



**FINAL DECISION**  
**Essential Energy distribution**  
**determination**  
**2015–16 to 2018–19**

**Attachment 11 – Service target**  
**performance incentive scheme**

April 2015

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## Note

This attachment forms part of the AER's final decision on Essential Energy's revenue proposal 2015–19. It should be read with other parts of the final decision.

The final decision includes the following documents:

Overview

Attachment 1 - Annual revenue requirement

Attachment 2 - Regulatory asset base

Attachment 3 - Rate of return

Attachment 4 - Value of imputation credits

Attachment 5 - Regulatory depreciation

Attachment 6 - Capital expenditure

Attachment 7 - Operating expenditure

Attachment 8 - Corporate income tax

Attachment 9 - Efficiency benefit sharing scheme

Attachment 10 - Capital expenditure sharing scheme

Attachment 11 - Service target performance incentive scheme

Attachment 12 - Demand management incentive scheme

Attachment 13 - Classification of services

Attachment 14 - Control mechanism

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Attachment 16 - Alternative control services

Attachment 17 - Negotiated services framework and criteria

Attachment 18 - Connection methodology

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## Shortened forms

Shortened form	Extended form
AEMC	Australian Energy Market Commission
AEMO	Australian Energy Market Operator
AER	Australian Energy Regulator
augex	augmentation expenditure
capex	capital expenditure
CCP	Consumer Challenge Panel
CESS	capital expenditure sharing scheme
CPI	consumer price index
DRP	debt risk premium
DMIA	demand management innovation allowance
DMIS	demand management incentive scheme
distributor	distribution network service provider
DUoS	distribution use of system
EBSS	efficiency benefit sharing scheme
ERP	equity risk premium
Expenditure Assessment Guideline	expenditure forecast assessment Guideline for electricity distribution
F&A	framework and approach
MRP	market risk premium
NEL	national electricity law
NEM	national electricity market
NEO	national electricity objective
NER	national electricity rules
NSP	network service provider
opex	operating expenditure
PPI	partial performance indicators
PTRM	post-tax revenue model
RAB	regulatory asset base
RBA	Reserve Bank of Australia
repex	replacement expenditure
RFM	roll forward model

Shortened form	Extended form
RIN	regulatory information notice
RPP	revenue and pricing principles
SAIDI	system average interruption duration index
SAIFI	system average interruption frequency index
SLCAPM	Sharpe-Lintner capital asset pricing model
STPIS	service target performance incentive scheme
WACC	weighted average cost of capital

# 11 Service target performance incentive scheme

The national Service Target Performance Incentive Scheme (STPIS) is intended to balance the incentives to reduce expenditure with the need to maintain or improve service quality. It achieves this by providing financial incentives to distributors to maintain and improve service performance where customers are willing to pay for these improvements.<sup>1</sup>

The STPIS establishes targets based on historical performance, and provides financial rewards for distributors exceeding performance targets and financial penalties for distributors failing to meet targets. These rewards and penalties are calculated by taking into account the value of customer reliability (VCR). This aligns the distributors' incentives with the long term interests of consumer, which is consistent with the National Electricity Objective (NEO).

The STPIS has two components, the s-factor component and the guaranteed service levels (GSL) scheme. The s-factor component adjusts the revenue that a distributor earns depending on reliability of supply and customer service performance. The GSL scheme sets threshold levels of service for distributors to achieve and requires direct payment to customers who experience service levels below those at the predetermined level.

While the regulatory regime as a whole encourages a business to improve its operating and capital efficiency, the STPIS is designed to ensure that this increase in efficiency is not at the expense of deterioration in service performance for customers. Further, the STPIS is designed to encourage a business to improve its service performance where customers are willing to pay for these improvements. The STPIS plays an important part in balancing the incentives on regulated businesses to ensure outcomes are consistent with the NEO of the National Electricity Law (NEL), in terms of efficient price and non-price outcomes for the long-term benefit of users.<sup>2</sup>

## 11.1 Final decision

We do not accept Essential Energy's proposal that the application of the STPIS should be dependent on whether we accept its revised opex and capex proposals. Our approved expenditure forecasts in the final decision reasonably reflect the capex and opex criteria, and provide a sufficient amount for a prudent Essential Energy incurring efficient costs to maintain reliability.

The STPIS will provide an incentive for Essential Energy to maintain its current levels of reliability or to improve them where customers are willing to pay for these

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<sup>1</sup> AER, *Electricity distribution network service providers—service target performance incentive scheme*, 1 November 2009. (AER, *Electricity distribution STPIS*, Nov 2009).

<sup>2</sup> AER, *Electricity distribution STPIS*, Nov 2009, p.3

improvements. The STPIS balances the incentive in the regulatory framework for distributors to reduce costs at the expense of service performance.

Consistent with our draft decision, we will apply the s-factor component of our national STPIS to Essential Energy for the 2015–19 regulatory control period.<sup>3</sup> We will not apply the GSL component to Essential Energy as the existing NSW jurisdictional GSL arrangements will continue to apply.

In the draft decision, we accepted Essential Energy's proposal that:

- the revenue at risk for each regulatory year of the 2015–19 regulatory control period will be capped at  $\pm 2.5$  per cent. Within this there will be a cap of  $\pm 2.25$  per cent for the reliability of supply component and a cap of  $\pm 0.25$  per cent for the customer service component
- to apply the System Average Interruption Duration Index (SAIDI) and System Average Interruption Frequency Index (SAIFI) of the reliability of supply component of the STPIS and use the 2.5 beta method to derive the major event day thresholds (MED), and
- to apply an incentive rate of  $-0.04$  per cent per unit of the telephone answering parameter.

Essential Energy did not propose alternatives in the revised proposal, and we maintain this position in this final decision.<sup>4</sup>

In the draft decision, we applied Ausgrid's performance trend as the benchmark for estimating the potential reliability improvement for Essential Energy as we did not observe any obvious overall reliability improvement trend from Essential Energy's past performance. We expected Essential Energy should achieve a similar level of SAIDI and SAIFI improvement, after taking into account the relative past investments and sizes of the two distributors.<sup>5</sup> Essential Energy rejected this aspect of our draft decision position in its revised proposal. It noted there are many differences between the Ausgrid's and Essential Energy's network. It observed improving SAIDI and SAIFI trends by substituting its forecast 2013/14 performance data by the actual values. Its revised performance targets were based on a weather normalisation adjustment in addition to the observed improving trend.<sup>6</sup>

We have taken into account Essential Energy's submissions on this point. In this final decision, we have set Essential Energy's performance targets based on its actual trend as proposed by Essential Energy, similar to the method that we have applied in setting the targets for Ausgrid.

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<sup>3</sup> AER, *Draft decision attachment 11: Service target performance incentive scheme*, November 2014.

<sup>4</sup> Essential Energy, *Attachment 4.2 response to AER draft decision on the STPIS*, January 2015.

<sup>5</sup> AER, *Draft decision attachment 11: Service target performance incentive scheme*, November 2014, pp.21-31.

<sup>6</sup> Essential Energy, *Attachment 4.2 response to AER draft decision on the STPIS*, January 2015, pp.16-17.



However, we do not accept Essential Energy's submission that benign weather conditions have materially affected the level of reliability over the previous five years.<sup>7</sup> The observed reliability outcomes do not support Essential Energy's proposed weather adjustment. Consequently, we do not consider it is reasonable to accept its proposed adjustments to the historical data.

Table sets out our final decision on Essential Energy's performance targets for the reliability of supply component.

**Table 11-1 The proposed performance targets for Essential Energy's reliability of supply component**

Year	2015/16	2016/17	2017/18	2018/19
<b>Unplanned SAIDI</b>				
Urban	68.47	68.47	68.47	68.47
Short rural	212.94	212.94	212.94	212.94
Long rural	419.43	419.43	419.43	419.43
<b>Unplanned SAIFI</b>				
Urban	0.863	0.863	0.863	0.863
Short rural	1.923	1.923	1.923	1.923
Long rural	2.803	2.803	2.803	2.803

Source: AER analysis.

We applied the September 2014 AEMO VCR for NSW instead of the VCR prescribed in clause 3.2.2 of the STPIS for the reliability of service component of the STPIS in the draft decision. We considered the most recent VCR better reflects the value customers currently attribute to reliability.<sup>8</sup> Essential Energy accepted the use of this new AEMO VCR in the revised proposal. However, it noted the September 2014 VCR should be indexed to July 2015, consistent with the approach set out in the STPIS.<sup>9</sup> We accept that the AEMO VCR should be indexed to the start of the regulatory control period by applying the appropriate CPI adjustment. We also accept Essential Energy's average annual energy consumption ( $C_n$ ) estimations in the revised proposal, as the proposed estimation period is consistent with the STPIS period. Table 11-2 below presents our calculated incentive rates to apply to Essential Energy's SAIDI and SAIFI targets.

<sup>7</sup> Essential Energy, *Attachment 4.2 response to AER draft decision on the STPIS*, January 2015, pp.8-19.

<sup>8</sup> AER, *Draft decision attachment 11: Service target performance incentive scheme*, November 2014, p. 13.

<sup>9</sup> Essential Energy, *Attachment 4.2 response to AER draft decision on the STPIS*, January 2015, p.19.

**Table 11-2 The proposed incentive rates on Essential Energy's reliability of supply targets**

Network type	Urban	Short rural	Long rural
Unplanned SAIDI	0.0129	0.0228	0.0073
Unplanned SAIFI	1.0532	2.7436	1.1892

Source: AER analysis.

## 11.2 Essential Energy's revised proposal

Essential Energy did not accept our draft decisions on this performance targets in its revised proposal. It further submitted that the STPIS should not be applied unless we accept its revised capex and opex proposals. This is because it considered that, in our draft decision, we had not taken into account the interrelationships between our proposed expenditure forecast reductions and impacts this may have on Essential Energy's ability to maintain its historical performance when setting performance targets under the STPIS.<sup>10</sup> It noted that Jacobs' modelling suggests the cuts to capex and opex in our draft decision would result in Essential Energy becoming non-compliant with its Schedule 2 licence conditions within the current regulatory control period.<sup>11</sup> Therefore, Essential Energy's revised STPIS proposal was based on the assumption that its revised capex and opex forecasts will be accepted by us.<sup>12</sup>

In setting the performance targets for reliability of supply component, Essential Energy rejected our draft decision to set its performance targets on trend data observed from Ausgrid's historical performance. It noted that its network is influenced to a greater extent by weather events and that Ausgrid has a far more meshed and interconnected network.<sup>13</sup>

Essential Energy observed improving SAIDI and SAIFI trends by substituting its forecast 2013/14 performance data by the actual values.<sup>14</sup> However, it submitted that the average performance of the previous five years does not represent the expected ongoing level of reliability performance as it does not fully take account of weather pattern variability. It applied a weather normalisation factor in conjunction with the AER's trend method to establish expected average performance levels to be used as the basis for setting the STPIS performance targets.<sup>15</sup> Table 11-3 sets out Essential Energy's proposed performance targets for reliability of supply component.

<sup>10</sup> Essential Energy, *Attachment 4.2 response to AER draft decision on the STPIS*, January 2015, p.3.

<sup>11</sup> Essential Energy, *Attachment 4.2 response to AER draft decision on the STPIS*, January 2015, p.6.

<sup>12</sup> Essential Energy, *Attachment 4.2 response to AER draft decision on the STPIS*, January 2015, p.3.

<sup>13</sup> Essential Energy, *Attachment 4.2 response to AER draft decision on the STPIS*, January 2015, pp.16-17.

<sup>14</sup> Essential Energy, *Attachment 4.2 response to AER draft decision on the STPIS*, January 2015, pp.17-18.

<sup>15</sup> Essential Energy, *Attachment 4.2 response to AER draft decision on the STPIS*, January 2015, pp.8-19.

**Table 11-3 Essential Energy's proposed performance targets for reliability of supply component**

Year	Weather normalised average performance	Adjusted difference with actual 13/14 data (%)	Proposed target using actual 13/14 data and weather normalised average
<b>Unplanned SAIDI</b>			
Urban	72.63	2.906	70.52
Short rural	226.08	2.906	219.51
Long rural	445.31	2.906	432.36
<b>Unplanned SAIFI</b>			
Urban	1.092	6.253	0.892
Short rural	2.105	6.253	1.973
Long rural	3.078	6.253	2.886

Source: Essential Energy, *Attachment 4.2 response to AER draft decision on the STPIS*, January 2015, p.19.

Essential Energy accepted our use of the September 2014 AEMO VCR for NSW instead of the VCR prescribed in clause 3.2.2 of the STPIS. However, it noted a few minor issues in relation to the incentive rate calculation in our draft decision:<sup>16</sup>

- the AER has used five years of data in estimating average annual energy consumption ( $C_n$ ), but the regulatory control period in relation to the STPIS is actually four years
- the VCR should be adjusted by CPI to the start of the regulatory period consistent with the requirement of STPIS.

It also submitted that setting a target based on other distributors' performance for the telephone answering parameter is counter to the design of the incentive scheme. Under the STPIS, the target is intended to be based on actual performance, with the scheme providing an incentive to move to a different level of service where economic to do so. It proposed that the telephone answering parameter should not be included in the STPIS if we consider its telephone answering service does not have sufficient data on which to set a target.<sup>17</sup>

<sup>16</sup> Essential Energy, *Attachment 4.2 response to AER draft decision on the STPIS*, January 2015, p.19.

<sup>17</sup> Essential Energy, *Attachment 4.2 response to AER draft decision on the STPIS*, January 2015, p.5.

## 11.3 AER's assessment approach

We have outlined our assessment approach to the application of the STPIS in the draft decision:<sup>18</sup>

- rule 6.6.2 of the NER describes the consultative process that we must apply in developing and publishing the STPIS
- rule 6.12.1(9) of the NER requires us to make a decision on how the STPIS is to apply to the relevant distributor in the Distribution Determination, and
- the STPIS Guideline outlines the process to be applied in determining performance targets under the STPIS, incentive rates and the MED thresholds.<sup>19</sup>

We have assessed Essential Energy's STPIS proposal according to the NER and the Guideline outlined above. When alternatives are presented which warrant a reconsideration of this approach, we have considered the relative merits of the alternative against the objectives of the STPIS.

### 11.3.1 Interrelationships

In applying the STPIS we must consider any other incentives available to the distributor under the NER or relevant distribution determination.<sup>20</sup> One of the objectives of the STPIS is to ensure that the incentives under the scheme are sufficient to offset any other incentives the service provider may have to reduce costs at the expense of service levels.<sup>21</sup> For the 2015–19 regulatory control period, the STPIS will interact with the Capital Expenditure Sharing Scheme (CESS).<sup>22</sup> For this period we will not subject any expenditure to the efficiency benefit sharing scheme (EBSS) which applies to opex, as we have used an alternative opex forecast rather than Essential Energy's revealed costs. This is explained further in the EBSS appendix (see attachment 9).

The CESS rewards distributors who pursue efficiency improvements in capex to the benefit of both distributors and network users. In setting the STPIS performance targets, we will consider both completed and planned reliability improvements expected to materially affect network reliability performance.<sup>23</sup> By setting the performance targets in such a way, any incentive a distributor may have to reduce the capex at the expense of target service levels should be curtailed by the STPIS financial penalties.

Contrary to Essential Energy's submissions, our approved capex and opex forecasts in the final decision are sufficient to allow a prudent and efficient Essential Energy, facing a realistic expectation of the demand forecast and cost inputs, to maintain reliability at

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<sup>18</sup> AER, *Draft decision attachment 11: Service target performance incentive scheme*, November 2014.

<sup>19</sup> AER, *Electricity distribution STPIS*, Nov 2009.

<sup>20</sup> NER, cl. 6.6.2(b)(3)(iv).

<sup>21</sup> AER, STPIS, clause 1.5(b)(5).

<sup>22</sup> The Efficiency Benefit Sharing Scheme will not operate for the 2015–19 regulatory control period.

<sup>23</sup> Included in the distributor's approved forecast capex for the subsequent period.

the current level (see sections 6.4 and appendix A of attachment 7). This is discussed in more detail in section 11.4.1.

## 11.4 Reasons for final decision

The following section sets out our reasons for our final decision.

### 11.4.1 Application of STPIS

We do not accept Essential Energy's proposal that the application of the STPIS should be dependent on whether we accept its revised opex and capex proposals. Our approved capex and opex forecasts in the final decisions are sufficient to allow Essential Energy to maintain its current levels of reliability (see sections 6.4 and appendix A of attachment 7). We note that Essential Energy has been delivering performance levels higher than the minimum standards it is required to achieve under its licence obligations.

In arriving at our capex forecast, we have considered the interaction between the removal of the N-1 deterministic design planning standards imposed by the NSW Government in the previous regulatory control period, the minimum reliability standards and the historical reliability that Essential Energy has been achieving. In its revised proposal, Essential Energy clarified that the proposed reliability capex expenditure is required to address compliance issues related to the Schedule 3 licence conditions. Accordingly, we have accepted Essential Energy's revised proposal in respect of the forecast reliability capex. We have provided sufficient revenue to allow Essential Energy acting prudently and efficiently to maintain its current reliability level with our approved capex forecast. In addition, as the current reliability level is higher than the minimum reliability standards, Essential Energy will also be able to meet, and indeed exceed, the jurisdictional minimum standard (see section 6.4).

Our benchmarking opex approach considers the reliability of the networks by incorporating it as an output in our opex Multilateral Partial Factor Productivity (MPFP) benchmarking. We found most networks have a level of reliability that is close to their expected level given their customer density, as reflected by the reliability scores being close to the trend line. Given this, our benchmarking indicates that a prudent and efficient Essential Energy facing a realistic expectation of the demand forecast and cost inputs should be able to deliver Essential Energy's current levels of reliability for less opex. Based on our benchmarking analysis, we consider that our approved opex forecast for Essential Energy is consistent with the targets that we have set for the STPIS in this period. Our forecast opex is also sufficient to allow a prudent and efficient Essential Energy facing a realistic expectation of the demand forecast and cost inputs to maintain reliability at the current level (see appendix A of attachment 7).

In addition, we consider that a distributor's reliability performance is influenced by the configuration and condition of its network assets. This is a result of the distributor's historical investment and operating practices. Most network assets have an expected life in excess of 50 years, therefore, by discounting for uncontrollable external impacts such as weather variations, the distributor's reliability level should not change abruptly.

There is also the potential for performance improvements to lag behind the completion of capex projects. As we explain in section 11.4.4, we are uncertain of the extent and time lag between the completion of new projects and any potential improvement in performance. Therefore we have not applied any lagged effects in our analysis as there is uncertainty as to what Essential Energy's past expenditure may ultimately deliver in terms of supply reliability in the 2015–19 regulatory control period.

In recognition of all these factors, we consider it is reasonable to apply a lower revenue at risk and lower incentive rates to reduce the risk to consumers and Essential Energy.

### 11.4.2 Applicable components and parameters

In both the Stage two F&A and the draft decision, we noted that:<sup>24</sup>

- performance targets would be set for both SAIDI and SAIFI under the reliability of supply component of the STPIS, with financial incentives attached to each.
- Essential Energy's network would be divided into urban, short rural and long rural feeder types.
- we would apply the telephone answering parameter under the customer service component to the Essential Energy in the 2015–19 regulatory control period.
- we would not apply the GSL component of the STPIS to Essential Energy while the jurisdictional GSL scheme remains in place.

We did not receive any submissions objecting our draft decision or our F&A positions in relation to these issue and we will not depart from the above position in this final decision.

### 11.4.3 Revenue at risk

Revenue at risk caps the potential rewards and penalties that Essential Energy can receive under the scheme. The STPIS allows us to vary the revenue at risk where this would satisfy the objectives of the scheme. In setting the revenue at risk, we must take into account the benefits to consumers that are likely to result from the scheme, and in particular, that the benefits are sufficient to warrant any reward or penalty under the scheme for the distributors.<sup>25</sup>

Essential Energy proposed to apply a revenue at risk of  $\pm 2.5$  per cent. Within this there will be a cap of  $\pm 2.25$  per cent for the reliability of supply component and  $\pm 0.25$  per cent for the customer service component.<sup>26</sup> We accepted Essential Energy's proposal in the draft decision. We considered this lower powered incentive would balance the

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<sup>24</sup> AER, *Draft decision attachment 11: Service target performance incentive scheme*, November 2014, pp. 18-19; AER, *Stage 2 framework and approach Ausgrid, Endeavour Energy and Essential Energy*, January 2014, pp.14–15.

<sup>25</sup> NEL, cl. 6.6.2(b)(3)(i).

<sup>26</sup> Essential Energy, *Regulatory proposal, Attachment 3.2 – proposed application of STPIS*, May 2014, pp. 3-4.

risk to both consumers and Essential Energy and thus better meet the objectives of the STPIS.<sup>27</sup> Essential Energy did not propose an alternative revenue at risk in the revised proposal. We maintain our view in this final decision.<sup>28</sup>

The Energy Users Association of Australia (EUAA) recommended that we should apply an asymmetrical incentive of +1 per cent to -3 per cent. It considered such asymmetrical incentive is needed to take account of the networks' excess capacity and would more appropriately balance the risks to both consumers and the distributors.<sup>29</sup> We note the s-factor component in the STPIS scheme specifies a symmetrical incentive framework.<sup>30</sup> Hence, we cannot apply an asymmetrical incentive under the current scheme. When we next review the design of STPIS, we shall also review this aspect of the scheme design.

#### 11.4.4 Reliability of supply component

We will apply unplanned SAIDI and unplanned SAIFI parameters under the reliability of supply component to Essential Energy for the 2015–19 regulatory control period. Unplanned SAIDI measures the sum of the duration of each unplanned sustained customer interruption (in minutes) divided by the total number of distribution customers. Unplanned SAIFI measures the total number of unplanned sustained customer interruptions divided by the total number of distribution customers.

#### Major Event Day (MED) exclusions

The STPIS allows certain events to be excluded from the calculation of the s-factor revenue adjustment. These exclusions include the events that are beyond the control of Essential Energy, such as the effects of transmission network outages and other upstream events. They also exclude the effects of extreme weather events that have the potential to significantly affect Essential Energy's STPIS performance.

We accepted Essential Energy's proposal to calculate MED thresholds using the 2.5 beta method in accordance with appendix D of the STPIS in the draft decision. Essential Energy did not propose an alternative method in its revised proposal. We

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<sup>27</sup> AER, *Draft decision attachment 11: Service target performance incentive scheme*, November 2014, pp.19-20.

<sup>28</sup> Essential Energy, *Attachment 4.2 response to AER draft decision on the STPIS*, January 2015.

<sup>29</sup> EUAA, *Submission AER 2015-19 draft revenue decision and NSW DNSPs' revenue proposals*, 13 February 2015, p.50.

<sup>30</sup> Our *final decision electricity distribution network service providers service target performance incentive scheme, June 2008*, explained that a symmetrical scheme provides the incentive for distributors to maintain and improve service performance [p.9]; and, in practice this means that where a distributor's actual cost of undertaking works to improve service performance is less than the reward provided through the scheme the distributor has an incentive to carry out the works and achieve the desired performance level. In this way the scheme can act as an additional cost-recovery mechanism for service performance improvements, where these improvements are over and above those being funded through the revenue allowed in a distribution determination. As the scheme is symmetrical, that is penalties are accrued at the same rate as rewards, there is also an incentive under the scheme for a distributor to maintain its service performance [p.6].



maintain our view in this final decision.<sup>31</sup> Table 11-4 sets out our MED thresholds calculated in accordance with Appendix D of the STPIS.

**Table 11-4 MED thresholds ( $T_{MED}$ ) for Essential Energy**

Regulatory year	$T_{MED}$
2009/10	7.242
2010/11	6.659
2011/12	5.920
2012/13	5.825
2013/14	5.893

Source: AER analysis

## Performance targets

Clause 3.2.1(a) of the STPIS states that performance targets for the reliability of supply parameters must be established by reference to average historical performance modified to account for completed or planned reliability improvements and any other factor expected to materially affect network reliability performance.

Essential Energy is required to meet the minimum reliability standards prescribed in schedule 2 of the NSW licence conditions for electricity distributors.<sup>32</sup> We noted Essential Energy's current performance level is better than these prescribed minimum requirements. The NSW licence conditions indicate that the distributor has discretion to plan its investment for compliance with these licence conditions to suit its individual circumstances if it is economically efficient to do so.<sup>33</sup>

In the draft decision, we proposed to forecast service performance using historical data from the 2009–14 regulatory control period and adjust the results for completed and planned reliability improvements. We noted a key driver of the Essential Energy's expenditure in the 2009–14 regulatory control period was to augment their networks to meet the previous N-1 deterministic planning standard. Essential Energy reported it has spent a total of \$609 million to improve security and reliability of its network during the 2009–14 regulatory control period (the N-1 expenditure).

The application of our STPIS from 2015–16 onwards will ensure that reliability improvements resulting from past capital expenditure are retained. This is important because customers are continuing to pay for this historical investment. In the absence of reliable expenditure data associated with reliability improvement and a robust

<sup>31</sup> Essential Energy, *Attachment 4.2 response to AER draft decision on the STPIS*, January 2015.

<sup>32</sup> *Reliability and performance licence conditions for electricity distributors – the Hon Anthony Roberts MP Minister for Resources & Energy*, 1 July 2014.

<sup>33</sup> *Reliability and performance licence conditions for electricity distributors, explanatory note*, Commencement date 1 July 2014, p. 3.



method that can precisely quantify the impacts of such investment, we considered it is reasonable to examine Essential Energy's observed historical reliability performance and modify the performance targets based on the observed trends. As we did not observe any obvious overall reliability improvement trend from Essential Energy's past performance, we applied Ausgrid's trend as the benchmark for estimating the potential reliability improvement for Essential Energy in the draft decision. We expected a similar level of SAIDI and SAIFI improvement by Essential Energy, after taking into account their relative past investments and sizes.<sup>34</sup>

The Consumer Challenge Panel (CCP) and the EUAA agreed with our approach of setting the improved performance targets. They consider these adjustments are reasonable and will enable the benefits of the reliability improvement resulting from past capital expenditures to be retained.<sup>35</sup>

In its revised proposal, Essential Energy rejected our draft decision to set its performance targets on trend data observed from Ausgrid's historical performance. Essential Energy noted that its network is influenced to a greater extent by weather events and that Ausgrid has a far more meshed and interconnected network.<sup>36</sup>

Essential Energy did, however, observe improving SAIDI and SAIFI trends by substituting its forecast 2013/14 performance data by the actual values.<sup>37</sup> It proposed to set its targets using its actual improvement trend, in a way similar to our method for setting the performance targets for Ausgrid. We accept that there are differences between the Ausgrid's and Essential Energy's network and we have observed an improvement trend with Essential Energy's updated 2013/14 data. Therefore, we have set Essential Energy's performance targets based on its actual trend as proposed by Essential Energy, similar to the method that we have applied in setting the targets for Ausgrid. This approach also ensures consistency in the application of STPIS between the NSW distributors.

Essential Energy also proposed to make further adjustments to its performance targets in the revised proposal. It submitted that the average performance of the previous five years does not represent the expected ongoing level of reliability performance as it does not fully take into account of weather pattern variability.<sup>38</sup>

Essential Energy submitted that, during the 2009-14 period, the weather conditions were benign and did not represent the normal weather pattern. It made reference to the historical Southern Oscillation Index (SOI), which gives an indication of the

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<sup>34</sup> AER, *Draft decision attachment 11: Service target performance incentive scheme*, November 2014, pp.21-31.

<sup>35</sup> CCP, *Submission to AER responding to NSW draft determinations and revised proposals from electricity distribution networks*, 2 January 2015, p.54; EUAA, *Submission AER 2015-19 draft revenue decision and NSW DNSPs' revenue proposals*, 13 February 2015, p.49.

<sup>36</sup> Essential Energy, *Attachment 4.2 response to AER draft decision on the STPIS*, January 2015, pp.16-17.

<sup>37</sup> Essential Energy, *Attachment 4.2 response to AER draft decision on the STPIS*, January 2015, pp.17-18.

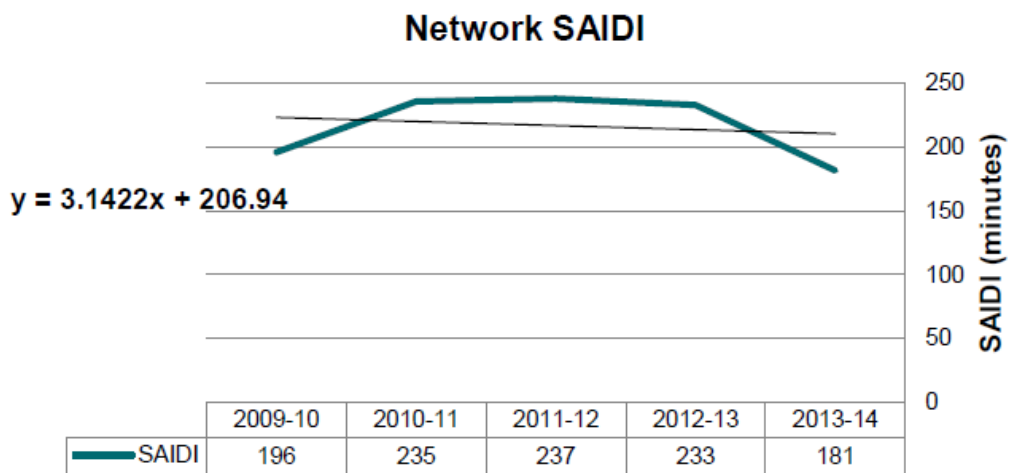
<sup>38</sup> Essential Energy, *Attachment 4.2 response to AER draft decision on the STPIS*, January 2015, pp.8-19.

development and intensity of El Nino or La Nina events in the Pacific Ocean, as the evidence for its benign weather conditions.<sup>39</sup> Based on its analysis, it found:<sup>40</sup>

- there is a direct correlation between the network performance and the number of lightning strikes in the NSW, and
- the level of lightning strikes between 2009-10 and 2013-14 regulatory years was the lowest in the past 8 years.

According to Essential Energy, the above effects are illustrated by Figure 11-1 and Figure 11-2.<sup>41</sup>

**Figure 11-1 Historical network overall SAIDI presented by Essential Energy**



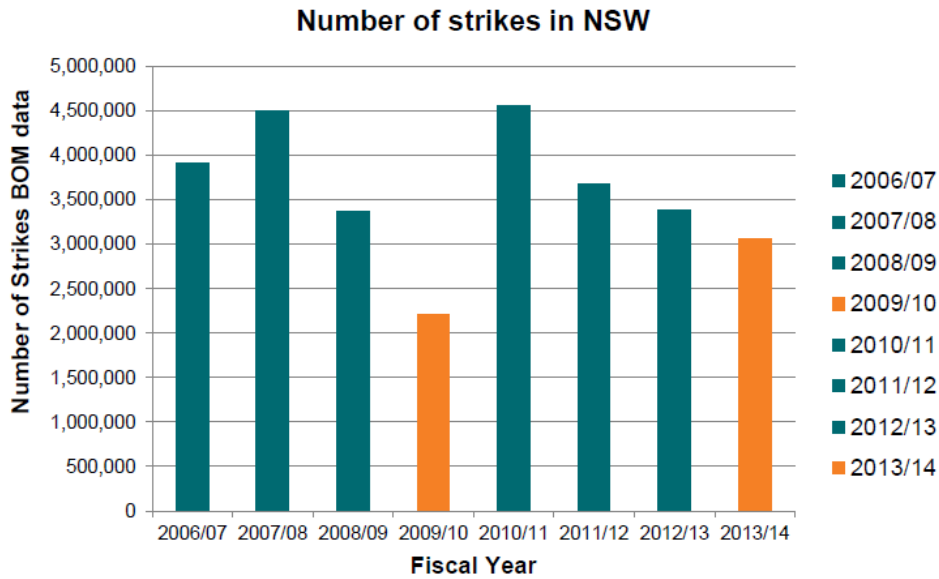
Source: Essential Energy, *Attachment 4.2 response to AER draft decision on the STPIS*, January 2015, p.10.

<sup>39</sup> Essential Energy, *Attachment 4.2 response to AER draft decision on the STPIS*, January 2015, pp.11-12.

<sup>40</sup> Essential Energy, *Attachment 4.2 response to AER draft decision on the STPIS*, January 2015, pp.9-10.

<sup>41</sup> Essential Energy, *Attachment 4.2 response to AER draft decision on the STPIS*, January 2015, pp.9-10.

**Figure 11-2 Historical lighting strikes presented by Essential Energy**



Source: Essential Energy, *Attachment 4.2 response to AER draft decision on the STPIS*, January 2015, p.9.

In support of the above contention, Essential Energy also submitted a Wind Analysis Report in its revised submission.<sup>42</sup> However, the purpose of this supporting document was not discussed in its main submission. We note the key message in this report is that Essential Energy's network experiences variable wind related damage year to year.<sup>43</sup>

We consider this Wind Analysis Report does not provide additional support to Essential Energy's submission that the weather conditions were benign to its network during the 2009–14 period.

We do not consider Essential Energy's contention is supported by the evidence as:

- except for the 2009/10 financial year, the numbers of lightning strikes for the 2010/11–2013/14 period do not appear materially different to those for the 2006/07–2009/10 period
- Essential Energy's network SAIDI for the 2013/14 financial year was substantially better than that of the 2009/10 financial year, although it experienced 40 per cent more lightning strikes
- the network SAIDI was stable over the 2010–13 period, despite the fact that there was 35 per cent difference in the number of lightning strikes across the same period.

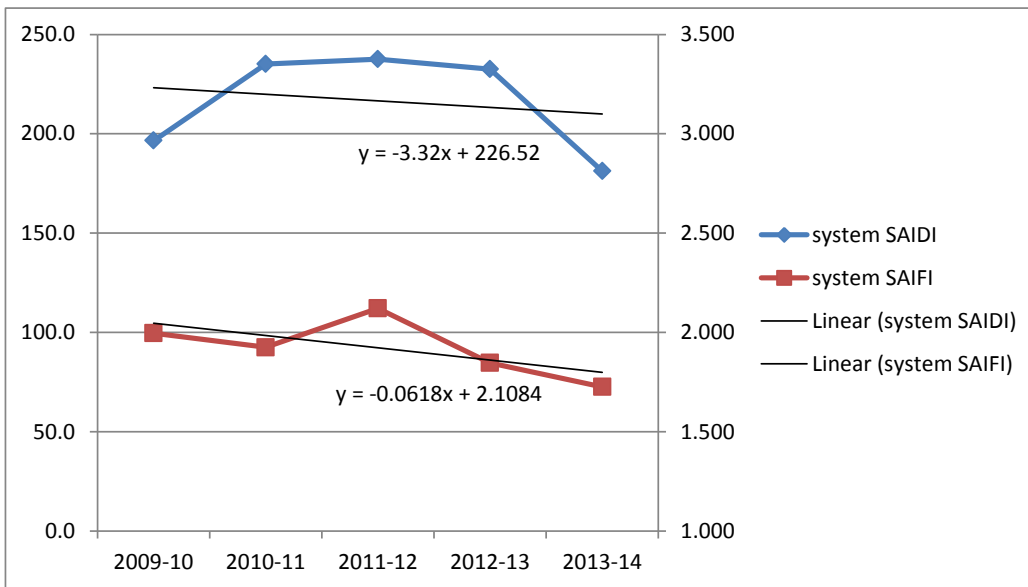
<sup>42</sup> Essential Energy - Attachment 4.2 - STPIS - Wind Analysis - Supporting documents - January 2015.

<sup>43</sup> Essential Energy - Attachment 4.2 - STPIS - Wind Analysis - Supporting documents - January 2015, pp. 6-7.

We agree that weather is a contributing factor to supply reliability. However, there are other factors that also contributed to the reliability outcomes, including asset management practices. Our MED exclusions have already removed the effects of extreme weather events that have the potential to significantly affect Essential Energy's STPIS performance.

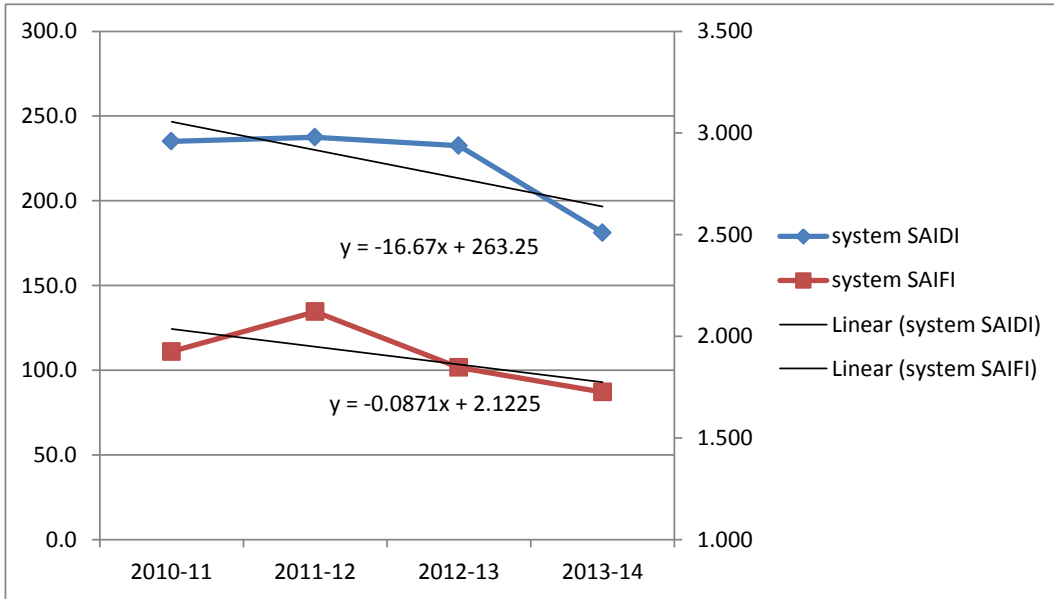
If we were to accept Essential Energy's submission that the weather pattern was unusually benign, we can adopt an alternative approach that analyses Essential Energy's historical performance trend by ignoring its performance for the 2009/10 financial year. The 2009/10 financial year has substantially less lightning strikes compared to the historical trend. This alternative approach would actually suggest that Essential Energy should be able to achieve even better reliability outcomes than our proposed performance targets based on the 5 year trend. These are illustrated in Figure 11-3 and Figure 11-4.

**Figure 11-3 Essential Energy's 5 year SAIDI and SAIFI trends**



Source: AER analysis.

**Figure 11-4 Essential Energy's 4 year SAIDI and SAIFI trends (excluding data for the 2009/10 financial year)**



Source: AER analysis.

As the observed reliability outcomes do not support Essential Energy's proposed weather adjustment, we do not consider it is reasonable to accept Essential Energy's proposed weather adjustment to the historical data.

We have revised our analysis and have set Essential Energy's performance targets for reliability of supply component based on the average performance trends of its actual data over the past five years. Table 11-5 sets out our final decision on unplanned SAIDI and SAIFI targets for Essential Energy.

**Table 11-5 Final decision on performance targets for Essential Energy's reliability of supply component, compared with Essential Energy's revised proposal**

	Proposed performance target by Essential Energy, based on five year average and adjustments for weather conditions	Our final decision on performance target for Essential Energy, based on observed trend	Difference (%)
<b>Unplanned SAIDI</b>			
Urban	70.52	68.47	2.91
Short rural	219.51	212.94	2.99
Long rural	432.36	419.43	2.99

	Proposed performance target by Essential Energy, based on five year average and adjustments for weather conditions	Our final decision on performance target for Essential Energy, based on observed trend	Difference (%)
<b>Unplanned SAIFI</b>			
Urban	0.892	0.863	3.25
Short rural	1.973	1.923	2.53
Long rural	2.886	2.803	2.88

Source: AER analysis.

We consider the adjustments that we made to Essential Energy's performance targets provide an appropriate incentive to maintain and improve performance. We are uncertain of the extent and time lag between the completion of new projects and the measured SAIDI and SAIFI performance. Therefore we have not adjusted the observed trend to account for any potential lagged performance increase. Any lagged effect would most likely make the performance targets we have proposed more stringent. Given there is uncertainty what the N-1 expenditure would deliver in terms of supply reliability in the 2015–19 regulatory control period, we consider it is reasonable to apply a lower revenue at risk and lower incentive rates to reduce the risk to both consumers and Essential Energy.

## Incentive rates

Clause 6.6.2(b)(3) of the NER stipulates that we must take into account the willingness of customers to pay for improved service performance when developing and implementing a STPIS. The incentive rates in the STPIS are based on measures of customers willingness to pay for performance, specifically, the value that customers place on supply reliability, referred to as the VCR.

In the draft decision, we noted the AEMO has carried out a review of the VCR and published the final results in September 2014. We proposed to apply the 2014 AEMO NSW VCR to calculate the incentive rates for Essential Energy.<sup>44</sup> The EUAA agreed with us that the incentive rates under the scheme should be based on the AEMO September 2014 VCR values as they were determined through a robust method and represent the best available information for this purpose.<sup>45</sup>

<sup>44</sup> Note the AEMO NSW VCR represents customers' willingness to pay in both NSW and the ACT.

<sup>45</sup> EUAA, *Submission AER 2015-19 draft revenue decision and NSW DNSPs' revenue proposals*, 13 February 2015, p.50.

Essential Energy accepted the use of this new AEMO VCR in the revised proposal. However, it noted the September 2014 VCR should be indexed to July 2015 as it is consistent with the approach set out in the STPIS.<sup>46</sup> We accept that the AEMO VCR should be indexed to the start of the regulatory control period by applying the appropriate CPI adjustment. We consider the reasonable adjustment is nine months (or 75 per cent) of the annual RBA inflation target of 2.5 per cent, which is 1.875 per cent. This adjustment is also consistent with the value proposed by Essential Energy.<sup>47</sup>

In addition, Essential Energy noted that we have used five years of data in estimating average annual energy consumption for different network types ( $C_n$ ), but the regulatory control period in relation to the STPIS is actually four years.<sup>48</sup> We agree that a consistent period should be used when estimating  $C_n$  and have revised our calculation accordingly. Table 11-2 above sets out the incentive rates that will apply to Essential Energy's SAIDI and SAIFI targets calculated based on these revised VCR values.

### 11.4.5 Customer service component

The telephone answering parameter measures the proportion of calls forwarded to an operator that are answered in 30 seconds. In the initial proposal, Essential Energy proposed to set the telephone answering target at 60 per cent based on less than 3 months' worth of new telephony data.<sup>49</sup> We did not accept Essential Energy's proposed target as less than three months of data is insufficient to robustly estimate the performance targets for the 2015–19 regulatory control period. We proposed to set Essential Energy's telephone answering target at 68.53 per cent based on the average telephone answering performance target of the Victorian distributors, similar to the benchmarking approach used to determine the opex forecast.<sup>50</sup>

In the revised proposal, Essential Energy submitted that setting a target based on other distributors' performance for the telephone answering parameter is counter to the design of the incentive scheme. If the AER considers that Essential Energy's telephone answering service does not have sufficient data on which to set a target, the parameter should not be included in the STPIS.<sup>51</sup>

Clause 5.3.1(d) of the STPIS allows us to set a performance target for customer service component based on an alternative methodology or benchmark, where five regulatory years of data is not available and where we are satisfied that the performance target meets the STPIS objectives. Similar to the opex benchmarking results, the Victorian distributors are generally more efficient in network operations and

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<sup>46</sup> Essential Energy, *Attachment 4.2 response to AER draft decision on the STPIS*, January 2015, p.19.

<sup>47</sup> Essential Energy, *Attachment 4.2 response to AER draft decision on the STPIS*, January 2015, p.19.

<sup>48</sup> Essential Energy, *Attachment 4.2 response to AER draft decision on the STPIS*, January 2015, p.19.

<sup>49</sup> Essential Energy, *Regulatory proposal, Attachment 3.2 – proposed application of STPIS*, May 2014, pp. 9-10.

<sup>50</sup> AER, *Draft decision attachment 11: Service target performance incentive scheme*, November 2014, pp.35-36.

<sup>51</sup> Essential Energy, *Attachment 4.2 response to AER draft decision on the STPIS*, January 2015, p.5.

therefore provide a reasonable benchmark. This target is conservative as it is lower than the telephone answering targets that we have set for the other NSW distributors.<sup>52</sup>

In the draft decision, we accepted Essential Energy's proposed incentive rate for the telephone answering parameter of  $-0.04$  per cent per unit.<sup>53</sup> Essential Energy did not propose alternative values in the revised proposal. We maintain this finding in this final decision.<sup>54</sup>

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<sup>52</sup> AER, *Final distribution decision Ausgrid 2015–19*, April 2015, attachment 11; AER, *Final distribution decision Endeavour Energy 2015–19*, April 2015, attachment 11.

<sup>53</sup> AER, *Draft decision attachment 11: Service target performance incentive scheme*, November 2014, p.36.

<sup>54</sup> Essential Energy, *Attachment 4.2 response to AER draft decision on the STPIS*, January 2015.