

# ATTACHMENT 3.2

## PROPOSED APPLICATION OF STPIS

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## 1. Introduction

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

## 2. Essential Energy's description of how STPIS is to apply

### Relevant Rule requirements

The National Electricity Rules (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, Essential Energy sets out the process prescribed under the Rules, including a reference to relevant documents that the AER has already published prior to our regulatory proposal.

- > Under 6.6.2 of the Rules, the AER must publish a 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 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 regulatory control period, the AER was required to publish 2 Framework and Approach papers. The Stage 2 Framework and Approach paper published on 31 January 2014 included a description of how the AER proposes to apply the STPIS to the 2014-15 transitional year and the subsequent regulatory years 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 STPIS 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 STPIS is to apply to the Distribution Network Service Provider.

### Application of STPIS to the 2014-19 period

Essential Energy notes that our proposed application of STPIS only applies to the 2015-16 to 2018-19 regulatory years. Consistent with its Stage 2 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 years, Essential Energy proposes that the AER apply a STPIS that contains financial incentives. In the sections below Essential Energy also sets 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 version 1.2 published by the AER, the maximum revenue increment or decrement (the revenue at risk) for the STPIS components in aggregate for each regulatory year within the regulatory control period shall be 5 per cent, that is, the sum of the s-factors associated with all parameters must lie between +5 per cent (the upper limit) and -5 per cent (the lower limit). A DNSP may propose a different revenue at risk to apply where this would satisfy the objectives of the STPIS described in clause 1.5.

Essential Energy proposes a revenue at risk in aggregate for each regulatory year from 2015-16 to 2018-19 of  $\pm 2.5$  per cent. The aggregate would comprise of  $\pm 2.25$  per cent for reliability parameters and  $\pm 0.25$  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  $\pm 5$  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 Essential Energy has made to the AER<sup>1</sup>. At that time, Essential Energy noted that applying a revenue at risk of  $\pm 5$  per cent would be excessive given the implementation issues with transitioning to a new scheme. Essential Energy considers our proposed revenue at risk best meets the objectives identified in 1.5 of the STPIS version 1.2 published by the AER in respect of the following:

- > Essential Energy considers that a lower revenue incentive would better ensure that benefits to consumers likely to result from the scheme are sufficient to warrant any reward or penalty under the STPIS for DNSPs, consistent with 1.5(b)(1) of the STPIS version 1.2. In particular Essential Energy 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), Essential Energy believes that a revenue at risk of  $\pm 2.5$  per cent is a more appropriate threshold to manage risks for customers and the network businesses during the initial establishment of the scheme.
- > Essential Energy considers that a revenue at risk of  $\pm 2.5$  per cent 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. Essential Energy’s customer research (see Chapter 2 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  $\pm 2.25$  per cent 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.

### **Proposed parameters to apply**

This section outlines how Essential Energy 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 STPIS including unplanned System Average Interruption Duration Index (SAIDI), unplanned System Average Interruption Frequency Index; and Momentary Average Interruption Frequency Index (MAIFI)<sup>2</sup>.

In its Stage 2 Framework and Approach paper, the AER proposed reliability of supply parameters to be:

- > System average interruption duration index (SAIDI)
- > System average interruption frequency index (SAIFI)

Essential Energy proposes that only unplanned SAIDI and SAIFI be subject to revenue at risk when applying the STPIS to the 2015-16 to 2018-19 regulatory control period.

Essential Energy currently does not have sufficient historical momentary average interruption frequency index (MAIFI) data and therefore proposes the exclusion of MAIFI from the reliability of supply parameters.

Essential Energy notes 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*

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

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<sup>1</sup> NSW distributors, *Response to AER Preliminary F&A*, Aug 2012, p. 65.

### *Customer Service parameters*

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

Essential Energy proposes that only telephone answering be subject to revenue at risk when applying the STPIS to the 2015-16 to 2018-19 regulatory years. Essential Energy notes that streetlight repair and new connections do not relate to standard control services and therefore should not be part of the STPIS. In respect of written enquiries, Essential Energy 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.

### *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. Essential Energy is already subject to a GSL component under our jurisdictional arrangements, and therefore Essential Energy has 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 which stated that the AER will not apply the GSL component of the national STPIS while jurisdictional arrangements are in place.

## **3. Proposed application of reliability parameters**

In the following sections, Essential Energy sets 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.

### **Proposed revenue at risk for reliability parameters**

Essential Energy considers that reliability parameters should be within the range of  $\pm 2.25$  per cent for reliability parameters.

### **Network segmentation**

The STPIS 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 Essential Energy proposes that the network area be divided into the following segments by network type as defined in the NSW jurisdictional Licence Conditions for Essential Energy 3. These definitions are not significantly different from those contained within Appendix A of the STPIS version 1.2:

- > Urban
- > Short Rural
- > Long Rural

### **Exclusions and our proposed Major Event Day Threshold**

The STPIS 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 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

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<sup>3</sup> Reliability and performance licence conditions for electricity distributors (effective 1 July 2014)

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. Essential Energy proposes to derive MED thresholds at the end of each regulatory year for use during the next regulatory using the 2.5 beta method in accordance with Appendix D of the STPIS. Essential Energy has applied a statistical log normal distribution test to the daily unplanned SAIDI data to determine the goodness-of-fit of a range of probability distributions. Essential Energy 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.

## 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.

Essential Energy’s method for establishing targets has average performance over the last 5 complete years as the basis.

Essential Energy calculated unplanned SAIDI and unplanned SAIFI targets in accordance with clause 3.2.1 of the STPIS for each network type. In the sections below, Essential Energy sets out how it derives reliability data from its systems, and details our proposed targets to apply under the STPIS for the 2015-16 to 2018-19 period.

#### Reliability data

When reporting actual information, Essential Energy has relied on its systems that record reliability incidents. Essential Energy derives daily unplanned SAIDI and unplanned SAIFI from individual interruption data. 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 unmetered supplies are excluded from the calculation of SAIDI and SAIFI metrics.
2. 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

Inactive (AER) = Permanent disconnection

This method has been used since the availability of de-energised customer numbers in November 2012. Prior to this only energized customer numbers were available.

3. Table 1 provides The following Major Event Day Thresholds (TMED) are applied to each year of historical data. These values are calculated in accordance with Appendix D of the STPIS:

**Table 1 TMED**

Year	T <sub>MED</sub>
2008/09	7.25
2009/10	7.24
2010/11	6.66
2011/12	5.92
2012/13	5.83

4. All outage event attributes are accurately recorded in Essential Energy's Outage Management System, "Power On".
5. Any interruption that spans multiple days is accrued to the day on which the interruption begins.
6. 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

#### Proposed targets

In terms of proposed targets for the 2014-15 to 2018-19 period, unplanned SAIDI and unplanned SAIFI for each network type are based on historical data from Essential Energy's completed regulatory template 6.2. The data has had exclusions under clause 3.3 and Appendix D of the STPIS applied.

Essential Energy's proposed performance for the 2014-19 regulatory control periods are set out in Table 2 and Table 3.

**Table 2 Unplanned SAIDI proposed performance**

Unplanned SAIDI	2014/15	2015/16	2016/17	2017/18	2018/19
Urban	80.0	80.0	80.0	80.0	80.0
Short Rural	240.6	240.6	240.6	240.6	240.6
Long Rural	457.8	457.8	457.8	457.8	457.8

**Table 3 Unplanned SAIFI proposed performance**

Unplanned SAIFI	2014/15	2015/16	2016/17	2017/18	2018/19
Urban	1.037	1.037	1.037	1.037	1.037
Short Rural	2.204	2.204	2.204	2.204	2.204
Long Rural	3.153	3.153	3.153	3.153	3.153

#### Value of customer reliability

The Value of Customer Reliability (VCR) proposed in the STPIS is \$47,850/MWh for the urban, short rural and long rural network types. This value has been adjusted for CPI from the September quarter 2008 to 1/7/2014 – after adjusting for inflation the VCR is \$55,764/MWh. Essential Energy investigated the possibility of selecting an alternative VCR and found that there was no substantial reason to do so. However, this view may change for subsequent regulatory control periods once the national VCR review is completed by AEMO and the ENA.

#### 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. Essential Energy utilises the formulae provided in Appendix B of the STPIS. The sources for input parameters required in the formulae are provided in Table 4.

**Table 4 Incentive rates source/calculation methods**

Parameter	Source / calculation method
VCR	The VCRs provided in clause 3.2.2(b) of the STPIS
CPI	CPI as applied to regulatory price setting
$w_n$	Weighting for unplanned SAIDI and unplanned SAIFI in Table 1 of the STPIS

Parameter	Source / calculation method
$C_n$	<p>The expected average annual energy consumption by network type for the 2015-19 regulatory control period. This is calculated according to the following method<sup>4</sup>:</p> <ol style="list-style-type: none"> <li>1. Calculate the 2010-11 annual energy consumption for each network type (by summing the energy consumption of active customers connected to each network type)</li> <li>2. Determine the ratio of total energy delivered in 2010-11 to the consumption for each network type</li> <li>3. Multiply the forecast 2014-15 total annual energy consumption by the ratio from step 2 in order to determine the forecast energy consumption by network type for 2014-15</li> <li>4. Repeat steps 2 and 3 for regulatory years 2015-16 to 2018-19</li> <li>5. Calculate the expected average annual energy consumption for the 2014-15 to 2018-19 regulatory period for each network type</li> </ol>
R	The average of the smoothed annual revenue requirement for the 2015-19 regulatory control period as determined by the AER
$SAIDI_n$	The average of Essential Energy's proposed unplanned SAIDI targets for the 2015-19 regulatory control period.
$SAIFI_n$	The average of Essential Energy's proposed unplanned SAIFI targets for the 2015-19 regulatory control period.

Essential Energy's proposed incentive rates are as follows<sup>5</sup>:

**Table 5 Unplanned SAIDI proposed incentive rates**

Unplanned SAIDI	Incentive rate (%)
Urban	0.0133
Short Rural	0.0232
Long Rural	0.0073

**Table 6 Unplanned SAIFI proposed incentive rates**

Unplanned SAIFI	Incentive rate (%)
Urban	1.060
Short Rural	2.7568
Long Rural	1.1539

<sup>4</sup> Essential Energy does not forecast energy consumption by network type

<sup>5</sup> Incentive rates will require recalculation once the revenue requirements have been determined by the AER.



## 4. Customer service parameters

### Proposed revenue at risk for telephone answering

The STPIS 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 per cent, that is, the s-factor associated with an individual customer service parameter must lie between +0.5 per cent (the upper limit) and -0.5 per cent (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.

Essential Energy proposes that the revenue at risk for telephone answering is  $\pm 0.25$  per cent for each year of the 2015-16 to 2018-19 regulatory period. We consider this best meets the objectives under 1.5 of the scheme as follows:

- > 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. Essential Energy therefore considers 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.
- > Historical data upon which the forecast is based is not robust. The reliability of data is dependent on the accuracy of the data within the Supply Interruptions Group (SIG) Call Data and Symposium as well as the accuracy of the assumptions and estimations that have been used. Note that this data is not able to be reproduced as historical reporting within Symposium is not available at this level beyond a rolling 12 months.
- > A new telephony reporting system was implemented on 11 January 2014 with new functionality enabling Essential Energy the opportunity to improve call data reporting. Therefore it is envisaged the new capability may decrease the "number of calls received".
- > At the time telephone answering data was prepared for the RIN. Essential Energy had less than 3 months of new telephony data to analyse for forecasting purposes. This base level of data is considered to be insufficient for forecasting purposes.

### Exclusions

Essential Energy 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, the impact of that event may be excluded from the calculation of a revenue increment or decrement for the 'telephone answering' parameter as appropriate.

### 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.

Essential Energy calculated telephone answering targets in accordance with clause 5.3.1 of the STPIS. In the sections below, Essential Energy sets out how it derives telephone answering performance from its systems, and then proceed to set out how these systems were used 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 a secondary reporting table (SIG Call Data - Excel) which has been manually updated with daily data from the main reporting tool called Symposium. As outlined above, this data is not considered to be robust.

The new telephony reporting system implemented on 11 January 2014 will improve reporting of telephone answering data, however insufficient data is available to robustly forecast forward.

### Forecast methodology for establishing customer performance targets

Forecasts were calculated using the current 2013-14 trend and volume as a baseline with an expected increase in call volume applied based on the National Institute of Economic & Industry Research (NIEIR) residential customer forecast. At the time the forecast was being compiled Essential Energy had less than 3 months' worth of new telephony data to analyse for forecasting purposes. The forecast provided is a 'best estimate' as Essential Energy are unable to quantify changes in future circumstances.

**Table 7 customer service performance targets – indicative forecast**

Customer service	2014-15	2015-16	2016-17	2017-18	2018-19
Number of calls received	364,327	366,982	369,439	372,024	374,959
Number of calls answered within 30 seconds	218,596	220,189	221,663	223,214	224,975
Percentage of calls answered within 30 seconds	60%	60%	60%	60%	60%

Essential Energy therefore proposes that our performance targets should be based on the forecasts identified above.

### Incentive rates

Essential Energy proposes 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.