

DETERMINATION

APPROVAL OF ELECTRICITY NETWORK PERFORMANCE TARGET STANDARDS FOR THE REGULATORY CONTROL PERIOD 1 JULY 2014 TO 30 JUNE 2019

Regulatory requirements

1. The Northern Territory Electricity Standards of Service Code 2012 (the Code) requires that PWC Networks submit to the Utilities Commission (the Commission) for approval its proposed distribution and transmission network performance target standards (the targets) at a date notified in writing by the Commission [cl.3.1.1].
2. The targets must be set for the performance indicators included in Table 1 below.¹

Table 1: Network target standards and segmentation

Target Standards	Segmentation
Adjusted Distribution Network Performance Indicators	
1. System Average Interruption Duration Index (SAIDI)	By Distribution Feeder Type (CBD, Urban, Short Rural, Long Rural)
2. System Average Interruption Frequency Index (SAIFI)	By Distribution Feeder Type (CBD, Urban, Short Rural, Long Rural)
Adjusted Transmission Network Performance Indicators	
1. Average Circuit Outage Duration (ACOD)	By Transmission Network
2. Frequency of Circuit Outage (FCO)	By Transmission Network
3. Average Transformer Outage Duration (ATOD)	By Transmission Network
4. Frequency of Transformer Outages (FTO)	By Transmission Network

3. The Code requires that the targets be calculated by:²
 - segmenting the targets in accordance with the feeder categories specified in the Feeder Category Guidelines issued by the Commission on 1 December 2012;
 - averaging the data from the preceding five financial years;
 - applying adjustments to the interruptions³ by excluding those events that are considered outside the control of the network provider, such as:
 - load shedding due to a shortfall in generation;

¹ Clause 3.1.2(a) and Schedule 2, Electricity Standards of Service Code.

² Clause 3.1.2 and 3.1.3, Electricity Standards of Service Code.

³ A network interruption excluding those less than one minute in duration.

- planned network interruptions which have been notified to customers at least two days prior;
 - direction from the System Controller, a police officer or another authorised person exercising powers in relation to public safety;
 - a traffic accident;
 - an act of vandalism;
 - a network interruption caused by a customer's electrical installation; or
 - a natural event that is identified as statistical outlier using the 2.5 beta method developed by the US Institute of Electrical and Electronics Engineers (IEEE).⁴
4. In deciding whether to approve the proposed targets, the Commission must have regard to:⁵
- the objectives of the ESS Code (that is, to promote improvement in standards of service by electricity entities among other things);
 - the matters listed in section 6 (2) of the *Utilities Commission Act*,⁶ and
 - good electricity industry practice.
5. The Code provides that, should the Commission decide not to approve the proposed targets, it may set a target for each performance indicator that requires a target standard in any way the Commission sees fit.⁷
6. The targets set and approved by the Commission in accordance with clause 3.1 of the Code will apply for the duration of the regulatory control period.

Approval of network target standards for the regulatory control period ending 30 June 2019

7. In accordance with clause 3.1 of the Code, the Commission has considered the distribution targets developed by the Power and Water Corporation Networks (PWC Networks) and submitted to the Commission on 1 March 2013.
8. The Commission does not approve the proposed distribution targets submitted by PWC Networks as they do not meet the objectives of the Code which, inter alia, aim to “promote improvement in standards of service by electricity entities in the electricity supply industry”. In making its decision, the Commission had also regard to PWC Networks’ historical performance, customers’ willingness to pay and the performance of comparable distributors in other Australian jurisdictions.
9. Pursuant to clause 3.1.8 of the Code, the Commission has set distribution targets using an improvement factor of:
- 5 per cent applicable to CBD, rural short and urban feeders; and
 - 10 per cent applicable to rural long feeders due to their exceptionally poor historical performance.

⁴ IEEE Standard 1366-2012, Guide for Electric Power Distribution Reliability Indices, 14 May 2012.

⁵ Clause 3.1.5, Standards of Service Code.

⁶ The matter relevant to setting target standards is “to protect the interests of consumers with respect to reliability and quality of services and supply in regulated industries” [section 6(2)(f)].

⁷ Clause 3.1.8, Standards of Service Code.

10. The Commission's determination approves the distribution targets developed by the Commission contained in Table 2 below.

Table 2: Distribution targets set by the Commission

Feeder category	Distribution Targets	
	System Average Interruption Duration Index (SAIDI)	System Average Interruption Frequency Index (SAIFI)
Rural Long	2,164.9	35.1
Rural short	496.3	8.1
Urban	136.0	2.5
CBD	18.8	0.4

11. The Commission is of the view that the approved targets:
- promote improvement in standards of service by the network provider;
 - are achievable; and
 - are broadly comparable with peers in other jurisdictions.
12. The approved distribution targets in Table 2 will apply for the 1 July 2014 to 30 June 2019 regulatory control period.
13. The Commission approves the transmission targets developed by PWC Networks. The approved transmission targets are contained in Table 3.

Table 3: Transmission circuit and transformer targets

Transmission performance indicators	Target
Average circuit outage duration (ACOD)	358.8
Frequency of circuit outage (FCO)	49.0
Average transformer outage duration (ATOD)	123.3
Frequency of transformer outages (FTO)	0.8

14. The approved transmission targets in Table 3 will apply to the Darwin-Katherine and Alice Springs networks for 1 July 2014 to 30 June 2019 regulatory control period.
15. The Commission's approval decision about the distribution and transmission targets is subject to their review in three year's time when more data is available and the accuracy of the targets can be confirmed.
16. Further details on PWC Networks' proposed targets and the methodology used to develop them are provided at Appendix A

APPENDIX A

Network Targets

1. On 15 February 2013, the Commission notified PWC Networks in writing that it had no later than 1 March 2013 to submit its proposed distribution and transmission targets to the Commission.

Proposed Distribution targets

2. The distribution network performance indicators include:
 - System Average Interruption Duration Index (SAIDI); and
 - System Average Interruption Frequency Index (SAIFI).
3. The distribution targets proposed by PWC are contained in Tables A1 and A2.

Table A1: SAIDI figures using the exclusion approach set out in the ESS Code

Feeder category	2007-08	2008-09	2009-10	2010-11	2011-12	Average (Target)
Rural Long	1,035.7	1,737.3	1,984.8	4,386.0	2,883.8	2,405.5
Rural short	392.5	474.6	357.6	837.2	549.9	522.4
Urban	118.7	204.4	106.6	191.9	94.5	143.2
CBD	2.1	10.7	13.0	59.6	13.1	19.7

Table A2: SAIFI figures using the exclusion approach set out in the ESS Code

Feeder category	2007-08	2008-09	2009-10	2010-11	2011-12	Average (Target)
Rural Long	19.1	18.1	43.2	71.7	42.9	39.0
Rural short	6.2	8.4	6.5	11.1	10.5	8.5
Urban	2.6	2.9	2.2	3.1	2.5	2.7
CBD	0.0	0.3	0.5	0.6	0.5	0.4

4. The targets proposed by PWC Networks were not approved by the Commission on the basis that they were not consistent with the objectives of the Standards of Service Code, which is to promote improvement in standards of service.
5. Recognising the Commission's concerns with regards to the proposed targets, PWC Networks proposed an average, as per the methodology determined under Standards of Service Code, with a 5 per cent improvement factor applied.
6. The Commission considered that there was merit in the alternative approach proposed by PWC Networks. However, decided that a higher improvement factor would be required for the Long Rural feeder category due to the exceptionally poor historical performance. The Commission also previously stated in the 2011-12 Power System Review that Long Rural performance was unacceptable.

Approved Distribution targets

7. The Commission approved the distribution targets as contained in Table A3.

Table A3: SAIDI figures using improvement factors

Feeder category	Distribution Targets	
	System Average Interruption Duration Index (SAIDI)	System Average Interruption Frequency Index (SAIFI)
Rural Long	2,164.9	35.1
Rural short	496.3	8.1
Urban	136.1	2.5
CBD	18.8	0.4

Proposed and Approved Transmission targets

8. The transmission network performance indicators include:

- Adjusted Average Circuit Outage Duration (ACOD);
- Adjusted Frequency of Circuit Outage (FCO);
- Adjusted Average Transformer Outage Duration (ATOD); and
- Adjusted Frequency of Transformer Outages (FTO).

9. Transmission targets proposed by PWC Networks and approved by the Commission are contained in Table A4 below.

Table A4: Transmission Circuit and Transformer Targets

Performance indicators	2007-08	2008-09	2009-10	2010-11	2011-12	Average (Target)
Average circuit outage duration (ACOD)	492.6	133.3	140.3	486	528.7	358.8
Frequency of circuit outage (FCO)	31	44	55	41	74	49
Average transformer outage duration (ATOD)	43	-	159	-	291	123.25
Frequency of transformer outages (FTO)	2	-	1	-	1	0.8

10. PWC Networks has advised the Commission that it does not have historical data for the Alice Springs transmission system due to its recent installation.