Attachment 23.13

SA Power Networks: Proposed adjustment to STPIS targets 2015-20

October 2014

Proposed adjustment STPIS targets – 2015-20

29 October 2014

SA Power Networks
www.sapowernetworks.com.au

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1 EXECUTIVE SUMMARY

1.1 Service Target Performance Incentive Scheme

In accordance with the Australian Energy Regulator's (**AER**) Service Target Performance Incentive Scheme (**STPIS**) distributors are annually rewarded (for improvements) and penalised (for declines) in performance compared to historic averages (normally five years). The performance that delivered that reward or penalty is then used to establish STPIS targets for future regulatory control periods (**RCPs**). However, there are exceptions to where:

1. The reward or penalty is capped by the STPIS revenue at risk (**R@R**) cap[1]; and
2. a distributor has been funded to improve performance, then the targets are adjusted to reflect that improvement.

In the first exception case listed above, the performance used to establish future STPIS targets is adjusted, so that it aligns with STPIS reward or penalty for that year, when used to establish future STPIS targets. This adjustment ensures that distributors do not receive a windfall gain (ie performance was worse than the cap) or windfall loss (performance was better than the cap) in future RCPs.

The STPIS measures underlying reliability performance by excluding Major Event Days (**MEDs**). The vast majority of MEDs, in SA Power Networks case, are associated with the Bureau of Meteorology (**BoM**) reported significant weather events. A day is classified as a MED where the daily[2] unplanned System Average Interruption Duration Index (**SAIDI**) exceeds a predetermined SAIDI threshold ($\mathbf{T_{MED}}$). A distributor is permitted to exclude the performance on MEDs when determining telephone response grade of service[3] (**GOS**) as well. SA Power Networks has excluded MED from its telephone response performance.

1.2 2010-15 SA Distribution Determination

SA Power Networks became subject to the STPIS from 1 July 2010 (ie the commencement of the 2010-15 RCP). The standard STPIS regime was amended in the AER's South Australian 2010-15 Distribution Determination (**2010 DD**). The amendments were:

1. the approval of the Box-Cox (**BC**) data transform to determine T_{MED} using the 2.5 Beta[4] statistical method in lieu of the natural logarithm (**LN**) data transform; and
2. a revenue at risk (R@R) cap of 3% in lieu of the standard 5% cap.

The BC STPIS[5] targets were established by the AER and documented in the 2010 DD, based on the average annual historic performance over the four year period 1 July 2005 to 30 June 2009.

SA Power Networks has received rewards and penalties under the BC STPIS based on the improvement or decline respectively, based on variations in underlying performance from the targets. Overall SA Power Networks has been rewarded by the BC STPIS.

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1 See AER's STPIS Guideline version 01.2 Nov 2009, sub-clause 3.2.1(a)(1B) pg 10.

2 The daily SAIDI is determined by the contribution to SAIDI from any interruption that commenced on that day (mid-night to mid-night).

3 Telephone GOS is the number of telephone calls answered within 30 seconds.

4 The 2.5 Beta method was developed by the Institute of Electrical and Electronic Engineers IN (US) as detailed in their IEEE Std™ 1366 titled "IEEE Guide for Electric Power Distribution Reliability Indices" and adopted by the AER in their STPIS Guideline.

5 The term BC STPIS refers to the STPIS regime where the Box-Cox method is used to calculated the MED SAIDI threshold.

1.3 Framework and Approach

The AER have advised via their Framework & Approach (**F&A**) for the 2015-20 RCP that SA Power Networks will:

1. be subject to the STPIS; and
2. that the standard STPIS regime will apply. It is our understanding, based on discussions with AER staff that this means that the determination of T_{MED} will be amended to employ the LN data transform, not the BC data transform.

SA Power Networks has determined that the use of the LN method to determine T_{MED} results in a change in the underlying performance as measured in accordance with the LN STPIS[6] regime in seven of the nine years since 1 July 2005. This change in underlying performance does not necessarily mean that the LN STPIS outcome (ie reward or penalty) would have been different for the 2010-15 RCP, as the STPIS outcome is based on variations to preset targets. The change in underlying performance would result in different STPIS targets being set for the 2010-15 RCP.

SA Power Networks has determined what targets would have applied, and the underlying performance for the 2010-15 RCP, to determine the LN STPIS outcome if the LN method had been used to determine the MED SAIDI threshold. The result is that the LN STPIS outcome would have provided a larger incentive (ie greater penalty and rewards) for each year of the four completed years of the 2010-15 RCP, than the BC STPIS outcome. Overall the LN STPIS outcome would have provided on average a materially higher reward (ie 1.2% pa). Effectively the use of the BC STPIS during the 2010-15 RCP has capped the LN STPIS outcome for each completed year of the current RCP.

Consequently, if the LN STPIS performance for each year of the 2010-15 RCP was used, without adjustment, SA Power Networks would bear windfall STPIS penalties during the 2015-20 and the 2020-25 RCPs. This means that the adoption of the LN method to determine if a day is a MED or not, results in issues in transitioning the STPIS from the current 2010-15 to the 2015-20 RCPs.

1.4 STPIS Transitional provisions

The STPIS Guideline (the **Guideline**) specifies the factors that the AER will consider when deciding on the appropriateness of distributor proposed arrangements to address transitional issues. Clause 2.6(d) of the Guideline states:

(d) The AER shall decide on the appropriateness of the arrangement to address a transitional issue on the basis of:

(1) materiality of the issue

(2) reasonableness and fairness to the DNSP and customers

(3) consistency with the objectives as set out in clause 1.5.

In addition, as highlighted in section 1.1, a year's performance used for setting future STPIS is adjusted where the STPIS outcome is capped by the R@R. The performance for that year is adjusted so that it delivers the STPIS outcome (ie matches the R@R cap) for that year. This adjustment highlights an unstated principle within the STPIS that the reward or penalty must match the performance and vice versa. This ensures that a distributor does not receive a windfall gain or loss from the operation of the STPIS.

[6] The term LN STPIS refers to the STPIS regime where the natural logarithm is used to calculated the MED SAIDI threshold.

1.5 Proposed STPIS transitional arrangements

As highlighted in section 1.3 above, use of the BC method has capped or predetermined the STPIS outcome for each year of the current RCP. Consequently, SA Power Networks proposes to adjust each year's performance, calculated using the LN method, to provide the identical BC STPIS outcome. This proposal ensures the reward/penalty matches the adjusted performance when establishing future STPIS targets.

Materiality of the issue

The first criterion the AER considers in deciding to approve a distributor's proposal to address transitional issues is materiality. Consequently, SA Power Networks has determined whether the LN STPIS outcome would have delivered a materially different outcome than the BC STPIS for the 2010-15 RCP.

To assess whether the adoption of LN method creates a material transitional issue, SA Power Networks has used the LN method to calculate the LN STPIS:

1. targets for the 2010-15 RCP, based on average performance over the period 1 July 2005 to 30 June 2009;
2. SAIFI incentive rates in accordance with the Guideline. Note: the SAIDI incentive did not require amendment; and
3. outcome for the four completed years of the current RCP.

The Table below compares the BC STPIS and LN STPIS outcomes for the first four years of the current RCP.

Table 1 - STPIS outcome - comparison of BC and LN method to determine MEDs

% Revenue	2010/11	2011/12	2012/13	2013/14	Ave.
BC STPIS	-0.19%	2.48%	1.53%	-1.25%	0.64%
LN STPIS	-0.85%	4.08%	3.86%	0.45%	1.89%
Difference (LN-BC)	-0.66%	1.60%	2.33%	1.70%	1.25%

The Table demonstrates that the STPIS result for each year and overall provides a materially different outcome. Consequently, this supports SA Power Networks' proposal to adjust each year's performance to provide the same STPIS outcome when establishing the STPIS targets for future RCPs.

Reasonableness and fairness to the DNSP and customers

The proposed adjustment to each year's performance to match the actual STPIS outcome for that year is financially neutral for both customers and SA Power Networks. On that basis our proposed transitional arrangements are fair and reasonable.

In addition, the AER proposed the amendment to the STPIS regime by requiring the use of the LN method to calculate the MED SAIDI threshold for the 2015-20 RCP.

Adjustment to performance to match STPIS outcome

The Guideline does not provide guidance on how to adjust underlying performance so that it delivers the R@R cap. There are two possible options:

1. Adjust each individual STPIS parameter's (eg CBD SAIDI) performance to match the STPIS outcome for that parameter; or
2. Proportionally adjust each individual parameter's performance by the same factor to match the STPIS outcome for that STPIS component (eg reliability).

SA Power Networks proposal employs option 2 as it provides the simplest method to adjust each year's performance, as all the individual parameters are adjusted by the same factor.

Determine 2015-20 STPIS targets

SA Power Networks proposes to use the LN performance from the 2009/10 regulatory year and the adjusted performance from the 2010/11 to 2013/14 regulatory years (ie five years of data), to determine the average performance and hence the STPIS targets.

In addition, the adjusted performance would be used to establish the SAIDI and SAIFI incentive rates for each feeder category to apply to the 2015-20 RCP. All other aspects of the STPIS regime would be in accordance with the STPIS Guideline.

The performances used to establish the targets are detailed below:

Adj Reliability	CBD	Urban	Short Rural	Long Rural	Dist System
2009-10					
SAIDI	8.9	124.1	282.6	323.3	180.6
SAIFI	0.078	1.382	2.210	2.287	1.649
2010-11					
SAIDI	17.4	119.6	210.1	344.9	169.4
SAIFI	0.131	1.356	1.919	2.181	1.563
2011-12					
SAIDI	12.6	102.6	221.7	271.9	146.6
SAIFI	0.152	1.240	1.969	1.870	1.441
2012-13					
SAIDI	14.0	121.6	221.8	267.9	159.0
SAIFI	0.175	1.367	1.825	1.647	1.471
2013-14					
SAIDI	9.5	139.6	219.1	350.5	184.2
SAIFI	0.122	1.421	1.727	2.152	1.573
STPIS Targets					
SAIDI	**12.5**	**121.5**	**231.1**	**311.7**	167.9
SAIFI	**0.132**	**1.353**	**1.930**	**2.027**	1.539

The proposed STPIS targets for the 2015-20 RCP reflect the same absolute improvement the number of interruptions as measured by distribution network SAIFI, as if the current BC method had been used to establish the SAIFI targets. In comparison there is a lower absolute decline in overall distribution network SAIDI of 6 minutes, compared to 11 minutes if the current BC method was continued to be used to establish the targets. This implies that from an overall perspective customers should see an average improvement in reliability or lower ongoing charges.

A similar process has been used in setting the telephone response target (measure is calls answered within 30 seconds or Grade of Service (GOS). The adjustment for the telephone response has been two fold, one is a correction to eliminate interactive voice response (**IVR**) answered calls and the other is to adjust the performance due to the change in how MEDs are

determined (ie BC vs LN method). The table below details the telephone response (Grade of Service (GOS)) adjusted performance and the proposed telephone response target.

Telephone response	09-10	10-11	11-12	12-13	13-14	Target
Agent GOS	64.1%	67.6%	68.9%	69.5%	68.9%	**67.8%**

2 BACKGROUND

2.1 Outage Management System

The outage management system (OMS) was implemented to enable the accurate[7] (now > 95%) reporting of reliability including Low Voltage (LV) interruptions and has been operational since 1 July 2005. The OMS has been used since 1 July 2010 to report reliability performance against the jurisdictional service standards and the reliability component of the STPIS. The OMS data from 1 July 2005 was used to establish jurisdictional and STPIS reliability targets.

As part of implementing the OMS a link was created between service points/National Meter Identifiers (NMIs) and their supplying distribution transformer. This means that where a single LV phase is affected by an outage the number of customers interrupted is estimated (eg one phase interruption out of the three phases, results in an estimate of 1/3rd of the customers connected to the transformer are recorded as being interrupted).

2.2 ESCoSA incentive schemes (2005-10 RCP)

2.2.1 Reliability

SA Power Networks (then ETSA Utilities) operated under an incentive regime to improve the reliability of the notionally worst served 15% of customers during the 2005-10 RCP.

2.2.2 Telephone response

SA Power Networks (then ETSA Utilities) operated under a telephone GOS incentive regime under ESCoSA. This regime was very similar to the STPIS regime. The jurisdictional regime was aligned with the telephone service standard.

2.3 Variations to STPIS regime for SA Power Networks

The underlying assumption in the US Institute of Electrical and Electronic Engineers Inc (IEEE) 2.5 Beta method, which is used in the STPIS to determine underlying reliability, is that the LN transform results in a distribution that is normally distributed or Gaussian.

SA Power Networks was concerned that the LN method did not appropriately determine underlying performance for the operation of incentives under the STPIS regime. So a statistician Dr John Field was engaged, who analysed 3 and then 3.5 years worth of daily SAIDI data. Dr Field determined that the LN method did not transform the daily SAIDI data into a distribution that could be considered as normally distributed. Consequently, Dr Field recommended the Box-Cox method which transformed the 3 and 3.5 years data into a distribution that was considered normally distributed or Gaussian.

[7] Initial accuracy of the OMS was > 80%. SA Power Networks has implemented a number of accuracy improvement projects since 1 July 2005 to improve the accuracy of the OMS, so the current accuracy is greater than 95%.

On this basis, SA Power Networks proposed and the AER approved the use of the BC method to determine the MED SAIDI threshold. It has since been determined that with five years data neither the BC or LN transform daily SAIDI data could be considered normally distributed. However, the BC transformed data is closer to normal than the LN method, when assessed using the Anderson-Darling normality test.

The AER adopted a 3% revenue at risk for the 2010-15 RCP, as the BC method had not been previously used by another distributor for determining the MED threshold.

3 STPIS REPORTED PERFORMANCE

3.1 Reliability

SA Power Networks' feeder category performance during the current RCP is detailed in the Tables below.

Table 2 - Underlying SAIDI (BC Method)

SAIDI	Target	2010/11	2011/12	2012/13	2013/14[8]	Ave.
CBD	*27.1*	13.6	11.7	12.6	9.0	*11.7*
Urban	*104.4*	114.4	93.1	109.6	128.7	*111.5*
Rural Short	*184.0*	197.0	195.6	199.9	197.0	*197.4*
Rural Long	*270.2*	273.9	234.2	241.4	314.1	*265.9*
Dist System	*143.2*	151.8	130.1	143.3	167.6	*148.2*

Table 3 - Underlying SAIFI (BC method)

SAIFI	Target	2010/11	2011/12	2012/13	2013/14[9]	Ave.
CBD	*0.263*	0.101	0.141	0.158	0.115	*0.129*
Urban	*1.292*	1.305	1.135	1.232	1.304	*1.244*
Rural Short	*1.736*	1.821	1.796	1.645	1.596	*1.715*
Rural Long	*2.111*	1.853	1.653	1.484	1.973	*1.741*
Dist System	*1.487*	1.459	1.308	1.326	1.446	*1.385*

Overall there has been a decline in SAIDI performance and an improvement in SAIFI performance during the first four years of the current RCP.

[8] Preliminary estimates prior to audit.

[9] Preliminary estimates prior to audit.

3.2 Telephone response

SA Power Networks' telephone response performance, as reported, is detailed in the table below:

Table 4 - Telephone response (five telephone lines and excluding BC MEDs)

Telephone response	Target	2010/11	2011/12	2012/13	2013/14	Ave.
Calls received	*478,092*	614,544	645,528	565,306	548,332	*593,428*
GOS	*88.7%*	87.7%	89.0%	8 9.6%	89.0%	*88.8%*

SA Power Networks maintained its telephone GOS despite on average a 24% increase in call volumes.

3.3 STPIS outcome for 2010-15 RCP

SA Power Networks STPIS outcome for each completed year of the current 2010-15 RCP is as detailed in the Table below:

Table 5 - STPIS Outcome 2010-15 RCP (% Revenue)

	2010/11	2011/12	2012/13	2013/14[10]
Reliability	-0.15%	2.47%	1.49%	-1.26%
Telephone response	-0.04%	0.01%	0.04%	0.01%
Total	-0.19%	2.48%	1.53%	-1.25%

4 STPIS TARGETS FOR THE 2015-20 RCP

4.1 2015-20 RCP Framework & Approach paper

The AER have advised that the STPIS regime will apply to SA Power Networks for the 2015-20 regulatory control period (ie 1 July 2015 to 30 June 2020). The parameters that will be used during the period are:

- Unplanned SAIDI for each feeder category;
- Unplanned SAIFI for each feeder category; and
- Telephone response (ie percentage of agent calls answered within 30 seconds).

The STPIS regime requires the establishment of targets based on average historical performance over a five year period. It is SA Power Networks understanding that the five year period for determining the targets will be 1 July 2009 to 30 June 2014.

In addition, the AER's F&A paper advised that the standard (ie unmodified) STPIS regime would apply to the 2015-20 RCP. SA Power Networks understands the main implications of that advice are that:

1. The MED threshold (T_{MED}) will be calculated using the natural logarithm instead of the currently used Box-Cox method; and
2. The revenue at risk will increase from 3% to 5% pa.

[10] STPIS outcomes for 2013/14 subject to audit and AER approval..

The change in the calculation of T_{MED} creates transitional issues for the STPIS regime from the current 2010-15 to future RCPs which include the 2010-15 RCP. The transitional issues can be resolved by adjusting the LN performance for each year of the current regulatory control period (ie 2010-15) when determining future STPIS targets.

4.2 STPIS transitional provisions

The STPIS Guideline contains the following guidance to address transitional issues that may occur between one regulatory period and the next. Clause 2.6 of the Guideline is states:

"**2.6 Transitional arrangements**

(a) The AER recognises that transitional issues may arise from one *regulatory control period* to the next *regulatory control period* if the *scheme's parameters* or other attributes are altered.

(b) The AER will give consideration to an arrangement proposed under this *scheme* that reduces the impact of any transitional issues.

(c) Subject to any transitional arrangements set out in the *NEL* and the *NER*, the AER may consider and decide whether the *scheme* or a component of the *scheme* should be altered to address a transitional issue.

(d) The AER shall decide on the appropriateness of the arrangement to address a transitional issue on the basis of:

(1) materiality of the issue

(2) reasonableness and fairness to the DNSP and customers

(3) consistency with the objectives as set out in clause 1.5.

(e) The AER shall set out in writing its reasons for deciding on the appropriateness of the proposed transitional arrangements."

In addition, the Guideline provides guidance in the circumstance when establishing future regulatory periods' STPIS targets when the reported performance is not align with the STPIS revenue outcome. This occurs when the performance would result in a greater reward or penalty, but for the R@R cap. The Guideline states in clause 3.2.1(a)(1B):

(a) The performance targets to apply during the regulatory control period must not deteriorate across regulatory years and must be based on average performance over the past five regulatory years, modified by the following:

(1B) an adjustment to correct for the revenue at risk, that is the sum of the s-factors for all parameters, to the extent it does not lie between the upper limit and the lower limit in accordance with clause 2.5(a).

This clause requires an adjustment to a year's performance where the STPIS outcome was capped by the R@R. The performance is adjusted, so that the resulting performance delivers exactly the R@R cap. The performance so adjusted is then used when establishing future regulatory control periods STPIS targets.

4.3 Quantifying the transitional issues

SA Power Networks has determined the LN STPIS outcome (ie targets set and performance measured by using the LN method) if that method had been used and compared it to STPIS outcome (ie BC STPIS), for each year of the current RCP.

4.3.1 Equivalent LN STPIS reliability targets for 2010-15 RCP (LN method)

The first step is to calculate the equivalent STPIS reliability targets that would have been applicable for the 2010-15 RCP, using the LN method. The Tables below detail the underlying performance for each of the four years and the resultant average which would then have been the used for the STPIS targets.

Table 6 – Feeder category underlying SAIDI (excludes LN MEDs)

USAIDI	CBD	Urban	Short Rural	Long Rural	Dist System
2005-06	27.5	147.0	187.4	334.8	184.5
2006-07	24.4	123.6	286.6	423.0	197.1
2007-08	23.6	92.4	159.7	265.3	129.6
2008-09	33.0	96.6	193.0	249.9	136.4
Ave.	**27.1**	**114.9**	**206.7**	**318.3**	**161.9**

Table 7 - Feeder category underlying SAIFI (excludes LN MEDS)

USAIFI	CBD	Urban	Short Rural	Long Rural	Dist System
2005-06	0.250	1.663	2.011	2.415	1.832
2006-07	0.316	1.543	2.125	2.723	1.820
2007-08	0.236	1.173	1.457	2.063	1.353
2008-09	0.251	1.134	1.790	2.017	1.374
Ave.	**0.263**	**1.378**	**1.846**	**2.305**	**1.595**

4.3.2 Equivalent LN STPIS reliability incentive rates 2010-15 RCP (LN method)

The STPIS Guideline (Appendix B) details how the feeder category SAIDI and SAIFI incentive rates are calculated. As the incentives rates are based on the value of customer reliability (**VCR**) which is expressed in $s per MWh. The rate is converted into the number of minutes lost. Consequently, as SAIDI is a direct measure of the number of minutes lost on average, no change to the incentive rate was required for its use to determine the LN STPIS outcome.

In comparison, SAIFI (ie no of interruptions) must be converted into on average the number of minutes lost for an interruption. The average number of minutes lost for every interruption is SAIFI multiplied by Customer Average Interruption Duration Index (ie the SAIDI target divided by the SAIFI target). The value of CAIDI using the LN method was the same for the feeder category CBD but different for Urban, Short Rural and Long Rural. Consequently, there was no amendment to the CBD SAIFI incentive rate but amendments to all the other three SAIFI incentive rates.

The incentive rates that would have applied for the LN STPIS regime for the 2010-15 RCP are shown in the Table below.

Table 8 – LN STPIS reliability incentive rates (LN method) - % Reveneue

Measure	CBD	Urban	Short Rural	Long Rural
SAIDI	0.0092	0.0513	0.0094	0.0115
SAIFI	0.8410	4.4064	1.1406	1.7253

4.3.3 LN STPIS performance and outcome (LN method)

The LN STPIS performance and outcome are detailed in the Table below for each completed year of the current RCP.

Table 9 - LN STPIS performance and outcome (LN method)

Reg Year	SAIDI	% Rev	SAIFI	% Rev	Total % Rev
2010-11 (Overall)	***180.6***	***-0.71%***	***1.591***	***0.12%***	***-0.59%***
CBD	8.9	0.09%	0.133	0.11%	0.20%
Urban	124.1	-0.35%	1.380	-0.01%	-0.36%
Short Rural	282.6	-0.07%	1.954	-0.12%	-0.19%
Long Rural	323.3	-0.38%	2.220	0.15%	-0.23%
2011-12 (Overall)	***135.8***	***1.93%***	***1.335***	***2.12%***	***4.06%***
CBD	11.7	0.14%	0.141	0.10%	0.24%
Urban	95.1	1.02%	1.149	1.01%	2.02%
Short Rural	205.4	0.01%	1.824	0.03%	0.04%
Long Rural	251.9	0.76%	1.733	0.99%	1.75%
2012-13 (Overall)	***143.3***	***1.36%***	***1.326***	***2.37%***	***3.73%***
CBD	12.6	0.13%	0.158	0.09%	0.22%
Urban	109.0	0.30%	1.225	0.67%	0.98%
Short Rural	202.8	0.04%	1.679	0.19%	0.23%
Long Rural	241.4	0.88%	1.484	1.42%	2.30%
2013-14 (Overall)	***173.6***	***-0.83%***	***1.483***	***1.02%***	***0.20%***
CBD	9.0	0.17%	0.115	0.12%	0.29%
Urban	131.6	-0.86%	1.339	0.17%	-0.68%
Short Rural	206.5	0.00%	1.628	0.25%	0.25%
Long Rural	330.4	-0.14%	2.028	0.48%	0.34%

The following Table compares the difference between the reliability component BC STPIS outcome and the LN STPIS outcome if it had applied to the 2010-15 RCP. In addition, it details the adjustment factor that must be applied to the LN underlying performance to match the actual STPIS outcome for each year of the current 2010-15 RCP.

Table 10 - Comparison of BC and LN STPIS reliability outcome and the adjustment factor

STPIS Outcome	BC STPIS	LN STPIS	Diff (LN-BC)	Adj Factor
2010-11	-0.15%	-0.59%	-0.44%	0.9823
2011-12	2.47%	4.06%	1.59%	1.0792
2012-13	1.49%	3.73%	2.23%	1.1097
2013-14	-1.26%	0.20%	1.46%	1.0609

In the Table above a negative difference means that the LN STPIS performance must be improved (ie lowered) so that performance used to establish future STPIS targets matches the BC STPIS outcome for that year. The opposite adjustment is made for a positive difference, where the actual performance needs to be eased (ie worsen), to deliver the same BC STPIS outcome.

The actual performance for each of the eight reliability measures for each STPIS feeder category for each year, as calculated using the LN method, is adjusted by this factor. The Table below details the performance for 2009/10 and the adjusted performance for the four years 2010/11 to 2013/14. In addition, the Table shows the proposed reliability targets for the 2015-20 RCP.

Table 11 - Adjusted LN STPIS reliability performance and STPIS targets 2015-20 RCP.

Adj Reliability	CBD	Urban	Short Rural	Long Rural	Dist System
2009-10					
SAIDI	8.9	124.1	282.6	323.3	180.6
SAIFI	0.078	1.382	2.210	2.287	1.649
2010-11 adj					
SAIDI	17.4	119.6	210.1	344.9	169.4
SAIFI	0.131	1.356	1.919	2.181	1.563
2011-12 adj					
SAIDI	12.6	102.6	221.7	271.9	146.6
SAIFI	0.152	1.240	1.969	1.870	1.441
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SAIDI	14.0	121.6	221.8	267.9	159.0
SAIFI	0.175	1.367	1.825	1.647	1.471
2013-14 adj					
SAIDI	9.5	139.6	219.1	350.5	184.2
SAIFI	0.122	1.421	1.727	2.152	1.573
STPIS Targets	**2015-20 RCP**				
SAIDI	**12.5**	**121.5**	**231.1**	**311.7**	167.9
SAIFI	**0.132**	**1.353**	**1.930**	**2.027**	1.539
STPIS Targets	**2010-15 RCP**				
SAIDI	27.1	114.9	206.7	318.3	161.9
SAIFI	0.263	1.378	1.846	2.305	1.595

The STPIS targets that would have applied for the 2010-15 RCP and the proposed targets for the 2015-20 RCP are shown in the Table.

4.3.4 Customer service component - targets

The STPIS customer service component applicable to SA Power Networks is telephone response. The telephone response measure is the number of telephone calls answered within 30 seconds. This measure is referred to as the telephone Grade of Service (**GOS**).

As permitted by the STPIS, SA Power Networks excludes telephone response on MED from the calculation of GOS. Consequently, transitional issues will arise as a result of the change to the how MEDs are classified and the associated reduction in the number of MEDs.

In addition, SA Power Networks established targets and has been reporting its STPIS telephone GOS in accordance with our jurisdictional definition as used in the previous GOS incentive scheme and for reporting telephone response service standards. It has recently been identified that this definition is different to that contained in the STPIS Guideline. The main discrepancy is the treatment of calls answered by our interactive voice response (IVR) system (ie customer terminates call after listening to the IVR messaging) and calls not answered but abandoned within 30 seconds. The STPIS excludes these calls whereas the jurisdictional definition includes these calls as being answered. Consequently, the STPIS GOS is effectively agent GOS which excludes the vast majority of fault/emergency calls.

Note: Both the telephone response targets and the annual performance have been reported in the same manner. The STPIS target for the 2010-15 RCP was 88.7%, compared to a STPIS compliant target of 70.0%.

SA Power Networks proposal to adjust the telephone response performance remedies both these transitional issues. SA Power Networks proposes to address these two issues by adjusting the targets for the 2015-20 RCP to reflect the incentive received and align the reporting of telephone GOS in accordance with the AER's STPIS Guideline.

The Table below details the GOS using both the BC and LN MED method along with the STPIS revenue adjustment resulting from each year of the 2010-15 RCP.

	All calls (Agent & IVR)		Agent Calls	
	BC MEDs	% Rev	LN MEDs	% Rev
2005-06	89.2%	n/a	68.2%	n/a
2006-07	88.6%	n/a	72.8%	n/a
2007-08	87.7%	n/a	66.8%	n/a
2008-09	89.0%	n/a	66.6%	n/a
STPIS target	**88.7%**	n/a	**68.6%**	n/a
2009-10	90.1%	n/a	64.1%	n/a
2010-11	87.7%	-0.04%	62.1%	-0.261%
2011-12	89.0%	0.01%	69.3%	0.027%
2012-13	89.6%	0.04%	71.9%	0.133%
2013-14	89.0%	0.01%	75.1%	0.259%

The overall STPIS outcomes for the 2010-15 RCP from measuring the telephone responsiveness including IVR answered calls or in accordance with the STPIS Guideline provides a similar overall outcome. The adjustment proposed below will correct for any small errors.

The adjustment LN telephone GOS to match the actual STPIS revenue adjustment and to comply with the STPIS Guideline is relatively simple, as the incentive is based on the difference

between the target and the actual performance. Thus the equivalent LN target (ie 68.7%) is adjusted by the difference between the BC target and the BC performance. For example, in the 2010/11 year the outcome was 87.7% (ie 1% lower than the BC STPIS target of 88.7%), so the adjusted LN Performance for 2010/11 is 67.6% (ie 68.6– 1.0) compared to original 87.7%.

The following table details the actual performance (for 2009/10) and the adjusted performance (for the four years 2010/11 to 2013/14) and the STPIS target using the five year period 1 July 2009 to 30 June 2014.

Table 12 - STPIS telephone answering targets for 2015-20 RCP

Regulatory Year	GOS
2009-10	64.1%
2010-11 adj	67.6%
2011-12 adj	68.9%
2012-13 adj	69.5%
2013-14 adj	68.9%
Target (Average)	**67.8%**

5 DEFINITIONS

2010 DD	The AER's Distribution Determination for the period 1 July 2010 to 30 June 2015.
2010-15 RCP	Regulatory control period from 1 July 2010 to 30 June 2015.
2015-20 RCP	Regulatory control period from 1 July 2015 to 30 June 2020.
AER	Australian Energy Regulator.
BC	Box-Cox statistical transform.
BC STPIS	The AER's STPIS regime where the MED SAIDI threshold (T_{MED}) is determined by using the Box-Cox transform to convert the daily SAIDI data.
CAIDI	Customer Average Interruption Duration Index –the average duration in minutes that a customer experiences who has a sustained interruption.
DNSP	Distribution network service provider
F&A	The AER's Framework and Approach document which provides guidance on the directions that will applied to the 2015-20 RCP
IEEE	Institute of Electrical and Electronic Engineers (Inc in America)
LV	Low voltage less than 1,000 Volts
LN	Natural logarithm statistical transform.
LN STPIS	The AER's STPIS regime where the MED SAIDI threshold (T_{MED}) is determined by using the natural logarithm transform to convert the daily SAIDI data.
MED	Major Event Day where the daily SAIDI exceeds T_{MED}
OMS	Outage Management System – an information system used to manage and report interruption information.
PES	Power Engineering Society of the IEEE.
R@R	Revenue at risk – the maximum revenue penalty or reward that is incurred from the STPIS regime.
RCP	Regulatory control period is a five year period that an AER determination applies to.
SAIDI	System Average Interruption Duration Index – a measure of the average number of minutes customers are without supply for a regulatory year (1 July to 30 June).
SAIFI	System Average Interruption Frequency Index – a measure of the average number of minutes customers are without supply for a regulatory year (1 July to 30 June).
STPIS	The AER's Service Target Performance incentive Scheme Guideline
T_{MED}	Major Event Day daily SAIDI threshold value. Where a day's daily exceeds the threshold, it is excluded from the normalised reliability performance under the STPIS.