission will consult with PWC prior to issuing a direction specifying the due date for the proposed target standards to be submitted to the Commission for approval.
  - The Commission will use the averaging methodology as the default methodology with respect to setting target standards.
  - The Commission will not impose any requirement for the Commission to consult with System Control prior to setting the target standards. The Commission will consult with System Control if and when required.

### **IEEE Standard and adjusted and unadjusted categories**

- 2.26 Clause 6 of the proposed ESS Code sought to set out the requirements for the segmentation of network service performance indicators (set out in Schedule 2 of the proposed ESS Code) into adjusted and unadjusted categories.

- 2.27 The proposed ESS Code contained the following definitions:

- Adjusted means to exclude all network outages that meet the requirements of clause 6.2 of this Code.
- Unadjusted means to include all network outages that would normally be excluded if adjusted.

- 2.28 The proposed ESS Code contained the following exclusions (from the adjusted category):

*An electricity entity may only exclude a network outage from the adjusted category if the event that caused that network outage is listed below and was beyond the reasonable control of the electricity entity:*

*(a) load shedding due to a shortfall in generation;*

*(b) an interruption where more than two business days' notice was given to customers by the electricity entity and the electricity entity has otherwise complied with the relevant requirements of the applicable regulatory instruments;*

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- (c) *the System Controller exercising any functions or powers under an applicable regulatory instrument, a direction by a police officer or another authorised person exercising powers in relation to public safety, but only to the extent that the exercise of that function or power, or the giving of that direction, is not caused by a failure by the electricity entity to comply with any applicable regulatory instrument;*
- (d) *a traffic accident;*
- (e) *an act of vandalism;*
- (f) *a natural event that is identified as statistical outliers using the IEEE 2.5 beta method; or*
- (g) *an interruption caused by a customer's electricity installation.*

2.29 The proposed ESS Code contained an approval process for natural events, whereby the network service provider would make an application to the Commission (in writing within 30 business days) from the date on which the event occurred, outlining all the relevant information relating to the event.

#### **Views in submissions for the initial round of consultation**

2.30 In its submission to the Consultation Paper, PWC made a number of suggestions and comments on the adjusted and unadjusted categories in the proposed ESS Code.

2.31 PWC stated that the adjusted and unadjusted categories should align with the IEEE (US Institute of Electrical and Electronics Engineers) 1366-2003 standard 2.5 beta method, which distinguishes between underlying network reliability and major event days, for the following reasons:

- the adjusted category for setting target standards would result in PWC's historical outage data sets no longer being directly comparable to future figures;
  - the IEEE 1366-2003 standard is a recognised industry standard that would allow PWC to study distinctly different data sets and develop the most suitable and appropriate actions, including benchmarking with other network service providers;
  - the 2.5 beta method is the most appropriate exclusion methodology for business planning, capital maintenance and resource allocation, as it provides PWC with an understanding of network performance and the impact this may have on customers. The 2.5 beta method data sets will take into account all relevant events, in their totality and regardless of the perceived or actual fault. In comparison, the Commission's proposed exclusion methodology may have unintended consequences in terms of business planning, capital maintenance and resource allocation;
  - the exclusions from the adjusted category generally would not apply in the context of transmission network performance (for example planned transmission outages generally would not affect customers and in the technical sense, would not be excluded to begin with);
  - adopting a methodology other than the 2.5 beta method would result in increased compliance costs on System Control. In particular, System Control would have to reconcile half-yearly reports to the Commission as well as electricity entities' performance reports. Furthermore, PWC argued that the System Control charges, as they stand, are insufficient to recover the costs of complying with increased
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regulatory obligations. PWC requested that the Commission review these charges; and

- the Commission's approval process for natural events identified using the 2.5 beta method is subjective, and results in intensive reporting requirements for PWC. PWC requested that the process be more objective. PWC stated that the full application of the 2.5 beta method would negate the need for an approval process.

### **Commission's response to views in submissions for the initial round of consultation**

#### *Separate data sets*

2.32 In the Draft Statement of Reasons, the Commission responded to PWC's comments and acknowledged that PWC may not be able to use the historical data sets, which had been adjusted using the 2.5 beta method under the IEEE standard 1366-2003. However, the Commission stated that it expects PWC to have historical unadjusted data sets, which could be adjusted to derive data sets that would comply with the proposed exclusion methodology.

#### *Application of the 2.5 beta method*

2.33 In the Draft Statement of Reasons, the Commission made the following comments:

- The IEEE 1366-2003 standard requires a distribution network service provider (DNSP) to maintain two separate data sets to distinguish between day-to-day operations and major event days (which are identified using the 2.5 beta method), the purpose of which is to reveal trends in daily operation that would normally be hidden by the large statistical effects of major events. The 2.5 beta method has (in theory) the effect of identifying major events that would occur 2.3 days per year. These events are deemed to be outside the random process that is assumed to control distribution network reliability.
- The 2.5 beta method does not account for the cause of the event. The IEEE has said that a statistical approach was preferred due to the difficulties in creating a uniform list of major events for the industry. Other reasons include:
  - definitions must be understandable and easy to apply;
  - definitions must be specific and calculated using the same process for all utilities;
  - must be fair to all utilities regardless of size, geographic, or design; and
  - entities that adopt the methodology will calculate indices on a normalised basis for trending and reporting. They will further classify the major event days separately and report on those days through a separate process.
- State regulators in Queensland and New South Wales as well as the AER have adopted the 2.5 beta method to identify major event days for standards of service and pricing purposes (as the case may be), although there are slight variations based on local characteristics.
- State regulators in South Australia and Tasmania do not use the 2.5 beta method. The AER does not use the 2.5 beta method for transmission network service providers (TNSP), opting instead to use an exhaustive list that defines events that are deemed to be outside the reasonable control of the TNSP.



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- A new version of the standard (IEEE 1366-2012) was released on 31 May 2012, which discusses major event days and the development of an objective methodology for the identification and processing of ‘catastrophic days’ (those major events that have a low probability of occurring, yet tend to skew the distribution of network performance by causing a shift of average data sets). The IEEE notes that it was unable to devise an objective methodology for the identification and processing of catastrophic events and recommends that regulators and utilities determine a process for catastrophic events on a case-by-case basis.

- 2.34 In the Draft Statement of Reasons, the Commission accepted that the inclusion of some major events in setting or approving the target standards may essentially skew the true performance of the network, which may negatively impact on the target standards and PWC’s planning and capital maintenance. The Commission stated that it was inclined to consider the exclusion of these major events (for example, Casuarina substation incident) on a case-by-case basis, in the form of a submission by the network service provider together with its proposed target standards, or under clause 3.1.3 (c), which sought to allow the Commission to set target standards on the basis of some alternative methodology.
- 2.35 The Commission considered that reporting of actual network performance should be based on the Commission’s exclusion approach (as outlined in the proposed ESS Code for the first round of consultation), as this would reflect the network service provider’s true performance during the relevant reporting period and would trigger reporting of events based on the cause of the event and whether or not the event was truly outside the reasonable control of the network service provider. The Commission noted that this was similar to the approach taken by the AER in measuring TNSP performance.
- 2.36 The Commission was of the view that its exclusion methodology would provide the network service provider with the right incentives to prevent or minimise the likelihood of major events (whether catastrophic or otherwise) through prudent asset management.

*Application of adjusted category on transmission network performance indicators*

- 2.37 In the Draft Statement of Reasons, the Commission noted that the exclusions (from the adjusted category) may not apply in the context of transmission network performance however noting that this would not mean that these events are not relevant or may not apply in future. The Commission responded to PWC’s example and noted that a transmission outage may have an impact on customers, depending on the circumstances.
- 2.38 The Commission also noted that exclusions also contained other events that are relevant to transmission network performance (for example, the System Controller exercising its functions or powers under applicable regulatory instruments or load shedding due to a shortfall in generation).
- 2.39 The Commission considered that the exclusions (from the adjusted category) are relevant to transmission network performance and should apply to the adjusted transmission network performance indicators under the proposed ESS Code.
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### *Adjusted category and network outages by System Control*

- 2.40 In the Draft Statement of Reasons, the Commission noted PWC's concern that the exclusion of network outages (from the adjusted category) due to an event by System Control would result in increased compliance costs. However, the Commission also noted that similar provisions are contained in the Commission's Guaranteed Service Level Code (GSL Code)<sup>8</sup>, the AER's Service Target Performance Incentive Scheme<sup>9</sup>, and the Queensland Electricity Industry Code.<sup>10</sup>
- 2.41 The Commission noted PWC's concerns over how these compliance costs should be funded and PWC's request for the Commission to review these charges. The Commission stated that System Control is free to submit a schedule of charges to the Commission for approval if it considers these charges to be justified in relation to the operations of system control pursuant to section 39 of the *Electricity Reform Act*.
- 2.42 The Commission invited System Control to submit an updated schedule of charges, and suggested that System Control distinguish between the costs associated with its system control functions and those costs associated with its services as procured by PWC Networks, as only the former should be included in the schedule of charges.
- 2.43 The Commission considered the exclusion of a network outage (from the adjusted category) due to an event by the system controller to be appropriate for the purposes of the new ESS Code.

### *Approval process for natural events*

- 2.44 In the Draft Statement of Reasons, the Commission noted PWC's concerns over the subjective nature of the approval process for considering natural events (as identified using the 2.5 beta method) that were to be excluded from the adjusted category.
- 2.45 The Commission noted that the approval process was developed to ensure regulatory oversight over natural events identified using the 2.5 beta method however considered it appropriate for the approval process to be removed (from the proposed ESS Code for the second round of consultation) given that a strict approval process may impinge upon reporting requirements by the due date.
- 2.46 Instead, the Commission proposed to replace the approval process with an annual reporting requirement to improve transparency in relation to the occurrence of natural events (inserted as clause 4.3 in the proposed ESS Code for the second round of consultation):
- All relevant events considered to be natural events as identified using the 2.5 beta method are to be reported in the annual performance report provided to the Commission on 1 November.
  - Information in the report should include information and documentation:
    - on the circumstances surrounding the event;

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8 Clause 2.2 Guaranteed Service Level Code.

9 Clause 3.3, Electricity distribution network service providers, Service Target Performance Incentive Scheme, AER, November 2009.

10 Clause 2.4.3 (b), Queensland Electricity Industry Code.

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- detailing the reasons why the event is excluded; and
  - outlining the extent of the exclusion from the adjusted category.

2.47 The Commission inserted clause 4.1.5 into the proposed ESS Code for the second round of consultation, which sought to require an electricity entity to respond to the Commission's request for further information regarding the annual performance report, within 20 business days of receipt of that request or as otherwise specified by the Commission.

### **Commission's preliminary decision**

2.48 The Commission's preliminary decision was to retain the exclusion methodology in the proposed ESS Code for the second round of consultation (i.e. to incorporate the exclusion methodology into the new ESS Code). However, in setting or approving the target standards, the Commission stated that it would consider the exclusion of certain major events on a case-by-case basis, as proposed by the network service provider or under an alternative methodology determined by the Commission.

2.49 The Commission also proposed the following:

- The Commission would not impose an approval process for natural events identified by the network service provider using the 2.5 beta method;
- The Commission would propose a reporting mechanism, requiring the network service provider to report certain information in relation to natural events identified using the 2.5 beta method; and
- The Commission would propose a timeframe for the network service provider to respond to the Commission's request for further information regarding an annual performance report, within 20 business days of receipt of that request or as otherwise specified by the Commission.

### **Views in submissions in response to Draft Statement of Reasons**

#### *Separate data sets*

2.50 The Commission did not receive further submissions on this point.

#### *Application of the 2.5 beta method*

2.51 In its submission to the Draft Statement of Reasons, PWC reiterated its view in the initial round of consultation and stated that it is important to adhere to national standards with regards to determining adjusted and unadjusted data to allow comparison with other NEM jurisdictions and continuity of reporting.

#### *Application of adjusted category on transmission network performance indicators*

2.52 The Commission did not receive further submissions on this point.

#### *Adjusted category and network outages by System Control*

2.53 In its submission to the Draft Statement of Reasons, PWC reiterated its view in the initial round of consultation, expressing concern with increasing compliance costs for System Control and noted that the existing system control charges fall short of the provision of services by System Control. PWC welcomed the Commission's response in the Draft Statement of Reasons and further dialogue regarding a review of System Control charges.

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*Approval process for natural events*

2.54 The Commission did not receive further submissions on this point.

**Commission' response to views in submissions to Draft Statement of Reasons***Application of the 2.5 beta method*

2.55 The Commission notes PWC's view and additional comments on the importance of adhering to national standards to allow comparisons and support continuity of reporting.

2.56 In relation to PWC's concerns that the application of the Commission's exclusion methodology will reduce comparability and continuity of reporting, the Commission notes that issues of comparability with NEM jurisdictions is always difficult and it is not uncommon for network service providers in the NEM to maintain separate data sets for different purposes. The Commission also notes that not all regulators apply the 2.5 beta method in its pure form. As mentioned in the Draft Statement of Reasons:

- State regulators in Queensland and New South Wales as well as the Australian Energy Regulator (AER) have adopted the 2.5 beta method to identify major event days only. Other specific exclusions apply.
- State regulators in South Australia and Tasmania do not use the 2.5 beta method.
- The AER does not use the 2.5 beta method for transmission network service providers (TNSP), opting instead to use an exhaustive list that defines events that are deemed to be outside the reasonable control of the TNSP.

2.57 The Commission also notes that continuity of reporting is preferred, but there will always be concerns with lack of comparability of performance over time in light of changes. This should not preclude changes to the exclusion methodology in the Standards of Service Framework, especially if these changes are necessary to support specific regulatory purposes, such as the objectives of the ESS Code.

2.58 As mentioned in the Draft Statement of Reasons, the Commission prefers an exclusions methodology that takes into account the cause of the event and whether or not the event is truly outside the network service provider's control. This arose out of specific incidents such as the 2008 Casuarina Zone Substation Incident and the need for a regulatory framework that provides incentives for the network service provider to improve performance and prevent similar incidents in future. The Commission considers that the pure 2.5 beta method (currently used in the ESS Code) did not achieve this objective and that its exclusion methodology better serves this purpose. Therefore, the Commission will incorporate its exclusion methodology into the new ESS Code.

2.59 The Commission's view is that reporting under the Commission's exclusion methodology will increase scrutiny of the network service providers performance by:

- excluding certain specific events listed in clause 6.2.3 of the ESS Code;
  - including non-weather related events identified by the 2.5 beta method (thereby addressing events such as the series of power outages at the Casuarina Zone Substation in early October 2008); and
  - including (in part or in their entirety) natural events captured by the 2.5 beta method if considered to be within the network service provider's reasonable control
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(addressing events such as the Darwin-Katherine system black on 30 January 2010).

*Adjusted category and network outages by System Control*

- 2.60 The Commission notes PWC's view that compliance costs for System Control are increasing, existing system control charges are inadequate and PWC's invitation for further dialogue in regard to system control charges.
- 2.61 As mentioned in the Draft Statement of Reasons, System Control is able to submit new charges to the Commission for consideration and approval.

**Commission's final decision**

- 2.62 The Commission's preliminary decision stands.
- 2.63 The Commission final decision is that the Commission's exclusion methodology (as set out in the proposed ESS Code for the second round of consultation) will be adopted in the new ESS Code. In setting or approving the target standards, the Commission will consider the exclusion of certain major events on a case-by-case basis, as proposed by the network service provider or under an alternative methodology determined by the Commission.
- 2.64 The Commission will also adopt a reporting mechanism as opposed to an approval process for natural events identified using the 2.5 beta method. This reporting mechanism will require the network service provider to report certain information in relation to natural events identified using the 2.5 beta method. For audit reports, the network service provider will be required to respond to the Commission's request for further information regarding an annual performance report, within 20 business days of receipt of that request or as otherwise specified by the Commission.

**Generation Performance Indicators**

- 2.65 The proposed ESS Code outlined the following generation service performance indicators:
- Availability Factor (AF);
  - Unplanned Availability Factor (UAF);
  - Equivalent Available Factor (EAF);
  - Forced Outage Factor (FOF);
  - Equivalent Forced Outage Factor (EFOF);
  - System Average Interruption Duration Index (SAIDI); and
  - System Average Interruption Frequency Index (SAIFI).

**Views in submissions for the initial round of consultation**

- 2.66 PWC made the following comments and suggestions on the generation service performance indicators:
- inclusion of three new performance indicators (AF, UAF, and FOF) is inconsistent with the Commission's *Final Report for the Review of Electricity Standards of Service for the Northern Territory*;
  - use of Net Maximum Capacity (NMC) in the calculation of AF, UAF, EAF, FOF, and EFOF should be replaced with Gross Maximum Capacity (GMC) as PWC is
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unable to capture the auxiliary load for each generator and because of this, GMC would be a more reliable value;

- segmenting SAIDI and SAIFI performance indicators by power system and region would involve duplication of information; and
- SAIDI and SAIFI performance indicators are not applicable in the context of generation services. The Energy Supply Association of Australia does not report SAIDI and SAIFI for generation services. PWC suggests that SAIDI and SAIFI generation performance indicators be replaced with 'System Minutes'. System minutes measure the loss of one minute at annual peak for the entire system.

### **Commission's response to views in submissions for the initial round of consultation**

#### *Inclusion of AF, UAF, and FOF in the Code*

2.67 In the Draft Statement of Reasons, the Commission stated that its *Final Report for the Review of Electricity Standards of Service for the Northern Territory* recommended that EFOF and EAF (and equivalent) measures should be used to report generation reliability performance.<sup>11</sup>

2.68 The Commission noted that:

- EFOF, EAF, AF, UAF, and FOF generation service performance indicators are sourced from the IEEE standard 762-2006,<sup>12</sup> and considered to be industry best practice; and
- AF, UAF, and FOF are equivalent measures to EFOF and EAF. These indicators are more segmented versions of EFOF and EAF, each containing similar inputs.

2.69 The Commission considered that the inclusion of AF, UAF, and FOF was consistent with its *Final Report for the Review of Electricity Standards of Service for the Northern Territory*.

#### *Use of Gross Maximum Capacity*

2.70 In the Draft Statement of Reasons, the Commission acknowledged that PWC may not be able to capture the electricity consumed by the auxiliary units for each of its generators. The Commission accepted PWC's suggestion to use GMC rather than NMC in the calculation of generation performance indicators. The Commission proposed changes to Schedule 1 and 4 of the proposed ESS Code for the second round of consultation.

#### *Segmentation by power system and region*

2.71 In the Draft Statement of Reasons, the Commission stated that:

- Both the Darwin and Katherine regions are linked by a 132kV transmission line and both regions have their own generation plants.
- However, segmentation of generation performance indicators by power system and region should be incorporated into the new ESS Code in order to capture the

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<sup>11</sup> Paragraph 4.42, *Final Report for the Review of Electricity Standards of Service for the Northern Territory*, Utilities Commission, November 2010.

<sup>12</sup> IEEE Standard 762-2006 Definitions for use in reporting electric generating unit reliability, availability, and productivity.



combined generation reliability performance of the Darwin-Katherine power system and the individual performance of Darwin and Katherine (the Darwin and Katherine regions).

#### *SAIDI and SAIFI for generation services*

2.72 In the Draft Statement of Reasons, the Commission noted PWC's view that SAIDI and SAIFI generation service performance indicators are an inappropriate means of assessing generation reliability performance.

2.73 However, the Commission considered that:

- the impact of generation outages on Territory customers can be substantial and should be easily identified by PWC; and
- Territory customers generally do not distinguish between network (distribution or transmission) and generation outages. Therefore, the inclusion of SAIDI and SAIFI generation service performance indicators is important to capture and assess the full impact of outages on customers.

2.74 The Commission noted PWC's suggestion to use System Minutes (where one system minute is equivalent to the loss of one minute at annual peak for the entire system) instead of SAIDI and SAIFI. The Commission stated the following:

- System Minutes would not capture the impact of generation outages on customers.
- In comparison, SAIDI and SAIFI generation service performance indicators measure the duration and frequency of interruptions of supply to customers.

2.75 The Commission stated that SAIDI and SAIFI generation performance indicators could be removed once Unserved Energy (USE) standards of reliability are established under the System Control Technical Code and ancillary services arrangement are developed.

#### **Commission's preliminary decision**

2.76 The Commission's preliminary decision was to retain the following measures in the proposed ESS Code for the second round of consultation (i.e. to incorporate these measures into the new ESS Code):

- the use of AF, UAF, and EAF generation services performance indicators;
- segmentation of generation service performance indicators by power system and region;
- the use of SAIDI and SAIFI to measure generation reliability performance; and
- AF, UAF, EAF, FOF and EFOF to be calculated by reference to the GMC, not the NMC.

#### **Views in submission in response to Draft Statement of Reasons**

##### *Inclusion of AF, UAF, and FOF in the Code*

2.77 In its submission to the Draft Statement of Reasons, PWC stated its view that the Commission was disinclined to rationalise the number of generation indicators to conform to reporting requirements elsewhere. PWC was of the view that reporting of these indicators will create a substantial cost burden with no benefit to customers. PWC offered to supply costs details to the Commission on request.

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*Use of Gross Maximum Capacity*

2.78 The Commission did not receive further submissions on this point.

*SAIDI and SAIFI for generation services*

2.79 In its submission to the Draft Statement of Reasons, PWC stated its view that the Commission was disinclined to rationalise the number of generation indicators to conform to reporting requirements elsewhere.

2.80 In regards to the Commission's comment with respect to the possible removal of SAIFI and SAIFI generation service performance indicators at a later date, PWC questioned the value of delaying this decision and stated that it would be prudent not to impose this costs in the first place.

*Segmentation by power system and region*

2.81 The Commission did not receive further submissions on this point.

**Commission's response to views in submissions to Draft Statement of Reasons**

*Inclusion of AF, UAF, and FOF in the Code*

2.82 In response to PWC's concerns over the large number of generation performance indicators, the Commission notes the following:

- The Commission's decision to incorporate EFOF, EAF, AF, UAF, and FOF indicators is based on the IEEE Standard 762-2006, which is considered to be good electricity industry practice. These indicators are widely used by generators to monitor performance and availability of their generation sets. The Commission considers that the new ESS Code should promote the adoption of good electricity industry practice and practices that comply with IEEE Standards.
- The Australian Energy Market Operator (AEMO) requires generators to report on forced and planned outage data so that AEMO may monitor generation capacity in each NEM region.

2.83 The Commission also notes that it made a request for PWC to supply all costs details (to support its argument that costs would be substantial) in relation to generation performance indicators outlined in the proposed ESS Code. PWC advised the Commission that these costs were still being identified and were not yet available.

*SAIDI and SAIFI for generation services*

2.84 In relation to PWC's comment on the inclusion of SAIDI and SAIFI generation service performance indicators, the Commission notes that it may reconsider the use of SAIDI and SAIFI to measure generation reliability performance but only if appropriate systems and measures are in place to reduce or prevent the impact of generation outages on customers. This will not be the case if SAIDI and SAIFI generation service performance indicators are removed at present as USE targets are yet to be implemented. The Commission sees merit in retaining SAIDI and SAIFI to capture the impact of generation outages on customers until such time as USE standards are codified and ancillary service arrangements are developed.

2.85 In relation to PWC's comment that reporting on SAIDI and SAIFI generation service performance indicators will add additional costs, the Commission notes that reporting on SAIDI and SAIFI generation service performance indicators already occurs under

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the existing ESS Code. As PWC's information systems are already developed to handle reporting on SAIFI and SAIFI generation service performance indicators, any additional costs should be unsubstantial.

### **Commission's final decision**

2.86 The Commission's preliminary decision stands. The Commission's final decision is that the Commission will adopt the generation service performance indicators (as outlined in the proposed ESS Code for the second round of consultation) in the new ESS Code including:

- the use of AF, UAF, and EAF generation services performance indicators for reporting purposes;
- segmentation generation service performance indicators by power system and region;
- to use SAIDI and SAIFI to measure generation reliability performance and
- to calculate AF, UAF, EAF, FOF and EFOF by reference to the GMC, not NMC.

### **Transmission network performance indicators**

2.87 The proposed ESS Code outlined the following transmission network performance indicators:

- Average Circuit Outage Duration (ACOD) adjusted and unadjusted;
- Frequency of Circuit Outages (FCO) adjusted and unadjusted;
- Average Transformer Outage Duration (ATOD) adjusted and unadjusted;
- Frequency of Transformer Outages (FTO) adjusted and unadjusted;
- SAIDI adjusted and unadjusted; and
- SAIFI adjusted and unadjusted.

### **Views in submissions for the initial round of consultation**

2.88 PWC made a number of comments and suggestions on the transmission network performance indicators:

- SAIDI and SAIFI should not be used to measure transmission network performance, as the IEEE 1366-2003 standard only intended SAIDI and SAIFI to measure distribution network performance.
- Using SAIDI and SAIFI to measure transmission network performance would result in a low data value, as there were limited transmission customers. PWC stated that it is willing to provide SAIDI and SAIFI for the transmission network based on the 'DNSP cause code' or the 'outage cause code at the DNSP level'. PWC queried whether this is what the Commission intended.

### **Commission's response to views in submissions for the initial round of consultation**

#### *SAIDI and SAIFI to measure transmission network performance*

2.89 In the Draft Statement of Reasons, the Commission noted that the SAIDI and SAIFI performance indicators in the IEEE 1366-2003 standard were originally intended for distribution network performance. However, it considered that the standard does not preclude the use of SAIDI and SAIFI for transmission networks.

2.90 The Commission also noted that Territory customers generally do not distinguish between different types outages. The Commission considered that transmission outages and their impact on Territory customers should be measured.

*Customers for calculating SAIDI and SAIFI for the transmission network:*

2.91 In the Draft Statement of Reasons, the Commission noted that SAIDI and SAIFI transmission network performance indicators sought to be measured based (among other things) on the number of 'customers', as defined in Schedule 4 (and in accordance with clause 1.6.3 of Schedule 2) of the proposed ESS Code.

2.92 The Draft Statement of Reasons explained that the proposed ESS Code sought to define the term 'customer' in reference to the *Electricity Reform Act*. The *Electricity Reform Act* defines customer as a person who receives or wants to receive, a supply of electricity for final consumption and includes:

- the occupier for the time being of a place to which electricity is supplied;
- where the context requires – a person seeking an electricity supply; and
- a person of a class declared by the Regulations to be customers.<sup>13</sup>

2.93 The Commission considered this definition to include all end-user customers (customers who receive supply from the transmission and distribution network) for the purpose of calculating SAIDI and SAIFI performance indicators (including SAIDI and SAIFI generation, transmission and distribution service performance indicators<sup>14</sup>).

2.94 The Commission noted PWC's intention to calculate SAIDI and SAIFI transmission network performance indicators using the 'outage cause code at the DNSP level'. The Commission agreed with PWC's approach, as long as the SAIDI and SAIFI transmission network performance indicators measure the impact of transmission related events on end-user customers.

**Commission's preliminary decision**

2.95 The Commission's preliminary decision was to retain the SAIDI and SAIFI transmission performance indicators in proposed ESS Code for the second round of consultation (i.e. incorporate SAIDI and SAIFI transmission performance indicators into the new ESS Code).

**Views in submission in response to Draft Statement of Reasons**

*SAIDI and SAIFI to measure transmission network performance*

2.96 The Commission received no further submissions on this point.

*Customers for calculating SAIDI and SAIFI for the transmission network:*

2.97 The Commission received no further submissions on this point.

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<sup>13</sup> Section 4, *Electricity Reform Act*.

<sup>14</sup> It should be noted that transmission customers are explicitly excluded in the calculation of distribution SAIDI and SAIFI in accordance with clause 1.7.4 of Schedule 2 of the new ESS Code.

*Incorrect definitions of SAIDI and SAIFI*

2.98 In its submission to the Draft Statement of Reasons, PWC stated that the definitions given to SAIDI and SAIFI in the proposed ESS Code were incorrect and would yield spurious result.

**Commission's response to views in submissions to Draft Statement of Reasons***Incorrect definitions of SAIDI and SAIFI*

2.99 The Commission notes PWC's comment on the formulation of the SAIDI and SAIFI indicators. The Commission confirms that its intention is not to depart from the industry accepted standard for calculating SAIDI and SAIFI performance indicators. The Commission has decided to clarify the definitions of SAIDI and SAIFI to avoid ambiguity.

**Commission's final decision**

2.100 The Commission's preliminary decision stands. The Commission will adopt the SAIDI and SAIFI transmission performance indicators in the new ESS Code and as outlined in the proposed ESS Code for the second round of consultation except for the following:

- SAIDI and SAIFI definitions will be defined by reference to the sum of the duration of each interruption (with separate definitions for generation and network interruptions). Similar definitions will be adopted for the calculation of transmission network performance indicators (for example ACOD sum of the duration of each network outage) for consistency.

**Distribution network performance indicators**

2.101 The proposed ESS Code outlined the following distribution network performance indicators:

- SAIDI adjusted and unadjusted;
- SAIFI adjusted and unadjusted; and
- Feeder Performance.

**Views in submissions for the initial round of consultation**

2.102 PWC made a number of comments on the distribution network performance indicators:

- With the exception of Darwin-Katherine, each region is isolated. The Darwin-Katherine system is connected by one 132kV transmission line, with no interconnection at a DNSP level. For this reason, PWC supports reporting of distribution network performance indicators by region rather than by power system.
- When reporting feeder performance, segmentation should be done by exception, rather than on all 150 + feeders. Furthermore, Table 3 of Schedule 2 of the proposed Code states that no targets are necessary for feeder performance. However, a target of 3 is specified in the definition section of the proposed ESS Code.

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## **Commission's response to views in submissions for the initial round of consultation**

### *Reporting distribution performance by region and power system*

2.103 In the Draft Statement of Reasons, the Commission accepted PWC's argument that reporting of distribution network performance indicators should be by feeder category and region, and not by power system. The Commission proposed changes to Table 3 and clause 1.7.4 of Schedule 2 of the proposed ESS Code for the second round of consultation.

### *Identification of poorly performing feeders*

2.104 In the Draft Statement of Reasons, the Commission explained that the proposed ESS Code contained a formula for the identification of poorly performing feeders. The process sought to require the SAIDI performance ratio of an individual feeder to be compared against the pre-defined SAIDI threshold, which was set at 3. If the SAIDI performance ratio was greater than 3 in at least two consecutive reporting periods, the individual feeder would be poorly performing. The feeders that are poorly performing (SAIDI performance ratio greater than 3) would be reported to the Commission.

2.105 The Commission stated that the SAIDI threshold of 3 was not a target standard, but a mechanism to identify (approximately) the bottom five per cent of worst performing feeders. Therefore, the Commission concluded that reporting on feeder performance (as outlined in the proposed ESS Code in the first round of consultation) is by exception and not for all 150 + feeders.

2.106 The Commission proposed that the SAIDI threshold be defined as *a multiple of a distribution network feeder's target standard as directed by the Commission*.

2.107 The Commission considered the formulae for the identification of poorly performing feeders to be appropriate for the purposes of the new ESS Code.

## **Commission's preliminary decision**

2.108 The Commission's preliminary decision was to amend Table 3 and clause 1.7.4 of Schedule 2 of the proposed Code for the second round of consultation (i.e. for the new ESS Code to incorporate reporting of distribution performance indicators by feeder category and region only).

## **Views in submissions in response to Draft Statement of Reasons**

### *Reporting distribution performance by region and power system*

2.109 The Commission received no further submissions on this point.

### *Identification of poorly performing feeders*

2.110 The Commission received no further submissions on this point.

## **Commission's final decision**

2.111 The Commission's preliminary decision stands.

2.112 The Commission's final decision is that the distribution network reliability performance indicators (as outlined in the proposed ESS Code in the second round of consultation) will be adopted in the new ESS Code and will be segmented by either region and/or feeder category.

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## Distribution feeder category definitions

### Background

2.113 In the *Final Report of the Review of Electricity Standards of Service for the Northern Territory*<sup>15</sup>, the Commission proposed the adoption of the AER distribution feeder category definitions for the purpose of measuring distribution network reliability.<sup>16</sup> The AER distribution feeder categories are divided into the following feeders:

- CBD – a feeder supplying predominantly commercial, high-rise buildings, supplied by a predominantly underground distribution network containing significant interconnection and redundancy when compared to urban areas.
- Urban – a feeder, which is not a CBD feeder, with actual maximum demand over the reporting period per total feeder route length greater than 0.3 MVA/km.
- Rural short – a feeder which is not CBD or urban feeder with a total feeder route length less than 200km.
- Rural long – a feeder which is not a CBD or urban with a total feeder route length greater than 200km.

2.114 The proposed ESS Code sought to define feeder categories in reference to a map published by the network service provider and developed under the GSL Code. Because of this, the publication of maps under the GSL Code would have impacted on the application of the feeder category definitions and the calculation of target standards for each feeder category under the proposed ESS Code.

2.115 On 1 June 2012, PWC published maps in accordance with the GSL Code, which identified various regions (CBD, Urban, Rural short, and Rural long) in the Territory.<sup>17</sup> PWC applied the AER feeder category definitions as described above.

2.116 On perusal of the maps, the Commission identified issues with the way in which these AER categories separate urban and rural areas in the Territory. In particular, significant parts of the network (and the regions that they serve) which would otherwise be considered urban by Territory consumers, are categorised as Rural Short under application of the AER feeder category definitions. The Commission's concern was that the levels of standard of reliability (as set through the feeder category definitions) may not match consumer expectations and the objectives of the ESS Code.

2.117 To address these concerns, the Commission engaged an independent expert consultant (ACIL Tasman) to determine whether:

- the AER feeder category definitions have been applied appropriately by PWC;
- other Australian jurisdictions have experienced similar issues with the application of the AER feeder category definition to those experienced by the Territory and how they were resolved;

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<sup>15</sup> Utilities Commission, *Review of Electricity Standards of Service for the Northern Territory - Final Report*, November 2010.

<sup>16</sup> The AER feeder category definitions are based on the definitions developed by the Steering Committee on National Regulatory Reporting Reform (SCONRRR). These definitions were initially developed by the Office of the Regulatory-General, the predecessor of the Essential Service Commission of Victoria.

<sup>17</sup> The maps are available on PWC's website [http://www.powerwater.com.au/news\\_and\\_publications/policy\\_and\\_guidelines/guaranteed\\_service\\_levels](http://www.powerwater.com.au/news_and_publications/policy_and_guidelines/guaranteed_service_levels).

- the overlap of certain feeders categorised as ‘Rural short’ supplying areas that would otherwise be considered to be ‘Urban’, has any implications for the regulation of standards of service performance in the Territory; and
- any adjustments to the feeder category definitions which can be made to address those implications.

2.118 The ACIL Tasman final report is available on the Commission’s website.

([www.utilicom.nt.gov.au](http://www.utilicom.nt.gov.au)).

### **Summary of the findings**

2.119 ACIL Tasman’s final report includes the following findings:

- PWC appears to have applied the AER feeder category definitions appropriately.
- Other Australian jurisdictions have experienced similar issues in applying the AER feeder category definitions. Regulators in South Australia and Tasmania have applied separate categories (independent to those used by the AER) to set standards of service and reliability for their respective distribution networks.
- The new ESS Code should incorporate the AER feeder category definitions. However, the MVA/km threshold (which defines Urban feeders) should be reduced from 0.3 MVA/km to 0.12 MVA/km.

2.120 ACIL Tasman explored three possible options in redefining the feeder category definitions in the proposed ESS Code:

- Realigning the feeder categories by altering the MVA/km threshold values. ACIL Tasman did not support this approach, as there may be little or no relationship between the load on a feeder (by km) and the type of area it supplies. Furthermore, the approach is seen as arbitrary and without additional information, it is impossible to know whether or not the right threshold value has been chosen.
- The ‘meshed’ and ‘radial’ feeder categorisation are currently applied under the existing ESS Code. Such an approach is more closely related to the nature of the network. However, ACIL Tasman did not support this approach, as there is no universally accepted definition of ‘radial’ and ‘meshed’.
- Setting performance targets in reference to identified geographic zones. This approach allows a great deal of flexibility, as standards could be applied on a place-by-place basis. Targets could be set to reflect the actual or expected performance for specific areas. However, ACIL Tasman noted that this approach would make it impossible to compare standards of service and reliability with those standards set in other Australian jurisdictions. This approach may also require a major design of PWC’s information systems to enable reporting in accordance with geographic zones.

2.121 ACIL Tasman recommended a ‘hybrid’ approach for categorising distribution feeders in the Territory:

- on the basis that customers in like areas can reasonable expect to receive similar levels of service; and
- to minimise the costs of compliance on PWC, given that PWC’s information systems currently use the AER feeder category definitions.



2.122 The following approach was used to justifying the reduction of the MVA/km threshold (which defines Urban feeders) from 0.3 MVA/km to 0.12 MVA/km:

- areas are determined based on Australian Bureau of Statistics (ABS) definitions (for instance the ABS definition of Urban) and demographic data;
- Geographic Information System data is used to determine the location of each of PWC's feeders in reference to ABS definitions and demographic data (the 'target categorisation'); and
- MVA/km threshold is reduced to the extent that it provides the best possible match with the 'target categorisation', that is 0.12MVA/km.

### **Commission's preliminary decision**

2.123 In the Draft Statement of Reasons, the Commission decided that the 'hybrid approach' proposed by ACIL Tasman is pragmatic and workable in that it met the Commission's expectations while minimising the impact on PWC's information systems.

2.124 The Commission noted that the approach did not provide a workable solution for all feeders. For example, ACIL Tasman has identified a small number of feeders ('mixed' feeders), which cross urban and rural areas (as defined by ABS definitions and demographic data). However, the Commission also noted:

- that the outcome was significantly better than the application of the AER feeder category definitions in their pure form.
- any methodology would have some anomalies, but that ACIL Tasman's recommended approach reduced these anomalies and was therefore workable in the Territory context.

2.125 The Commission invited submissions on other options for amending the AER feeder categories. The Commission stated that it would consider any other option if it was more appropriate in the Territory context.

2.126 The Commission also decided that:

- the feeder and area definitions should not be defined in relation to a map developed in accordance with clause 2.3 of the GSL Code; and
- the feeder and area definitions would be defined in reference to a direction<sup>18</sup> issued by the Commission in accordance with the ESS Code.

2.127 The Commission considered that the above approach would provide sufficient time for both PWC and the Commission to develop a workable solution for the treatment of problematic feeders and areas, without compromising the timeframe for implementation of the new ESS Code.

### **Views in submission in response to Draft Statement of Reasons**

2.128 In its submission to the Draft Statement of Reasons, PWC recommended that feeder categories be determined in accordance with industry standards to enable benchmarking with industry peers. In adopting the ACIL Tasman approach, PWC

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<sup>18</sup> It is noted that the Commission did not specify the form of the direction. In the final decision (outlined in this paper) the Commission has decided that the direction be issued in the form of a guideline.

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stated that the ability to benchmark and engage in prudent investment would be lost. PWC also stated that the perceived benefit from adopting ACIL Tasman's approach had not been reasonable established or justified.

2.129 PWC noted that the proposed ESS Code continued to define feeders and areas in accordance with the maps developed by PWC under the GSL Code, despite the Commission's statement in paragraph 2.94 of the Draft Statement of Reasons that this would not be the case.

### **Commission's response to views in submissions to Draft Statement of Reasons**

2.130 With respect to the Commission's decision to adopt the ACIL Tasman approach to feeder categorisation as opposed to the AER feeder category definitions, the Commission has considered the scale of anomalies associated with the application of the AER feeder category definitions and considers that the outcome is inconsistent with the objectives of the Code and the objects of the *Electricity Reform Act* and *Utilities Commission Act*.

2.131 The Commission considers it essential that customers in like areas receive (or should expect to receive) the same levels of service. This objective is best served through the adoption of ACIL Tasman's feeder categorisation approach considering the alternative (AER) approach. The AER approach yields unjustifiable results given that many pockets of Darwin considered to be 'urban' by Territory consumers will be classified as 'rural'.

2.132 The Commission considers that the ACIL Tasman's methodology to determine the category of each individual feeder (i.e. reducing the threshold from 0.3MVA/Km to 0.12MVA/km) has the following merits:

- it addresses most of the discrepancies associated with the AER feeder category definitions while having a minimal impact on PWC's systems; and
- it ensures that customers in like areas receive (or should expect to receive) similar standards with respect to supply of electricity.

2.133 The Commission believes that comparability with other jurisdictions is important. However, the Commission considers that the new ESS Code would not prevent PWC from undertaking planning or benchmarking in the way it sees fit.

2.134 The Commission also considers that the approach to feeder categorisation needs to be formulated within the context of the objectives of the Code (and the regulatory framework), suit local characteristics and serve specific regulatory purposes. The Commission's view is that it is important for target standards to reflect customer expectations.

2.135 With respect to the small number 'mixed feeders' identified by ACIL Tasman (those feeders which cross urban and rural areas), the Commission expects to consult with PWC Networks to determine the most appropriate treatment for these feeders. The Commission will adopt the following process to determine the treatment of 'mixed feeders':

- 1) The Commission will specify the following feeders as 'mixed feeders' consistent with the ACIL Tasman methodology:
    - 11CA13 WANGURI;
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- 11PA10 DRIVER;
  - 22KP03 TINDAL 2;
  - 22MM09 MCMINNS PUMPS;
  - 22RG09 FARMS; and
  - 22RG13 BREWER 1,
- 2) On the Commission's reasonable request, the network provider must submit to the Commission its proposed categorisation of mixed feeders (as specified above) into feeder categories, which must include:
    - reasons for the proposed categorisation;
    - sufficient information and supporting documentation to support the proposed categorisation; and
    - statements that demonstrate that the network provider has had regard to the matters listed in section 6 (2) of the Act, the objectives of the Code (among other things) and whether the proposed categorisation is consistent with good electricity industry practice.
  - 3) If in the Commission's reasonable opinion the network provider has failed to sufficiently address the matters set out above, all mixed feeders will be categorised as urban feeders.
  - 4) If bullet point 3 does not apply, the network providers proposed categorisation will be considered by the Commission in consultation with the network provider and/or any other person the Commission sees fit to consult.
  - 5) If in the Commission's reasonable opinion the network provider's proposed categorisation of mixed feeders into feeder categories is consistent with the object of the Act and the objectives of the Code (among other things) the Commission will (subject to consultation requirements outlined in bullet point 4) adopt the network provider's proposed feeder categorisation.

2.136 The Commission proposes to specify this process in 'Feeder Category Guidelines' which will be released in conjunction with the new ESS Code (1 December 2012). The guidelines will be made pursuant to the Commission's powers to otherwise direct an alternative definition of the following terms; CBD feeder, urban feeder, rural long feeder and rural short feeder (as well as CBD area, rural area and urban area) in accordance with Schedule 4 of the new ESS Code.

2.137 In relation to PWC's comment that feeders and areas continue to be defined in accordance with the maps developed by PWC under the GSL Code, the Commission agrees with PWC's comment and will incorporate definitions that are consistent with paragraph 2.94 of the Draft Statement of Reasons in the new ESS Code.

### **Commission's final decision**

2.138 The Commission's preliminary decision stands.

2.139 The Commission's final decision is:

- the feeder and area definitions will not be defined in relation to a map developed in accordance with clause 2.3 of the GSL Code;

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- the feeder and area definitions will be defined in reference to a guideline issued by the Commission in accordance with the Code This guideline will define feeder and area definitions consistent with ACIL Tasman's proposed approach to feeder categorisation; and
  - the guideline will outline a process for the determining the treatment of mixed feeders.

### **Transmission and distribution customer service performance indicators**

2.140 The proposed ESS Code outlined the following transmission and distribution customer service performance indicators:

- connections;
- phone answering;
- network complaints; and
- written enquiries.

### **Views in Submissions for the initial round of consultation**

2.141 PWC made a number of comments in relation to the transmission and distribution customer service performance indicators including:

- PWC considered that a combination of network and retail related queries for phone answering data (as well as complaints) was the most practical approach. However, PWC stated that phone answering data (and possibly complaints) would also include water and sewerage queries.
- Reporting on written enquiries in relation to transmission and distribution customer service was not included in the Commission's *Final Report for the Review of Electricity Standards of Service for the Northern Territory*.

### **Commission's response to views in submissions for the initial round of consultation**

#### *Phone answer data and complaints containing water and sewerage queries*

2.142 In the Draft Statement of Reasons, the Commission stated that following:

- The proposed ESS Code permits combined totals for network and retail related queries.
- However, this should only apply until such time as system functionality supports separate reporting.
- The Commission expects PWC to be actively work towards separate recording and reporting of network and retail queries and complaints for its own business purposes.

2.143 The Commission also stated that separate recording and reporting would enable PWC to better cater to its customer's needs, understand its customer base, and provide greater transparency in relation to the quality of its customer service performance. This should enable PWC to resolve customer queries in a more timely and efficient manner.

2.144 The Commission noted PWC's advice that phone answering data (and possibly complaints) would also include water and sewerage queries. However, the Commission expressed the view that the proposed ESS Code did not extend to water

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and sewerage queries and expected PWC to be able to exclude water and sewerage queries for the purposes of the new ESS Code, as soon as possible

*Written enquiries relating to transmission and distribution customer service*

2.145 In the Draft Statement of Reasons, the Commission noted PWC's concerns regarding the addition of written enquiries as a transmission and distribution customer service performance indicator. However, the Commission stated that:

- The inclusion of written enquiries for network related queries would inform and potentially incentivise the network service provider to cater for its customers' needs and understand its customer base.
- Written enquiries were included as a retail service performance indicator.
- The time taken by a network service provider to respond to a customer enquiry is one of the performance measures included in the GSL Code.<sup>19</sup>
- There did not appear to be any compelling reason preventing PWC from reporting network related written enquiries.

2.146 The Commission considered the inclusion of written enquiries as a transmission and distribution service performance indicator to be appropriate for the purposes of the new ESS Code.

**Commission's preliminary decision**

2.147 The Commission's preliminary decision was to retain the transmission and distribution customer service performance indicators in the proposed ESS Code for the second round of consultation (i.e. to incorporate these performance indicators into the new ESS Code).

**Views in submission to Draft Statement of Reasons**

*Phone answer data and complaints containing water and sewerage queries*

2.148 In its submission to the Draft Statement of Reasons, PWC stated that system functionality does not support separate reporting systems for PWC Networks.

*Written enquiries relating to transmission and distribution customer service*

2.149 The Commission received no further submissions on this point.

**Commission's response to views in submission to Draft Statement of Reasons**

*Phone answer data and complaints containing water and sewerage queries*

2.150 The Commission notes that PWC's system functionality does not support separate reporting systems for PWC Networks. Therefore, the new ESS Code will make allowances for combined totals for phone answer data as it pertains to PWC Retail and PWC Networks.

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<sup>19</sup> See Table 1 and clause 2.1.4 Guaranteed Service Level Code.

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2.151 However, as noted in the Draft Statement of Reasons, the Commission expects PWC to be actively working towards separate recording and reporting of network and retail queries and complaints for its own business purposes.

### **Commission's final decision**

2.152 The Commission's preliminary decision stands.

2.153 The Commission's final decision is to adopt the transmission and distribution customer service performance indicators (as outlined in the proposed ESS Code for the second round of consultation) in the new ESS Code.

### **Retail Performance Indicators**

2.154 The proposed ESS Code contains the following retail service performance indicators:

- connections;
- phone answering;
- complaints;
- hardship; and
- written enquiries.

### **Views in submissions to initial round of consultation**

2.155 PWC made a number of comments on the retail service performance indicators.

#### *Complaint categories*

2.156 PWC noted that the percentage and total number of complaints would be segmented into complaint categories. PWC stated that it intends to segment complaints into the following categories:

- disconnection in error;
- credit listing in error;
- delayed connection (connection not performed within specified timeframes);
- bill issues – where process has not been followed; and
- complaints related to PWC's hardship scheme.

2.157 PWC also informed the Commission that it could report on 'customer transfer' and 'energy marketing'. However, PWC cautioned that the customer transfer process involves multiple business units within PWC which may make it difficult to report on these performance indicators.

#### *Customer hardship measures*

2.158 PWC commented on the customer hardship measures:

- total number of disconnections for failure to pay and reconnections under customer hardship measures, did not provide information relating to customer's difficulty to pay;
  - total number of customer complaints under customer hardship measures, was already covered under the complaints performance indicator;
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- total number of calls relating to the collection of security deposits under customer hardship measures, was only applicable to large customers and not small customers; and
  - total number of calls associated with social welfare concessions and other related schemes, did not relate to a retailer's performance.

2.159 PWC also proposed that the new ESS Code adopt the following customer hardship indicators (as sourced from the AER retail performance reporting guidelines):

- number of current residential customers on the retail hardship program as at 30 June each financial year;
- number of current residential customers that completed the retail hardship program for the financial year ending 30 June;
- number of current residential customers on the retail hardship program receiving hardship vouchers for the financial year ending 30 June;
- number of current residential ceased customers whilst on the retail hardship program for the financial year ending 30 June;
- number of residential electricity customers denied access to the retail hardship program during each calendar month of the reporting period;
- the average energy bill debt for those retail hardship program customers who entered the hardship program during the reporting period;
- the number of electricity customers who entered the retail hardship program during the reporting period, with an energy bill debt that was:
  - between \$0 and \$500;
  - over \$500 but less than \$1,500;
  - over \$1,500 but less than \$2,500;
  - \$2,500 or more;
- total number of electricity customers who exited the retail hardship program during the reporting year, who:
  - successfully completed the retail hardship program or exited with the agreement of the retailer; and
  - were excluded or removed from the retail hardship program for non-compliance.

2.160 PWC considered the following hardship measures (as sourced from the AER retail performance reporting guidelines) would require extra resourcing for PWC Retail and may be provided to the Commission at significant costs:

- number of residential electricity customers disconnected for non-payment of a bill during the reporting period, who successfully completed the hardship program, or exited by agreement with the retailer, in the previous 12 months;
  - number of residential customers who successfully completed the hardship program or exited by agreement with the retailer in the previous 12 months, who were reconnected in the same name and at the same address within seven days of disconnection for non-payment; and
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- the retailer must provide a written summary on the types of assistance offered and provided to hardship customers throughout the reporting period.

#### *Definition of hardship and application of performance indicators to domestic customers*

2.161 PWC proposed that the term 'hardship' in the new ESS Code be defined in accordance with PWC's Stay Connected Policy, which is as follows:

*a stay connected customer is someone who is experiencing financial hardship whose intention is to pay, but who does not have the financial capacity to make the required payments with the timeframe set out in Power and Water's payment terms.*

2.162 PWC also requested that the Commission confirm whether the hardship measures would apply to all customers or domestic customers alone.

### **Commission's response to views in submissions**

#### *Complaint categories*

2.163 In the Draft Statement of Reasons, the Commission considered PWC's proposed complaint categories to be appropriate for the purposes of the ESS Code. However, the Commission noted that complaint categories should be reasonably comprehensive, to ensure that all major (and potential) issues are properly identified. The Commission stated that this should enable retailers to assess any trends in its performance and adopt appropriate measures in response to major issues that affect the majority of its customers.

2.164 The Commission welcomed PWC's position to report on complaints relating to customer transfers and energy marketing. The Commission accepted that the customer transfer process involves coordination with various business units within PWC and as a result, these complaints may not necessarily relate to PWC Retail's performance.

#### *Customer hardship measures*

2.165 In the Draft Statement of Reasons, the Commission noted PWC's comments in relation to customer hardship measures in the proposed ESS Code.

2.166 In relation to the total number of disconnections for failure to pay and reconnections (in the same name), the Commission considered that these indicators, when viewed in conjunction with customers service measures associated with retail hardship schemes, would provide valuable insight into a retailer's treatment of vulnerable customers (including vulnerable customer on a retail hardship program and those customers who are not). Therefore, the Commission proposed to retain this customer hardship measure in the proposed ESS Code for the second round of consultation (i.e. to incorporate this performance indicator into the new ESS Code).

2.167 In relation to customer hardship measures for the total number of calls relating to the collection of security deposits and social welfare concessions (including membership of pensioner concession schemes, and other relevant schemes), the Commission agreed with PWC's comments that these indicators may not be directly related to customer hardship and should be removed from the proposed ESS Code for the second round of consultation.

2.168 In relation to the total number of customer complaints under customer hardship measures, the Commission noted that PWC would adopt a complaint category for complaints relating to PWC's customer hardship scheme. The Commission considered that the adoption of this complaint category would meet the requirements under this customer hardship measures. However, the Commission stated that the proposed ESS Code sought not to strictly define the complaint categories for the purpose of reporting (to provide retailers with a flexible approach to compiling complaint categories which would cater for their own operations and the assessment of retail performance). Therefore, the Commission proposed to retain this customer hardship measure for the second round of consultation (i.e. to incorporate this performance indicator into the new ESS Code).

2.169 The Commission accepted PWC's proposed measures in relation to the performance of its retail hardship scheme and noted that these measures generally align with the AER retail performance reporting guidelines. Schedule 4 of the proposed ESS Code was amended for the second round of consultation.

2.170 The Commission noted that the three other measures (as identified in paragraph 2.160) could be provided to the Commission at significant costs. The Commission decided against imposing a requirement to report under those measures, at this time.

*Definition of hardship and application to domestic customers*

2.171 In the Draft Statement of Reasons, the Commission noted PWC's comment that hardship was not adequately defined in the proposed ESS Code. The Commission also noted that PWC's proposed definition of hardship defined a customer in reference to PWC's Stay Connected Policy as opposed to a generic hardship policy.

2.172 As an alternative, the Commission decided to align the definition of 'customer hardship policy' with the National Energy Retail Law (NECF).<sup>20</sup> A definition of 'Retail Hardship Program' was inserted in Schedule 4 (and in the relevant retail performance indicators in Schedule 3) of the proposed ESS Code for the second round of consultation, which was defined as a scheme, which may include any of the following elements:

- processes to identify residential customers experiencing payment difficulties due to hardship, including identification by the retailer and self-identification by a residential customer;
- process for early response by the retailer in the case customers identified as experiencing payment difficulties due to hardship;
- flexible payment options (including a prepayment plan and Centrepay) for the payment of energy bills by hardship customers;
- processes to identify appropriate government concession programs and appropriate financial counselling services and to notify hardship customers of those programs and services;
- an outline of a range of programs that the retailer may use to assist hardship customers;

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<sup>20</sup> s 44, *National Energy Retail Law (South Australia) Act*.



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- process to review the appropriateness of a hardship customer's market retail contract in accordance with the purpose of the customer hardship policy;
  - processes or programs to assist customers with strategies to improve their energy efficiency, where such processes or programs are required under an applicable regulatory instrument; and
  - any other matters required by an applicable regulatory instrument.

2.173 The Commission also confirmed that the hardship measures (and the retail service performance indicators more generally) should be limited to measuring the treatment of domestic customers, which are those customers taking in 160 megawatt (MW) hours or likely to be taking less than 160 MW hours of electricity during the reporting period). Clause 1.1.3 of Schedule 4 has been added clarify this point.

2.174 The Commission considered the above definitions to be appropriate for the purposes of the new ESS Code.

### **Commission's preliminary decision**

2.175 The Commission's preliminary decision was to:

- adopt the hardship measures listed in the AER's performance reporting procedures and guidelines in the new ESS Code with the exception of the three measures identified by PWC as being too costly to provide;
- retain the measure on the total number of disconnections for failure to pay and reconnections in the same name and total number of customer complaints under customer hardship measures in the proposed ESS Code for the second round of consultation (i.e. to incorporate these measures into the new ESS Code);
- remove the following measures from the proposed ESS Code for the second round of consultation:
  - total number of calls relating to the collection for security deposits; and
  - the total number of calls associated with social welfare concessions, including membership of pensioner concession schemes and other relevant schemes;
- adopt a variation of the NECF definition of 'customer hardship program' in the new ESS Code; and
- limit the application of retail service performance indicators to domestic customers only.

### **Views in submission in response to Draft Statement of Reasons**

2.176 In its submission to the Draft Statement of Reasons PWC:

- sought confirmation that the hardship indicator would apply to domestic customer only and not small business;
  - was in agreement that performance standards should apply to small customers consuming less than 160 MWh, but noted that PWC would not be able to filter these customers for the purpose of reporting phone answering performing indicators; and
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- stated that it is able to report on the performance indicators pertaining to PWC's Stay Connected Policy. However PWC Retail sought confirmation that reporting would only be required from 2013-14 onwards given the testing and training was required.

### **Commission's response to submission to Draft Statement of Reason**

2.177 The Commission notes PWC's comments:

- The Commission agrees that hardship indicators should apply to domestic customers only and not small businesses.
- The Commission notes PWC's current inability to filter calls from customers consuming less than 160Mwh. The Commission considers this to be acceptable at this time; however the Commission expects PWC to be actively working towards continuous improvements of its information systems to enable reporting of performance indicators under the new ESS Code.
- The Commission notes PWC's request that performance indicators pertaining to PWC's Stay Connected Policy should commence from 2013-14 onwards. The Commission notes that the new ESS Code will start from 1 December 2012. However, the Commission also notes that there may be issues in reporting all of the performance indicators in such a short period of time. The Commission is expects PWC to report these indicators as soon as possible. The Commission welcomes updates on PWC Retail's ability to report on these indicators.

### **Commission's final decision**

2.178 The Commission's preliminary decision stands.

2.179 The Commission final decision is to adopt the follow measures in the new ESS Code:

- hardship measures listed in the AER's performance reporting procedures and guidelines (as proposed by PWC) in the new ESS Code with the exception of the three measures identified by PWC as being too costly to provide at this time;
- measures on the total number of disconnections for failure to pay and reconnections in the same name and total number of customer complaints;
- variation of the NECF definition of 'customer hardship program' (as outlined in Schedule 4 of the proposed ESS Code for the second round of consultation); and
- limit the application of retail service performance indicators to domestic customers only. Hardship measures will be limited to residential customers.

2.180 The Commission will not require reporting against any of the following measures:

- total number of calls relating to the collection for security deposits; and
  - the total number of calls associated with social welfare concessions, including membership of pensioner concession schemes and other relevant schemes;
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## APPENDIX A

### Other matters

Proposed Code reference	Submission in initial round of consultation	Commission's response and preliminary decision	Submissions in response to preliminary decision	Commission's final decision
cl.3.1.3	<p>In proposing target standards, PWC requested that an additional methodology be added to clause 3.1.3 that will enable PWC proposed an alternative methodology, for example, average the data from the preceding three years, subject to the Commission's approval.</p>	<p>The Commission noted that clause 3.1.3 of the proposed ESS Code stated that the proposed target standards must be calculated by averaging the data from the preceding five financial years. However if that data is not available, the methodology will be averaging comparable and available data from each of the preceding five financial years.</p> <p>The Commission also noted that the proposed target standards may be calculated utilising such other methodology that the Commission considers appropriate. The Commission was of the view that this would enable PWC to propose an alternative methodology to the Commission.</p>	<p>The Commission received no further submissions on this point</p>	<p>The Commission's preliminary decision stands.</p>

cl.5.2.1	PWC proposed that audits should take place every five years, unless there are significant changes to the service standards or PWC's reporting methodology. PWC stated that it was concerned that frequent audits will result in additional costs on PWC.	The Commission stated that it was mindful that audit costs can be significant. The Commission stated that it would have regard to the overall benefits of the audit relative to the costs. It was noted that of particular interest to the Commission would be the accuracy of the proposed target standards as they would be one of the inputs into distribution network planning. The Commission was of the view that audit costs would be comparably small, relative to the magnitude of the cost associated with PWC network's capital program.	The Commission received no further submissions on this point	The Commission's preliminary decision stands.
Schedule 1	PWC queried how generation planned and unplanned outages are to be treated under Schedule 1 of the proposed ESS Code. PWC is of the understanding that reporting will continue to be in terms of total outages.	Planned and/or unplanned outages (as well as the equivalent partial outages hours resulting from partial planned outages and/or partial unplanned outages) are used as an input to calculate the generation service performance indicators in Schedule 1 of the proposed ESS Code.	The Commission received no further submissions on this point	The Commission's preliminary decision stands.
Schedule 1, Table 1	PWC commented that there was an additional performance indicator (Equivalent Forced Outage Factor (EFOF)) outlined in Table 1 of Schedule 1 of the proposed ESS Code that did not appear in Table 1.2 of the consultation paper. PWC sought clarification as to which set of indicators will be used.	The Commission confirmed that EFOF would be used, as per its inclusion in the proposed ESS Code. Although EFOF was not listed in Table 1.2 of the consultation paper, it was noted that EFOF was listed in Table 3.1, and discussed at length, at paragraph 3.80 of the consultation paper.	The Commission received no further submissions on this point	The Commission's preliminary decision stands.

Schedule 1	<p>PWC said that it was of the understanding that the segmentation of generation services performance indicators by power station in Schedule 1 (as well as other indicators) would not apply to Indigenous Essential Services communities.</p>	<p>The Commission confirmed that the application of Schedule 1 sought to exclude IES communities. To clarify this point, clause 1.2.2 was inserted in the proposed ESS Code for the second round of consultation, which stating that the Code will only apply to an electricity entity to the extent that it provides generation services, network services or retail service on the regulated network.</p> <p>The Commission proposed to define 'regulated network' in relation to an 'electricity network prescribed by the Minister by notice in the Gazette as an electricity network covered by the Network Access Code in accordance with the ENTPA Act'.</p> <p>The Commission stated that the calculation of network services performance indicators in Schedule 2 of the proposed Code would apply to IES communities to the extent that they are connected to a regulated network.</p>	<p>The Commission received no further submissions on this point</p>	<p>The Commission's preliminary decision stands.</p>
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Schedule 1 and 2	<p>PWC recommended that the Commission consult directly with the Energy Supply Association of Australia (ESAA) to ensure consistent formulae are used with respect to the calculation of generation performance indicators. PWC's also made a number of comments on:</p> <ul style="list-style-type: none"> <li>• equations containing extra closing brackets;</li> <li>• the variable "x" has been used in place of a multiplication sign; and</li> <li>• the use of word 'Incident' as opposed to 'Interruption' for SAIDI and SAIFI performance indicators</li> </ul>	<p>That Commission noted that it sought external expert advice (ACIL Tasman) to ensure that all indicators are consistent with generally accepted industry practice. As a result, inconsistencies were identified and corrected and in some cases the formulation of the indicators was simplified. These changes were incorporated into the proposed ESS Code for the second round of consultation.</p> <p>The derivation of the number of customers in the denominator of the generation and network SAIDI and SAIFI indicators was clarified as the average of the number of customers supplied at the beginning of the reporting period and the number of all customers supplied at the end of the reporting period.</p> <p>The Commission stated that the ACIL Tasman report on the review of performance indicators in the proposed ESS Code can be found on the Commission's website.</p>	The Commission received no further submissions on this point	The Commission's preliminary decision stands.
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Schedule 2	N/A	N/A	PWC sought clarification on the definition of circuit for the purpose of reporting transmission indicators (ACOD and FCO). PWC stated that it assumes that circuit is defined as an overhead and/or underground transmission line.	The Commission notes that the term 'circuit' is only used in the title of the performance indicator and to indicate what the symbols in the formulae stand for. The test of causation in relation to a transmission outage and whether an outage is to be included or excluded in the calculation of performance indicators is contained in clause 1.5.1 of Schedule 2 of the new ESS Code. Therefore, it is unnecessary to define the term 'circuit'.
Schedule 2, cl.1.4, 1.5 and 1.63	PWC has commented that clauses 1.4, 1.5, and 1.6.3 of Schedule 2 of the proposed ESS Code provide different definitions for network outages or interruptions, which makes the document unclear. PWC said that it supports the use of a single definition for each term, followed by accurate and adequately defined performance indicator descriptions in their own right.	The Commission noted that the Code was checked for legal consistency. To assist the reader, the Commission added a clause to each performance indicator referencing the relevant parts of the Code, which should be read in conjunction with the relevant formulae for that performance indicator. The Commission considered that an electricity entity is responsible for ensuring that it interprets the Code correctly in accordance with any laws that apply to the interpretation of statutory instruments.	The Commission received no further submissions on this point	The Commission's preliminary decision stands.
Schedule 5 clause 1.1.6 (c)	PWC commented that there is a typographical error in Schedule 5 clause 1.1.6 (c) of the proposed ESS Code, where data segmentation should refer to clause 6 not clause 7.	The Commission agreed with PWC's comment and made amendments to the proposed ESS Code for the second round of consultation.	The Commission received no further submissions on this point	The Commission's preliminary decision stands.

Schedule 2 clause 1.8.2	<p>On the connections customer service performance indicators for transmission and distribution networks under clause 1.8.2 of Schedule 2 of the proposed ESS Code, PWC commented that:</p> <ul style="list-style-type: none"> <li>the requirement for reconnections should read “the percentage and total number of reconnections not undertaken within 24 hours of receipt by the network provider of a valid request for reconnection from the customer”; and</li> <li>the inclusion of “the number and average length of time taken to provide new connections to new subdivisions where minor extensions or augmentation is required in urban areas” is unwarranted and uninformative, as timing is determined on a case-by-case basis.</li> </ul>	The Commission agreed with PWC’s comment and made amendments to the proposed ESS Code for the second round of consultation.	The Commission received no further submissions on this point.	The Commission’s preliminary decision stands.
Schedule 2 clause 1.8.3	<p>On phone answering customer service performance indicators for transmission and distribution networks under clause 1.8.3 of Schedule 2 of the proposed ESS Code, PWC proposed that the average time taken to answer the phone should be 30 seconds, rather than 20 seconds. PWC stated that this proposal is in line with AER guidelines.</p>	The Commission agreed with PWC’s comment and made amendments to the proposed ESS Code for the second round of consultation.	The Commission received no further submissions on this point	The Commission’s preliminary decision stands.



Schedule 2, cl.1.8.3	On phone answering customer service performance indicators for transmission and distribution networks under clause 1.8.3 of Schedule 2 of the proposed ESS Code, PWC sought clarification on the way in which abandonment of calls should be interpreted (for example, if abandonment occurs after a pre-recorded message is heard by a customer (and the pre-recorded message contains the information that the customer requires) is this considered negative in terms of performance).	The Commission noted that the intention of measuring abandonment of calls is to capture those calls that are abandoned within the specified timeframe in instances where a customer's query has not been resolved (especially in cases where a customer chooses to talk to an operator). In the example given, the Commission considered that the call has not been abandoned, as the customer has received the information it requires, through a pre-recorded message.	The Commission received no further submissions on this point	The Commission's preliminary decision stands.
Schedule 5	On the interim targets under clause 1.1.5 of Schedule 5 of the proposed ESS Code, PWC stated that there is not enough time to develop systems to collect the required information and ensure its accuracy. PWC stated that the new performance indicators, the GSL Code, and the regulatory reset process, is enough incentive to develop systems, processes, and procedures to collect data for the proposed target standards re 2014-19 Network Price Determination. PWC stated that it was concerned of any costs incurred in complying with this requirement. PWC suggested that the funds could be spent on developing and improving PWC's systems, processes, and procedures instead.	The Commission noted that PWC may not have sufficient time to develop its systems, processes, and procedures to ensure compliance with the interim target standards. However, the Commission considered that interim target standards should be established, as this would avoid a situation where there are no set levels of service performance reliability for the remainder of the 2009-14 regulatory control period. PWC stated that target standards for the 2014-19 regulatory period needed to be in place by early 2013. The Commission suggested that these targets could be used as part of the interim arrangements. The Commission stated that it intends to discuss this matter further with PWC.	The Commission received no further submissions on this point	The Commission's preliminary decision stands.

Schedule 3	<p>ERM made a number of comments regarding the relevance of the retail customer service performance indicators on its business:</p> <ul style="list-style-type: none"> <li>ERM intends to retail electricity to commercial and industrial customers not households and small businesses.</li> <li>ERM does not operate a call centre, every customer is assigned a specialist account manager who has the capacity to respond to enquiries 7 days a week regardless of contact methodology.</li> </ul> <p>Given its business model, ERM requested confirmation on whether nil reports are required to be submitted to the Commission.</p>	<p>The Commission noted ERM's comments on the operation of its business and the way in which it deals with its customers. The Commission considered that an electricity entity will be required to submit nil reports to the Commission. The Commission noted that over time, it may consider limiting reporting requirements on certain electricity entities so that reporting is only required for customer service performance indicators that are relevant.</p> <p>It was also noted that the application of retail services performance indicators would be limited to measuring the treatment of domestic customers, which are those customers taking in 160 megawatt MW hours or likely to be taking less than 160 MW hours of electricity during the reporting period. Clause 1.1.3 of Schedule 4 has been added to the proposed ESS Code to clarify this point.</p>	<p>The Commission received no further submissions on this point</p>	<p>The Commission's preliminary decision stands.</p>
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CI 3.2.1	N/A	N/A	N/A	<p>After releasing the Draft Statement of Reasons and prior to finalising the Final Statement of Reasons, the Commission amended clause 3.2.1 of the new ESS Code. Clause 3.2.1 of proposed ESS Code (released for the second round of consultation) sought to empower the Commission to vary a target standard if (in its reasonable opinion) the target standard is contrary to the objectives of this Code.</p> <p>The Commission considered that this clause did not reflect the Commission's initial intention. Clause 3.2.1 intended to empower the Commission to vary a target standard if (in its reasonable option) the target standard is contrary to the objectives of this Code as well as the matters listed in section 6 (2) of the Act.</p> <p>The Commission advised QEnergy, ERM and Power and Water Corporation of the Commission's proposed amendment. No concerns were raised.</p> <p>The Commission's final decision is for clause 3.2.1 of the new ESS Code to empower the Commission to vary a target standard if (in its reasonable option) the target standard is contrary to the objectives of this Code or the matters listed in section 6 (2) of the Act.</p>
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## APPENDIX B

### Explanatory material for the new ESS Code

Title	Reference	Clause	Explanatory comments
Due date for proposed target standards and date for setting target standards	Clause 3.1.1	An electricity entity that provides network services must, no later than the date notified in writing to the electricity entity by the Commission (being a date that is prior to the commencement of the regulatory control period in which the proposed target standards will apply) submit to the Commission for approval, the proposed target standards for that regulatory control period developed in accordance with this clause 3.1.	The ESS Code requires that the target standards be set prior to each regulatory control period under the <i>Electricity Networks (Third Party Access) Act</i> . This allows the network service provider to incorporate the target standards into its regulatory proposal for the network price determination. The Commission intends to liaise with the network service provider prior to issuing a direction specifying the date by which the network service provider must submit its proposed target standards to the Commission.
Establishing target standards	Clause 3.1.3	<p>The proposed target standards must be calculated by:</p> <ul style="list-style-type: none"> <li>• averaging the data from the preceding five financial years;</li> <li>• if that type of data is not available, averaging comparable and available data from each of the preceding five financial years; or</li> <li>• utilising such other methodology that the Commission considers is appropriate and notifies to the electricity entity from time to time.</li> </ul>	Establishing targets standards through an averaging methodology represents a reasonable guide to performance that is expected of the network service provider. If five years of data is unavailable, the target standards could be derived from comparable or available data from the preceding five financial years. The Commission is also empowered to establish target standards through an alternative methodology.
	Clause 3.1.4	An electricity entity must provide all information that is requested by the Commission from time to time in relation to the proposed target standards.	The Commission may issue an information request in connection with the proposed target standards. An information request will assist the Commission in gathering all the information it requires prior to setting the target standards for the purpose of considering the proposed target standards submitted to it by the network service provider.
	Clause 3.1.6	In deciding whether to approve the proposed target standards, the Commission may consult with other electricity entities, the Minister and anyone else the Commission considers should be consulted, in any way the Commission sees	The ESS Code empowers the Commission to consult with electricity entities (including System Control), the Minister and anyone else that the Commission sees fit to consult, prior to setting the target standards.

Title	Reference	Clause	Explanatory comments
		fit.	
	Clause 3.1.8	If the Commission does not: receive or approve, proposed target standards under this clause 3.1 for a regulatory control period, the Commission may, prior to the commencement of that regulatory control period, set a target standard for each performance indicator that requires a target standard in any way the Commission sees fit.	If the Commission does not receive the proposed target standards by the date specified by the Commission, or considers the proposed target standards to be inadequate, the Commission is empowered to set target standards in any way it sees fit, prior to the commencement of the regulatory period. This provision recognises that the onus is on the Commission to set the target standards (notwithstanding that the network provider is required to submit proposed target standards to the Commission by the date specified by the Commission). If the network provider has not submitted a proposal that meets the Commission's requirements, the Commission should be empowered to set target standards in a flexible and expedient manner.
Varying the target standards	Clauses 3.2.1,	If in the Commission's reasonable opinion a target standard is contrary to the objectives of this Code or the matters listed in section 6 (2) of the Act, the Commission may vary that target standard (in which case the Commission must provide reasonable notice to the relevant electricity entity) at any time and in any way the Commission sees fit (but not in a manner which is inconsistent with the Act).	The Commission may vary a target standard if in its reasonable opinion the target standard is contrary to the objectives of this Code or the matters listed in section 6 (2) of the Act. The Commission may use this power if the established target standards fail to reflect customer preferences, does not promote improvements in network performance (as expected from consumers, industry participants or stakeholders) or is not in the long term benefit of consumers among other things.
	Clauses 3.2.2 and 3.2.3	<p>3.2.2 An electricity entity that provides network services may at any time request the Commission to vary a target standard.</p> <p>3.2.3 A request under clause 3.2.2 must:</p> <ul style="list-style-type: none"> <li>• state the reasons for varying the target standards;</li> <li>• contain sufficient information and supporting documentation to support the request to vary the target standard; and</li> <li>• specifically address the objectives of the Code and the matters listed in section 6 (2) of the Act.</li> </ul>	<p>A network service provider may request the Commission to vary a target standard. The network service provider should sufficiently address all of the matters set out in clause 3.2.2 in order for the Commission to make a fully informed decision in relation to the proposed variation.</p> <p>In considering a variation, the Commission will consider the objectives of the ESS Code and the matters listed in section 6(2) of the <i>Utilities Commission Act</i>.</p>
Target standard obligations	Clause 3.3.1	An electricity entity that provides network services must use its best endeavours to meet the target standards approved by the Commission under this clause 3.	The best endeavours principle accounts for the possibility that a network service provider may not be able to meet the target standards at all times, but must nevertheless use its best endeavours to do so. It is expected that a network service provider should be able to achieve a consistent

Title	Reference	Clause	Explanatory comments
Obligation to report actual performance	Clauses 4.1.1, 4.1.2 and 4.1.3	<p>4.1.1 An electricity entity that provides:</p> <ul style="list-style-type: none"> <li>• generation services;</li> <li>• network services; or</li> <li>• retail services;</li> </ul> <p>must as soon as practicable after the end of each financial year (but by no later than 1 November of the next financial year) submit to the Commission a report on its actual performance against the performance indicators for those services during the preceding financial year.</p> <p>4.1.2 A report under clause 4.1.1 must:</p> <ul style="list-style-type: none"> <li>• in relation to generation services, include the performance of the electricity entity against the generation services performance indicators set out in Schedule 1;</li> <li>• in relation to network services, include the performance of the electricity entity against the network services performance indicators set out in Schedule 2;</li> <li>• in relation to retail services, include the performance of the electricity entity against the retail services performance indicators set out in Schedule 3; and</li> <li>• be segmented in accordance with clause 6.</li> </ul> <p>4.1.3 A report under this clause 4 must include a responsibility statement.</p>	<p>level of performance.</p> <p>A generator must report its actual performance for those services during the preceding financial year against the performance indicators set out in Schedule 1 of the ESS Code. This report must be provided to the Commission by 1 November.</p> <p>The network service provider must report its actual performance for those services during the preceding financial year against the performance indicators set out in Schedule 2 of the ESS Code. This includes information on any excluded events in accordance with clause 4.3.2. This report must be provided to the Commission by 1 November. The information provided in this report will be used to assess compliance with the target standards (and whether or not the network service provider has used its best endeavours to met the target standards) established under the ESS Code.</p> <p>A retailer must report its actual performance for those services during the preceding financial year against the retail service indicators set out in Schedule 3. This report must be provided to the Commission by 1 November.</p> <p>A report on actual performance must contain a responsibility statement (outlined in Schedule 5 of the ESS Code) The requirement to provide a responsibility statement is consistent with similar requirements in NEM jurisdictions. It is expected that the requirement to provide a responsibility statement will promote compliance with the ESS Code.</p>
Audit of data	Clauses 5.2.1, 5.2.2, 5.2.3, 5.2.4 and 5.2.5	5.2.1 The Commission may at any time, by giving notice to the electricity entity, require the electricity entity to appoint an independent auditor to undertake an audit of the electricity entity's compliance with clause 5.1.1(a).	The audit requirements under the ESS Code are separate from the annual compliance audit under the licenses issued by the Commission pursuant to the <i>Electricity Reform Act</i> . This recognises that an audit under the ESS Code may require a level of expertise beyond the requirements of an annual compliance audit.

Title	Reference	Clause	Explanatory comments
		<p>5.2.2 The audit requirements will be determined by the Commission in consultation with the electricity entity.</p> <p>5.2.3 An auditor appointed under this clause 5.2 must have the necessary technical expertise determined by the Commission and notified to the electricity entity.</p> <p>5.2.4 If the electricity entity fails to comply with a notice given by the Commission under this clause 5.2 by the date set out in that notice, the Commission may appoint an independent auditor to undertake an audit of the electricity entity's compliance with clause 5.1.1(a).</p> <p>5.2.5 An electricity entity must meet the costs of any audit under this clause 5.2.</p>	<p>The costs of the audit must be met by the electricity entity. This is in line with compliance practices in other Australian jurisdictions and provides an incentive for the electricity entity to actively develop systems, processes, and procedures to ensure compliance with the ESS Code.</p> <p>The Commission will consider the Commission's <i>Statement of Approach on Compliance</i> prior to appointing an auditor under this the ESS Code.</p>
Data segmentation	Clause 6.1.1; Table 1 of Schedule 1; Table 2, Table 3, Table 4 of Schedule 2; Table 5 of Schedule 3.	<p>An electricity entity must segment the performance indicators in accordance with the categories listed against the relevant performance indicator in Schedules 1 to 3 of the ESS Code.</p> <p>Generation indicators:</p> <ul style="list-style-type: none"> <li>• Reporting of AF, UAF, EAF, FOF and EFOF by power station;</li> <li>• Reporting of SAIDI and SAIFI by power system and region.</li> </ul> <p>Transmission network performance indicators:</p> <ul style="list-style-type: none"> <li>• Reporting of ACOD, FCO, ATOD, FTO, SAIDI and SAIFI by power system;</li> <li>• Targets for ACOD adjusted, FCO adjusted, ATOD adjusted, and FTO adjusted by transmission network.</li> </ul> <p>Distribution network performance indicators:</p> <ul style="list-style-type: none"> <li>• Reporting of SAIDI and SAIFI by region and feeder category;</li> <li>• Targets for SAIDI adjusted and SAIFI adjusted by feeder category.</li> </ul>	<p><u>Generation network performance indicators</u></p> <p>In reporting generation SAIDI and SAIFI performance, the ESS Code requires segmentation by region and power system in order to capture the combined generation reliability performance of the Darwin-Katherine power system and the individual performance of the Darwin and Katherine regions.</p> <p><u>Distribution network performance indicators</u></p> <p>In recognition that each region is isolated and operates independently from another reporting of distribution performance is by feeder category and region.</p> <p>SAIFI and SAIFI distribution performance indicators (and target standards) are to be segmented by feeder category:</p> <ul style="list-style-type: none"> <li>• CBD feeders;</li> <li>• Urban feeders;</li> <li>• Rural short feeders;</li> <li>• Rural long feeders.</li> </ul> <p>These feeder categories are defined in Feeder Category Guidelines made under the ESS Code. These guidelines implement the following feeder category definitions.</p> <ul style="list-style-type: none"> <li>• CBD – a feeder supplying predominantly commercial, high-rise buildings, supplied by a predominantly underground distribution</li> </ul>



Title	Reference	Clause	Explanatory comments
		<p>Transmission and distribution customer service performance indicators:</p> <ul style="list-style-type: none"> <li>• Reporting of connection indicators by CBD, Urban area and Rural area;</li> <li>• Reporting of phone answering indicators at an NT wide level;</li> <li>• Reporting of network related complaints by region;</li> <li>• Reporting of written enquiries indicator by region.</li> </ul> <p>Retail services performance indicators:</p> <ul style="list-style-type: none"> <li>• Reporting of phone answering indicators at an NT wide level;</li> <li>• Reporting of complaints indicators by region;</li> <li>• Reporting of customer hardship indicators by region;</li> <li>• Reporting of the written enquiries indicator by region.</li> </ul>	<p>network containing significant interconnection and redundancy when compared to urban areas.</p> <ul style="list-style-type: none"> <li>• Urban – a feeder, which is not a CBD feeder, with actual maximum demand over the reporting period per total feeder route length greater than 0.12 MVA/km.</li> <li>• Rural short – a feeder which is not CBD or urban feeder with a total feeder route length less than 200km.</li> <li>• Rural long – a feeder which is not a CBD or urban with a total feeder route length greater than 200km.</li> </ul> <p>These definitions are derived from the AER feeder category definitions used in other Australian jurisdictions, with the expectation of urban which has been defined in reference to total feeder route length greater than 0.12 MVA/km (as opposed to 0.3 under the AER approach)</p> <p>The Commission lowered the MVA/km threshold to 0.12MVA/km to suit local characteristics and serve specific regulatory purposes. Lowering the threshold ensures that the SAIDI and SAIFI target standards established under the ESS Code are relevant and meaningful to customers.</p>
Adjusted and unadjusted for segmentation of performance indicators	Clauses 6.2.2 and 6.2.3	<p>6.2.2 An electricity entity must segment the performance indicators separately for the following categories:</p> <ul style="list-style-type: none"> <li>• adjusted; and</li> <li>• unadjusted,</li> </ul> <p>in accordance with Schedule 2 and clause 6.2.3.</p> <p>6.2.3 An electricity entity may only exclude a network outage from the adjusted category if the event that caused that network outage is listed below and was beyond the reasonable control of the electricity entity:</p> <ul style="list-style-type: none"> <li>• load shedding due to a shortfall in generation;</li> <li>• a network interruption where more than two business days' notice was given to customers by the electricity entity and the electricity entity has otherwise</li> </ul>	<p>Clause 6 of the ESS Code defines the adjusted and unadjusted categories for reporting network performance. These are the events that can be excluded from the adjusted performance indicators. Clause 6 ensures that only those events that are beyond the reasonable control of the network provider can be excluded from the calculation of performance indicators. The intention is to capture the network provider's true performance during the reporting period.</p> <p>The exclusion list in the ESS Code is consistent with the Commission's GSL Code.</p> <p>The exclusion list has been derived from similar methodologies used in other jurisdictions and by other regulators (for example Queensland, New South Wales and the AER).</p>

Title	Reference	Clause	Explanatory comments
		<p>complied with the relevant requirements of the applicable regulatory instruments;</p> <ul style="list-style-type: none"> <li>• the System Controller exercising any functions or powers under an applicable regulatory instrument, a direction by a police officer or another authorised person exercising powers in relation to public safety, but only to the extent that the exercise of that function or power, or the giving of that direction, is not caused by a failure by the electricity entity to comply with any applicable regulatory instrument;</li> <li>• a traffic accident;</li> <li>• an act of vandalism;</li> <li>• a natural event that is identified as statistical outliers using the IEEE 2.5 beta method; or</li> <li>• a network interruption caused by a customer's electrical installation.</li> </ul>	
Generation Services Performance Indicators	Schedule 1	<p>A generator is required to report its actual performance against the following indicators:</p> <ul style="list-style-type: none"> <li>• Availability Factor (AF);</li> <li>• Unplanned Availability Factor (UAF);</li> <li>• Equivalent Availability Factor (EAF);</li> <li>• Forced Outage Factor (FOF);</li> <li>• Equivalent Forced Outage Factor (EFOF);</li> <li>• System Average Interruption Duration Index (SAIDI); and</li> <li>• System Average Interruption Frequency Index (SAIFI).</li> </ul>	<p>AF, UAF, EAF, FOF, and EFOF generation service performance indicators have been sourced from the IEEE Standard 762-2006. AF, UAF and FOF are equivalent measures to EFOF and EAF, each containing similar inputs.</p> <p>The ESS Code requires the use of Gross Maximum Capacity in the calculation of the generation performance indicators.</p> <p>The ESS Code does not set or establish target standards for generation performance.</p> <p>SAIDI and SAIFI generation service performance indicators are considered useful measures to capture the impact of generation outages on customers and are useful for reporting purposes and to promote transparency and accountability in generation performance.</p> <p>In the Commission's <i>Final Report on the Review of Electricity Standards of Service for the Northern Territory</i>, the Commission recommended that generation standards be set through unserved energy (USE) targets for each power system. However, the Commission decided that USE should be codified in the System Control Technical Code, and administered by</p>

Title	Reference	Clause	Explanatory comments
Network Services Transmission performance Indicators	Schedule 2, Clause 1.3	<p>The network provider is required to report its actual performance against the following indicators:</p> <ul style="list-style-type: none"> <li>• Average Circuit Outage Duration (ACOD) – Adjusted and unadjusted;</li> <li>• Frequency of Circuit Outages (FCO) – Adjusted and unadjusted;</li> <li>• Average Transformer Outage Duration (ATOD) – Adjusted and unadjusted;</li> <li>• Frequency of Transformer Outages (FTO) – Adjusted and unadjusted;</li> <li>• System Average Interruption Duration Index (SAIDI) – Adjusted and unadjusted; and</li> <li>• System Average Interruption Frequency Index (SAIFI) – Adjusted and unadjusted.</li> </ul> <p>Transmission target standards are to be set for the following indicators:</p> <ul style="list-style-type: none"> <li>• Average Circuit Outage Duration (ACOD) – Adjusted;</li> <li>• Frequency of Circuit Outages (FCO) – Adjusted;</li> <li>• Average Transformer Outage Duration (ATOD) – Adjusted;</li> <li>• Frequency of Transformer Outages (FTO) – Adjusted;</li> <li>• System Average Interruption Duration Index (SAIDI) – Adjusted; and</li> <li>• System Average Interruption Frequency Index (SAIFI) – Adjusted.</li> </ul>	<p>System Control.</p> <p>The ESS Code sets specific performance indicators for the transmission network.</p> <p>The transmission performance indicators are based on the Australian Competition and Consumer Commission’s Statement of principles for the regulation of transmission revenues Service standards guidelines (dated 12 November 2003)</p> <p>SAIDI and SAIFI are used to report on the impact of transmission outages on customers. SAIDI and SAIFI transmission performance indicators should include all end-user customers (receiving electricity from the transmission and distribution) as per the definition in the <i>Electricity Reform Act</i>.</p>
Network Services Distribution performance Indicators	Schedule 2, Clause 1.4	<p>The network provider is required to report its actual performance against the following indicators:</p> <ul style="list-style-type: none"> <li>• System Average Interruption Duration Index (SAIDI) – Adjusted and unadjusted; and</li> </ul>	<p>The SAIDI and SAIFI performance indicators exclude transmission customers. SAIDI and SAIFI performance indicators are reported by region and feeder category. SAIDI and SAIFI target standards are set by feeder category. Feeder category is defined in the ESS Code and as of the time of writing this paper, the Feeder Category Guidelines.</p>

Title	Reference	Clause	Explanatory comments
		<ul style="list-style-type: none"> <li>• System Average Interruption Frequency Index (SAIFI) – Adjusted and unadjusted.</li> <li>• Poorly performing feeders.</li> </ul> <p>Distribution target standards are to be set for the following indicators:</p> <ul style="list-style-type: none"> <li>• System Average Interruption Duration Index (SAIDI) – Adjusted; and</li> <li>• System Average Interruption Frequency Index (SAIFI) – Adjusted.</li> </ul>	<p>Poorly performing feeders' performance indicator is derived from the approach adopted by the Essential Services Commission of South Australia. The approach provides a dynamic link between poorly performing feeders and the SAIDI target standards. It measures the SAIDI performance ratio for an individual feeder against a pre defined SAIDI threshold.</p> <p>The calculation of the SAIDI performance ratio is as follows: SAIDI for an individual feeder divided by the SAIDI target standard for the individual feeder's feeder category.</p> <p>The SAIDI threshold is to be determined by the Commission once data is available to determine the threshold that would identify (approximately) the bottom 5 per cent of worst performing feeders.</p>
Transmission and Distribution Customer Service Performance Indicators	Schedule 2, Clause 1.8	<p>The network provider is required to report customer service performance against the following performance indicators:</p> <ul style="list-style-type: none"> <li>• Connections;</li> <li>• Phone answering;</li> <li>• Network complaints;</li> <li>• Written enquiries.</li> </ul>	<p>The ESS Code allows combined phone answering totals for network and retail related queries. However, this provision will apply until such time as PWC's system functionality supports separate reporting.</p> <p>The inclusion of written enquiries for network related queries will inform and potentially incentivise the network provider to cater for its customers' needs and understand its customer base.</p>
Retail Services Performance Indicators	Schedule 3	<p>A retailer is required to report retail services performance against the following performance indicators:</p> <ul style="list-style-type: none"> <li>• Phone answering;</li> <li>• Complaints;</li> <li>• Customer hardship;</li> <li>• Written enquiries.</li> </ul>	<p>The performance indicators in Schedule 3 apply to customers (those customers that are taking (or likely to take less than) 160 megawatt hours of electricity during the reporting period)</p> <p>The customer hardship measures are listed in clause 1.1.7 of Schedule 3 and are limited to residential customers (i.e. customers that purchase electricity for their own personal, household or domestic use at premises).</p> <p>The customer hardship measures are mainly sourced from the AER retail performance reporting guidelines.</p>