Attachment 3.02

Proposed application of STPIS for the 2014-19 regulatory control period

January 2015

Ausgrid revised regulatory proposal attachment

Contents

1 Introduction

The Australian Energy Regulator's (AER) distribution Service Target Performance Incentive Scheme (STPIS) provides a financial incentive for Ausgrid to maintain and improve its reliability and customer service performance over time. The purpose of this document is to detail Ausgrid's revised proposal on how the Service Target Performance Incentive Scheme (STPIS) should apply for the 2014-19 regulatory period.

2 Ausgrid's description of how STPIS is to apply

2.1 Relevant Rule requirements

The Rules set out a clear process on how the AER is to make a constituent decision on how an applicable STPIS is to apply to a DNSP for a regulatory control period. In the sections below, we set out the process prescribed under the Rules, including a reference to relevant documents that the AER has already published prior to our revised regulatory proposal

- Under 6.6.2 of the Rules, the AER must publish an STPIS for DNSPs to maintain and improve performance. Clause 6.6.2 states: The most recent amended version of the STPIS to apply to DNSPs is that published by the AER on 24 November 2009 (version 1.2).

- The Rules require that the AER to set out its proposed approach to applying the current version of the STPIS in the Framework and Approach paper process. Under the Transitional Rules that applied to NSW DNSPs for the 2014-19 period, the AER was required to publish 2 Framework and Approach papers. The Stage 2 Framework and Approach paper published on 31 January 2014 and the draft regulatory determination of November 2014 included a description of how the AER proposes to apply the STPIS to the 2014-15 transitional year and the subsequent regulatory control period of 2015-16 to 2018-19.

- Importantly, the Rules require that a DNSP's regulatory proposal provide a description, including relevant explanatory material, of how the Distribution Network Service Provider proposes any service target performance incentive scheme that has been specified in a framework and approach paper that applies in respect of the forthcoming distribution determination should apply to it.

- Clause 6.12.1(9) of the Rules states that the AER must make a decision on how any applicable service target performance incentive scheme is to apply to the Distribution Network Service Provider.

2.2 Application of scheme to the 2014-19 period

We note that our proposed application of STPIS only applies to the 2015-16 to 2018-19 regulatory years. Consistent with its Framework and Approach paper, the AER's regulatory determination for the 2014-15 year stated that no STPIS applies in the transitional regulatory control period to NSW/ACT DNSPs. The current performance reporting obligations that applied in the 2009-14 regulatory period will continue to apply with no revenue at risk.

For the 2015-16 to 2018-19 regulatory control period, we propose that the AER apply a STPIS incentive that contains financial benefits and penalties, provided that the expenditure forecasts in our revised proposal are accepted. In the sections below we also set out our proposed design of how the AER should apply a STPIS in terms of revenue at risk and performance parameters.

Proposed revenue at risk

Under the current STPIS published by the AER, the maximum revenue increment or decrement (the revenue at risk) for the scheme components in aggregate for each regulatory year within the regulatory control period shall be 5%, that is, the sum of the s-factors associated with all parameters must lie between +5% (the upper limit) and –5% (the lower limit). A DNSP may propose a different revenue at risk to apply where this would satisfy the objectives of the scheme described in clause 1.5.

Ausgrid proposes a revenue at risk in aggregate for each regulatory year from 2015-16 to 2018-19 of ±2.5%. The aggregate would comprise of ±2.25 per cent for reliability parameters and ±0.25 per cent for customer service parameters respectively.

Our proposal is within the range specified by the AER's when it published Stage 2 of the Framework and Approach Paper, and therefore is not a departure from the AER's proposed approach. The AER stated:

"Consistent with the objectives of the STPIS, we propose to set revenue at risk reflective of the particular circumstances of each distributor and within the range of ±5 per cent. We will determine the revenue at risk during the distribution process following receipt of the NSW distributors' regulatory proposals and submissions on those proposals."

Our proposed aggregate revenue at risk is consistent with previous representations we have made to the AER[1] At that time, we noted that applying a revenue at risk of ±5 per cent would be excessive given the implementation issues with transitioning to a new scheme. We consider our proposed revenue at risk best meets the objectives of the scheme identified in 1.5 of the STPIS published by the AER in respect of the following:

- We consider that a lower strength incentive would better ensure that benefits to consumers likely to result from the scheme are sufficient to warrant any reward or penalty under the scheme for DNSPs, consistent with 1.5(b)(1) of the scheme. In particular we are concerned that the introduction of a new scheme in an environment where there is considerable change in our organisation may lead to windfall gains or rewards that are not valued by the customer. Until such time as the STPIS has been in place and operating over a full five year regulatory control period, and there is clarity over the setting of targets and other aspects of the scheme (including the underlying reliability standards), we believe that a revenue at risk of ± 2.5% is a more appropriate threshold to manage risks for customers and the network businesses during the initial establishment of the scheme.

- We consider that a revenue at risk of ± 2.5% would better meet the criteria of the willingness of the customer or end user to pay for improved performance in the delivery of services as stipulated in 1.5(b)(6) of the scheme. Ausgrid's customer research (see Chapter 1 of our regulatory proposal document) has shown that the majority of customers are satisfied with their existing level of reliability and would not be willing to pay for any improvements. A revenue at risk of ±2.25% would limit the exposure of customers to potential price increases due to reliability improvements, further emphasising that customers are not wanting to pay any more for reliability improvements.

We note that the AER, in its draft determination, has accepted Ausgrid's proposed revenue at risk of ± 2.5%.

Proposed parameters to apply

This section outlines how Ausgrid proposes to apply each component of the STPIS.

Reliability of supply parameters

There are three reliability of supply parameters that may be applied under the scheme, including unplanned System Average Interruption Duration Index (SAIDI), unplanned System Average Interruption Frequency Index (SAIDI); and Momentary Average Interruption Frequency Index (MAIFI)[2.]

Ausgrid proposes that only unplanned SAIDI and SAIFI be subject to revenue at risk when applying the scheme to the 2015-16 to 2018-19 regulatory control period. We consider that our proposed approach to excluded MAIFI/MAIFIe is consistent with the criteria under clause 3.1(f) of the STPIS which states that where the DNSP demonstrates to the AER it is unable to measure MAIFI, a DNSP may propose a variation to exclude MAIFI.

In this respect, Ausgrid currently does not have sufficient historical MAIFI/MAIFIe data Ausgrid gathers MAIFIe data using a manual process and is currently performing quality checks on this data. Ausgrid is investigating the possibility of the SCADA system automatically interfacing with the Outage Management System (OMS) and is intending to collect data throughout the 2015-19 period. This will ensure the correct and accurate recording of MAIFIe data and will then allow MAIFIe to be assessed in subsequent regulatory control periods.

We note that our decision is also consistent with the AER's proposed approach under Stage 2 of the Framework and Approach paper which only specified unplanned SAIDI and SAIFI, and which explicitly excluded MAIFI from the parameters to apply to the STPIS for 2015-16 to 2018-19. More information on our proposed reliability performance targets, incentive rates and exclusions are set out in Section 3 of this document.

Quality of Supply parameters

[1] NSW distributors, *Response to AER Preliminary F&A*, Aug 2012, p. 65.

[2] For clarity, Ausgrid considers that MAIFIe[2] is a better measure of MAIFI. MAIFIe is an indicator of the number of events, while MAIFI is an indicator of the number of momentary interruptions which includes the effect of multiple attempts to reclose for an individual event. It is Ausgrid's assumption that customers are more concerned about the frequency of the events and not of the number of interruptions within an event.

The current scheme does not include any quality of service parameters, and accordingly Ausgrid has not proposed any parameters to apply to the STPIS for the 2015-16 to 2018-19 period.

Customer Service parameters
There are four customer service parameters that may be applied under the scheme including telephone answering, streetlight repair, new connections and response to written enquiries.

Ausgrid proposes that only telephone answering be subject to revenue at risk when applying the scheme to the 2015-16 to 2018-19 regulatory control period. We note that streetlight repair and new connections do not relate to standard control services and therefore should not be part of the scheme. In respect of written enquiries, Ausgrid notes that our historical data is of a poor quality and therefore we would not be able to establish appropriate targets.

We note that our decision to only include telephone answering as a customer service parameter is consistent with the AER's proposed approach in Stage 2 of the Framework and Approach paper. More information on our proposed customer service performance targets, incentive rates and exclusions are set out in Section 4 of this document.

We note that the AER, in its draft determination has accepted the customer services proposal from Ausgrid.

Guaranteed Service Level parameters

The scheme notes that where jurisdictional electricity legislation imposes an obligation on a DNSP to operate a guaranteed service level scheme that no parameters will apply under the STPIS. Ausgrid is already subject to GSL component under our jurisdictional arrangements, and therefore we have not proposed the application of GSL parameters consistent with the scheme.

This accords with the AER's proposed approach in Stage 2 of the Framework and Approach paper and its draft regulatory determination which states that the AER will not apply the GSL component of our national STPIS while jurisdictional arrangements are in place.

3 Proposed application of reliability parameters

In the following sections, we set out our proposed network segmentation, exclusions including the major event day threshold, and the performance targets including proposed value of customer reliability and incentive rates.

3.1 Proposed revenue at risk for reliability parameters

We consider that reliability parameters should be within the range of ±2.25 per cent for reliability parameters.

3.2 Network segmentation

The scheme requires that to calculate revenue incentives, the electricity distribution network should be divided into segments by network type. When applying unplanned SAIDI and unplanned SAIFI we propose that the network area be divided into the following segments by network type as defined in the NSW jurisdictional Licence Conditions[3]. These definitions are not significantly different from those contained within Appendix A of the STPIS:

- CBD
- Urban
- Short Rural
- Long Rural

3.3 Exclusions and our proposed Major Event Day Threshold

The scheme requires that certain defined events may be excluded when calculating the revenue increment or decrement under the scheme when an interruption on the DNSP's distribution network has not already occurred or is concurrently occurring at the same time.

These include load shedding due to a generation shortfall, automatic load shedding due to the operation of under frequency relays following the occurrence of a power system under-frequency condition, load shedding at the direction of the Australian Energy Market Operator (AEMO) or a system operator, load interruptions caused by a failure of the shared transmission network, load interruptions caused by a failure of transmission connection assets except where the

[3] Reliability and performance licence conditions for electricity distributors (effective 1 July 2014)

interruptions were due to inadequate planning of transmission connections and the DNSP is responsible for transmission connection planning; and load interruptions caused by the exercise of any obligation, right or discretion imposed upon or provided for under jurisdictional electricity legislation or national electricity legislation applying to a DNSP.

An event may also be excluded where daily unplanned SAIDI for the DNSP's distribution network exceeds the major event day (MED) boundary defined in the scheme. Ausgrid proposes to derive MED thresholds at the end of each regulatory year for use during the next regulatory year using the 2.5 beta method in accordance with Appendix D of the STPIS. Ausgrid has applied the Anderson-Darling statistical test to the daily unplanned SAIDI data to determine the goodness-of-fit of a range of probability distributions. It was found that the lognormal distribution had the best fit of all tested distributions. Therefore, Ausgrid is not proposing an alternative data transformation method and step 4 (b) of Appendix D of the STPIS will be followed when calculating MED thresholds.

3.4 Proposed reliability performance targets and incentive rates

Reliability performance targets for STPIS

Stage 2 of the AER's Framework and Approach paper indicated the AER's preferred approach to base performance targets on average performance over the past five regulatory years. The method for establishing targets has drawn on past performance as a basis for developing a trend, not strictly adopting average performance over the last 5 years as a basis for establishing targets. This includes consideration of past and future investments.

Ausgrid has calculated unplanned SAIDI and unplanned SAIFI targets in accordance with the AER Draft Determination of November 2014 for each network type, but with a CPI adjustment to July 2015. In the sections below, we set out how Ausgrid derives reliability data from its systems, and then proceed to set out how we have used our reliability forecast system to derive forecasts of performance for the 2014-19 period, and our proposed targets to apply under the STPIS for the 2015-16 to 2018-19 period.

Reliability data

When reporting actual information, Ausgrid has relied on its systems that record reliability incidents. We derive daily unplanned SAIDI and unplanned SAIFI from individual interruption data[4]. Where possible, parameters have been calculated in accordance with definitions contained in the STPIS. The following assumptions have been made when calculating daily performance data:

1. All SAIDI and SAIFI metrics are calculated using daily customer counts. Ausgrid has consistently adopted this approach because average customer counts do not result in stable metrics suitable for trend analysis due to the constant adding, removing and reconfiguring of feeders.
2. All unmetered supplies are excluded from the calculation of SAIDI and SAIFI metrics.
3. All active customers are included in the calculation of SAIDI and SAIFI metrics. All inactive customers are excluded in the calculation of SAIDI and SAIFI metrics. The following assumptions regarding the definition of active and inactive customers have been made:

   Active = Energised + De-energised

   Inactive = Extinct = Deactivated

   De-energised (AER) = Temporary disconnection (AUSGRID)

   Inactive (AER) = Permanent disconnection (AUSGRID)
4. The following Major Event Day Thresholds (TMED) are applied to each year of historical data (as per Ausgrid's completed regulatory template 6.2). These values are calculated in accordance with Appendix D of the STPIS:

Year	T_{MED}
2008/09	3.719
2009/10	3.745
2010/11	3.345
2011/12	3.181
2012/13	2.714
2013/14	2.600
2014/15	2.46

[4] The individual interruption data to be used in calculating STPIS parameters is contained in Ausgrid's completed regulatory templates 6.3 and 6.4.

5. All outage event attributes are accurately recorded in Ausgrid's Outage Management System (OMS).
6. Any interruption that spans multiple days is accrued to the day on which the interruption begins.
7. The following interruptions are excluded from daily performance data:
    a) Momentary interruptions of one minute or less in duration
    b) Planned interruptions for which advance notice has been provided to the affected customers
    c) Exclusions as per Clause 3.3 and Appendix D of the STPIS

Forecast targets

In terms of forecasts for the 2014-15 to 2018-19 period, unplanned SAIDI and unplanned SAIFI for each network type are forecast with Ausgrid's Reliability Forecast System (RFS). The RFS is based on raw historical data from Ausgrid's completed regulatory template 6.2. The raw data has had exclusions under clause 3.3 and Appendix D of the STPIS applied. The RFS takes into account completed and planned reliability improvements that are:

- Included in the expenditure program proposed by Ausgrid in regulatory proposal, or
- Proposed by Ausgrid (and the cost of improvements is allowed) in the previous regulatory proposal, and
- Expected to result in material improvements to supply reliability.

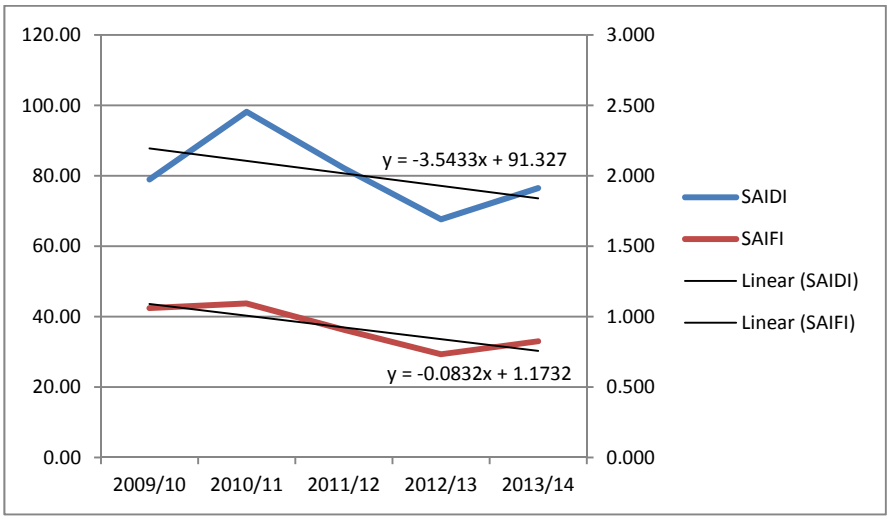
Other factors that affect reliability performance are also taken into account. The RFS methodology is provided in supporting document ID68195 (Feeder Category Reliability Forecast Methodology).

The AER has proposed STPIS incentive rates for Ausgrid based on its average reliability performance over the period 2008/09-2012/13 (including an estimate of the 2013/14 performance) and by extrapolating an observed trend of improvement following Ausgrid's historical expenditure for improving supply security and reliability.

Ausgrid, in its regulatory proposal of May 2014, had proposed STPIS reliability performance targets based on the period 2007/08-2011/12 and its forecast performance for the 2013/14-2018/19 period, taking into account completed and planned reliability and supply security improvements, and using the VCRs provided in clause 3.2.2 (b) of the STPIS.

In the interests of transparency and simplicity, Ausgrid accepts the methodology proposed by the AER Draft Determination and has used the actual reliability outcomes for 2013/14 to update its reliability forecast and the September 2014 AEMO VCR values to provide a modified proposed set of STPIS incentive rates.

Using the methodology outlined in the AER's November 2014 Draft Determination we used the trend line performance to calculate the future performance targets for 2014-19 period.



System	2009/10	2010/11	2011/12	2012/13	2013/14	Avg	Trend	Diff.
SAIDI	78.94	98.21	82.19	67.62	76.52	80.70	73.6108538	8.78%
SAIFI	1.060	1.093	0.907	0.732	0.825	0.924	0.75715033	18.02%

The detailed trend line calculation is given in Appendix 1.

Ausgrid's targets for the 2014-19 regulatory control periods are set out below. We note that the actual performance from 2013-14 affected the calculation of our proposed performance targets for 2014-15 to 2018-19 where they now differ from the AER's November 2014 Draft Determination.

Unplanned SAIDI	2014/15	2015/16	2016/17	2017/18	2018/19
CBD	16.58	16.58	16.58	16.58	16.58
Urban	62.41	62.41	62.41	62.41	62.41
Short Rural	157.28	157.28	157.28	157.28	157.28
Long Rural	436.53	436.53	436.53	436.53	436.53

Unplanned SAIFI	2014/15	2015/16	2016/17	2017/18	2018/19
CBD	0.054	0.054	0.054	0.054	0.054
Urban	0.674	0.674	0.674	0.674	0.674
Short Rural	1.426	1.426	1.426	1.426	1.426
Long Rural	3.088	3.088	3.088	3.088	3.088

Ausgrid forecasts a requirement for capital expenditure for reliability remediation of $19.5 million ($2013-14 real excluding overheads), but with an offset of $6.6m to account for the proportion that would be expected to be funded by marginal STPIS revenue. As a result the amount to be included in the standard control capital expenditure items for revenue modelling is reduced by the STPIS offset.

This indicates one of the difficulties of the STPIS process, in that programs targeting individual feeders and feeder segments (covered under Schedule 3 of the licence conditions) where customers are experiencing low reliability outcomes do not generally deliver sufficient reliability improvement to average customer outcomes to be funded. Customer feedback on reliability issues is considered by Ausgrid during the project development process. This difficulty with a STPIS has also been noted in the AEMC's September 2014 Final Report on the Review of Distribution Reliability Measures.

Value of customer reliability

The Value of Customer Reliability (VCR) proposed in the scheme is $76,700/MWh for the CBD network type and $38,350/MWh for the urban, short rural and long rural network types. These are the values proposed by the AER in its draft determination and are based on the outcomes of the AEMO VCR Review report of September 2014. Ausgrid used the same VCR values for its calculations, but CPI adjusted for July 2015 (the CPI adjusted VCR values used in Ausgrid calculations are $78,138/MWh for the CBD network type and $39,069/MWh for the urban, short rural and long rural network types).

Incentive rates

The incentive rates for unplanned SAIDI and unplanned SAIFI are calculated in accordance with clause 3.2.2 of the STPIS for each network type. Ausgrid utilises the formulae provided in Appendix B of the STPIS. The sources for input parameters required in the formulae are as follows:

Parameter	Source / calculation method
VCR	The VCRs provided in AER draft determination and CPI adjusted to July 2015
CPI	CPI as applied to regulatory price setting
w_n	Weighting for unplanned SAIDI and unplanned SAIFI in Table 1 of the STPIS
C_n	The expected average annual energy consumption by network type for the 2015-19 regulatory control period. This is calculated according to the following method[5]: 1. Calculate the 2012-13 annual energy consumption for each network type (by

[5] Ausgrid does not forecast energy consumption by network type

	summating the energy consumption of active customers connected to each network type) 2. Determine the ratio of energy consumption of each network type to total energy consumption. 3. Multiply the forecast total energy delivered in 2014-15 (from Ausgrid's completed regulatory template 3.4) by the ratio from step 2 for each network type. 4. Repeat steps 3 for regulatory years 2015-16 to 2018-19 5. Calculate the expected average annual energy consumption for the 2014-15 to 2018-19 regulatory period for each network type
R	The four year average of the Ausgrid's smoothed revenue in revised regulatory proposal adjusted by CPI into 2014-15 Note: The smoothed annual distribution revenue is used for the calculation based on Ausgrid's revised regulatory proposal.
$SAIDI_n$	The average of Ausgrid's proposed unplanned SAIDI targets for the 2015-19 regulatory control period.
$SAIFI_n$	The average of Ausgrid's proposed unplanned SAIFI targets for the 2015-19 regulatory control period.

Ausgrid's proposed incentive rates are as follows[6]:

Unplanned SAIDI	Incentive rate
CBD	0.00683%
Urban	0.03168%
Short Rural	0.00427%
Long Rural	0.00004%

Unplanned SAIFI	Incentive rate
CBD	1.85114%
Urban	3.02256%
Short Rural	0.51232%
Long Rural	0.00587%

The detailed incentive rates calculation for unplanned SAIDI and unplanned SAIFI for Ausgrid's distribution network component are given in Appendix 2.

4 Customer service parameters

4.1 Revenue at risk for telephone answering

The scheme notes that the maximum revenue increment or decrement (the revenue at risk) for an individual customer service parameter for each regulatory year of the regulatory control period shall be 0.5%, that is, the s-factor associated with an individual customer service parameter must lie between +0.5% (the upper limit) and –0.5% (the lower limit). A DNSP may propose a different revenue at risk from that referred to in clauses 5.2(a) and/or 5.2(b) to apply where this would satisfy the objectives of the scheme described in clause 1.5.

[6] Incentive rates may require recalculation once the revenue requirements have been determined by the AER's final determination.

Ausgrid accepts the AER's proposal for the incentive rate for the telephone answering parameter and the cap on revenue at risk for each regulatory year of the 2015-18 regulatory period of +-2.5%. We consider this best meets the objectives under 1.5 of the scheme as follows:

- There is considerable uncertainty on performance levels when transitioning to the STPIS due to fundamental changes in our organisational structure with the expiry of the Transitional Services Agreement (TSA). As noted in the section below concerning the setting of performance targets, the expiry of the TSA means that we are likely to see a decline in performance over the 2014-19 period. We therefore consider a lower target is consistent with clause 1.5(b)(3) of the scheme which relates to past performance, and could be interpreted to mean that higher targets should only be set when there is a clear link between past and future performance.

- Our customer engagement surveys have not indicated that customers have concerns on the current levels of telephone answering, or would be willing to pay more for improved service levels. We therefore consider a lower target is consistent with clause 1.5(b)(6) of the scheme which relates to the willingness of customers to pay more for improved services.

4.2 Exclusions

Ausgrid proposes that where a reliability exclusion occurs, this should also be excluded from the calculation of telephone answering performance. This is consistent with the scheme which states that where the impact of an event is to be excluded from the calculation of a revenue increment or decrement under the 'reliability of supply' component as provided for in clause 3.3, the impact of that event may be excluded from the calculation of a revenue increment or decrement for the 'telephone answering' parameter as appropriate.

4.3 Proposed telephone answering targets and incentive rates

Telephone answering targets

Stage 2 of the AER's Framework and Approach paper indicated the AER's preferred approach is to base performance targets on average performance over the past five regulatory years. Our method for establishing targets has drawn on past performance as a basis for developing forecasts, but has not strictly adopted average performance over the last 5 years as a basis for establishing targets.

Ausgrid calculated telephone answering targets in accordance with clause 5.3.1 of the STPIS. In the sections below, we set out how Ausgrid derives telephone answering performance from its systems, and then proceed to set out how we used these systems to derive forecasts of performance for the 2014-19 period, including our proposed targets to apply under the STPIS for the 2015-16 to 2018-19 period.

Telephone answering data

The source of the information for telephone answering was obtained from the following systems: Genesys, Alcatel, and Rockwell data. Information was retrieved via Business Objects reporting and stored in a summary Spreadsheet monthly since 01/07/2009. Due to a Voice telephony platform change Genesys, monthly data was added on the first of each month as a default for the period 1 October 2009 until 30 June 2010. After this date, the Genesys reporting became the base and all other data sources were merged with it.

Forecast methodology for establishing customer performance targets

In developing forecasts of performance for 2013-14 to 2018-19, we have used a straight line projection from 2012-13. This is set out below, and provides a 'best estimate' as it relates to past information in the absence of being able to quantify changes in future circumstances.

	Indicative Forecasts				
Customer service	**2014/15**	**2015/16**	**2016/17**	**2017/18**	**2018/19**
Number of calls received	226992	226992	226992	226992	226992
Number of calls answered within 30 seconds	170000	170000	170000	170000	170000
Percentage of calls answered within 30 seconds	75%	75%	75%	75%	75%

As noted in section 4.1 we consider that these forecasts may not adequately take into account fundamental changes that will occur to our business structure in November 2014. Currently, Ausgrid's call centre performance is aided by our ability to transfer calls to the retail line of our business under our TSA when a large volume of calls occur. 43% of call activity was handled by retail staff in FY13. With the expiry of the TSA in November 2014, Ausgrid's resource capacity has reduced from the former 300+ resources to approximately 60 and is therefore expected to drive a reduction in telephone

answering performance. NOTE: Historical trending data for network only performance does not exist. Consequently, we propose the following targets and methodology:

- 75% of all calls answered within 30 seconds consistent with the AER definitions of calls answered for the forward period, per the above table.
- A data capture period of 12 months be established following the completion of the TSA to enable a refreshed forecast predicated on past actual performance of a Network only business
- Upon completion of the data capture period, Ausgrid will provide updated data that quantitatively assesses the performance levels following the completion of the TSA, based on known data at that point in time.

We note that the AER in its draft determination has accepted Ausgrid's proposed approach for telephone answering targets.

Incentive rates
We propose to use the AER's incentive rate for the 'telephone answering' parameter of -0.040% per unit of the 'telephone answering' parameter. This is consistent with clause 5.3.2 of the scheme.

5 Related Documents

ID68195 – Feeder Category Reliability Forecast Methodology

ID33258 – Feeder Category Reliability Forecast System

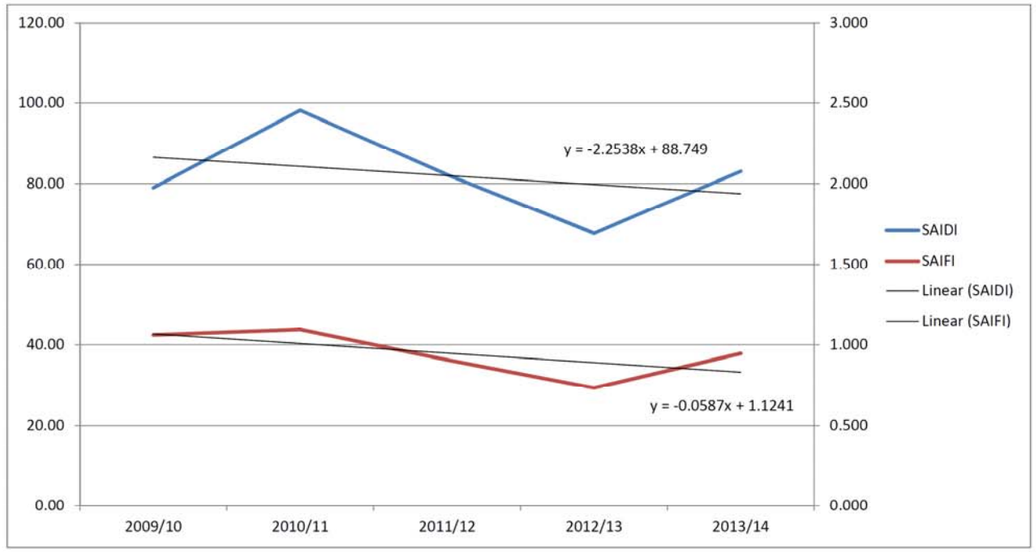
ID18205 – Overview of Reliability Investment Plan

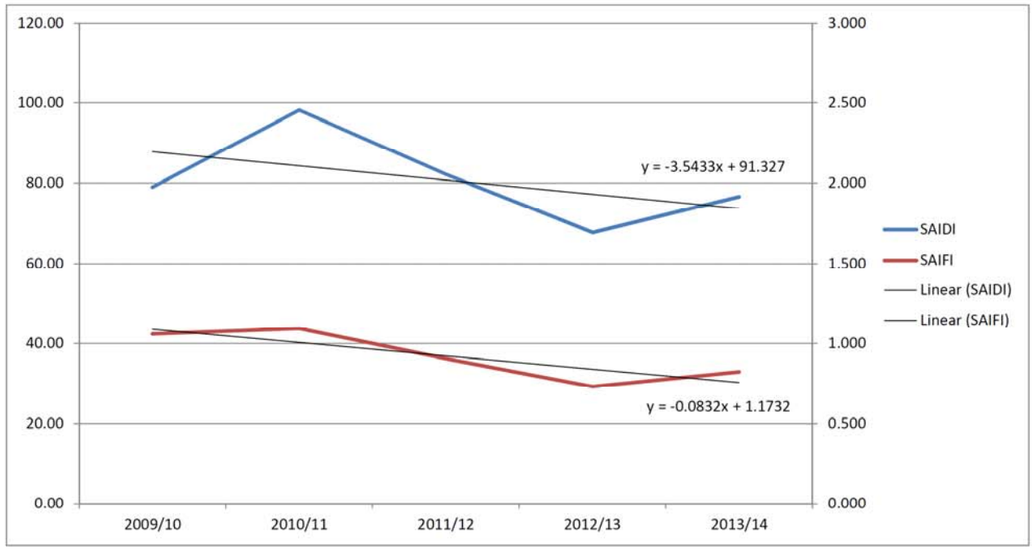
AER November 2014 Draft Determination

Appendix 1: Trend Line Performance Calculation for STPIS

Original	2009/10	2010/11	2011/12	2012/13	2013/14	Avg	Trend	
SAIDI	78.94	98.21	82.19	67.62	82.97	81.99	77.4793086	5.50%
SAIFI	1.060	1.093	0.907	0.732	0.947	0.948	0.83071784	12.38%

Latest	2009/10	2010/11	2011/12	2012/13	2013/14	Avg	Trend	
SAIDI	78.94	98.21	82.19	67.62	76.52	80.70	73.6108538	8.78%
SAIFI	1.060	1.093	0.907	0.732	0.825	0.924	0.75715033	18.02%





Appendix 2 - Ausgrid Incentive Rate Calculation

$$ir_{SAIFI\_urban} = \frac{\left(\frac{\left(VCR_n * (1+CPI)\right)}{1+w_n}\right) * C_n}{R} * \frac{SAIDI_n}{SAIFI_n} * \frac{1}{(365.25*24*60)} * 100 \quad \text{---------- (1)}$$

$$ir_{SAIDI\_urban} = \frac{\left(\frac{VCR_n * (1+CPI) * \left(1-\left(\frac{1}{1+w_n}\right)\right)}{R}\right) * C_n}{(365.25*24*60)} * 100 \quad \text{----------(2)}$$

where:

ir is the *incentive rate* (expressed in a percentage per unit of the *parameter*)

n is the *network type*

VCR_n is the VCR for *network type* n escalated to the start of the relevant *regulatory control period*

CPI the *consumer price index* used to adjust VCR from the September quarter 2014 to the start of the *relevant regulatory period*, calculated in accordance with the AEMO VCR Review Final Report in September 2014.

w_n is the *network type* weighting for the *unplanned SAIDI* or *unplanned SAIFI parameter* from table 1 in the *scheme*

C_n is the average annual energy consumption for *network type* n

R is the average of the smoothed annual revenue requirement for the relevant *regulatory control period*

$SAIDI_n$ is the average of the *unplanned SAIDI* targets in the *regulatory control period* for *network type* n

$SAIFI_n$ is the average of the *unplanned SAIFI* targets in the *regulatory control period* for *network type* n.

	14/15	15/16	16/17	17/18	18/19	Average
Smoothed Revenue Dist RRP	2075.547	2129.932	2185.742	2243.015		2,158.6

	CBD	Urban	Rural short	Rural long	total	Check (STPIS example)
Output parmaeters						
ir - SAIDI	0.006826	0.031680	0.004272	0.000038		0.0325
ir - SAIFI	1.851139	3.022557	0.512317	0.005873		2.0365
Input parameters						
VCR	76700	38350	38350	38350		47850
CPI	1.88%	1.88%	1.88%	1.88%		8.67%
w_n	1.13	0.97	0.92	0.92		0.97
C_n	1869528.842	18696494.8	2590933.717	23174.62486	23,180,132	2000000
R	2,158,559,126	2,158,559,126	2,158,559,126	2,158,559,126		300000000
SAIDI	16.57892533	62.40670217	157.2840091	436.5319803		70
SAIFI	0.054102355	0.674321478	1.42566501	3.087512135		1.15

CPI Adj VCR for Other network types (Urban, SR & LR)	39069.06
CPI Adj VCR for CBD network type	78138.13

Ausgrid Consumption Data

Year	CBD	Urban	Short Rural	Long Rural
2014/15	1878724.696	18788459.27	2603678.023	23288.61639
2015/16	1870246.445	18703671.29	2591928.225	23183.52024
2016/17	1859142.542	18592625.09	2576539.601	23045.87658
2017/18	1867879.241	18679997.72	2588647.575	23154.17644
2018/19	1880847.141	18809685.1	2606619.468	23314.92617
4 yr avg	1869528.842	18696494.8	2590933.717	23174.62486

REVENUE

Revenue-SCS

($m nominal)

Revenue Distribution SCS	2014/15	2015/16	2016/17	2017/18	2018/19	Total
Revenue Smooth - RRP	1,956.4	2,075.5	2,129.9	2,185.7	2,243.0	10,590.7