

PRELIMINARY DECISION

SA Power Networks determination 2015−16 to 2019−20

Attachment 11 − Service target performance incentive scheme

April 2015

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1. Note
2. This attachment forms part of the AER's preliminary decision on SA Power Networks' 2015–20 distribution determination. It should be read with all other parts of the preliminary decision.
3. The preliminary decision includes the following documents:
4. Overview
5. Attachment 1 – Annual revenue requirement
6. Attachment 2 – Regulatory asset base
7. Attachment 3 – Rate of return
8. Attachment 4 – Value of imputation credits
9. Attachment 5 – Regulatory depreciation
10. Attachment 6 – Capital expenditure
11. Attachment 7 – Operating expenditure
12. Attachment 8 – Corporate income tax
13. Attachment 9 – Efficiency benefit sharing scheme
14. Attachment 10 – Capital expenditure sharing scheme
15. Attachment 11 – Service target performance incentive scheme
16. Attachment 12 – Demand management incentive scheme
17. Attachment 13 – Classification of services
18. Attachment 14 – Control mechanism
19. Attachment 15 – Pass through events
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21. Attachment 17 – Negotiated services framework and criteria
22. Attachment 18 – Connection policy
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1. 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 |
| 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 |

# Service target performance incentive scheme

We published the current version of our national Service Target Performance Incentive Scheme for electricity distributors (STPIS) in November 2009.[[1]](#footnote-1) The STPIS is intended to balance 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.

The STPIS operates as part of the building block determination and is applied via the control mechanism. Through the S-factor component of the STPIS, distributors are penalised or rewarded for diminished or improved service performance compared to predetermined targets.

Our framework and approach paper for SA Power Networks proposed to continue to apply the national STPIS to SA Power Networks. The framework and approach paper also proposed to:[[2]](#footnote-2)

* set revenue at risk for SA Power Networks within the range ±5 per cent
* segment the network according to feeder categories (CBD, urban, short rural and long rural)
* set applicable reliability of supply (system average interruption duration index or SAIDI and system average interruption frequency index or SAIFI) and customer service (telephone answering) parameters
* set performance targets based on the distributor's average performance over the past five regulatory years
* apply the methodology indicated in the national STPIS for excluding specific events from the calculation of annual performance and performance targets
* apply the methodology and value of customer reliability (VCR) values as indicated in our national STPIS to the calculation of incentive rates using the latest VCR for South Australia
* not apply the GSL component as SA Power Networks is subject to a jurisdictional GSL scheme.

We also indicated that we would consider the application of a transitional arrangement to address the change to the natural log data (LN) transform method––from the previous Box-Cox method––of calculating the major event day (MED) threshold in the distribution determination process.[[3]](#footnote-3)

## Preliminary decision

Our preliminary decision is to apply the STPIS to SA Power Networks for the 2015-20 regulatory control period, and it will be to:

* set revenue at risk for SA Power Networks at the range ±5 per cent
* segment SA Power Networks' network according to feeder categories CBD, urban, short and long rural
* set applicable reliability of supply (system average interruption duration index or SAIDI and system average interruption frequency index or SAIFI) and customer service (telephone answering) parameters
* set performance targets based on the SA Power Networks' average performance over the past five regulatory years
* apply the methodology indicated in the national STPIS for excluding specific events from the calculation of annual performance targets (using the natural log method to calculate the major event day for exclusion)
* apply the methodology and value of customer reliability (VCR) values to the calculation of incentive rates.

### Revenue at risk[[4]](#footnote-4)

The maximum level of penalty or reward under the STPIS is calculated as a percentage adjustment to SA Power Networks' total revenue (the S-factor adjustment). The S-factor adjustment is subject to the revenue at risk cap.

The revenue at risk for SA Power Networks for each regulatory year of the 2015–20 regulatory control period will be capped at ±5.0 per cent. Within this cap, there will be a ± 0.5 per cent cap component for the telephone answering parameter.

### Incentive rates[[5]](#footnote-5)

Incentive rates are the penalty or reward that SA Power Networks receives for a single unit variation in performance. The incentive rates parameters are calculated with reference to the Value of Customer Reliability (VCR).[[6]](#footnote-6) We consider the most recent VCR rate should be applied in calculating the incentive rates because it better reflects customers' current value for reliability compared to our national STPIS. As such, we have applied the following VCRs:

* Our derived VCR for CBD based on SA Power Networks' data.[[7]](#footnote-7)
* AEMO's VCR values for urban, short and long rural because it represented the best available information. AEMO's review process was comprehensive and included survey of South Australian consumers and relies on more recent information compared to our national STPIS on the preferences of South Australian consumers.[[8]](#footnote-8)

Table 11.1 presents our incentive rates to apply to SA Power Networks' SAIDI and SAIFI targets. The incentive rates for the telephone answering parameter will be ­  
- 0.040 per cent per unit of the telephone answering parameter. Table 11.2 outlines the VCR values that were used to derive the incentive rates.

Table 11.1: Preliminary decision—incentive rates to apply to SA Power Networks' STPIS targets 2015–20

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | CBD | Urban | Rural short | Rural long |
| SAIDI | 0.0035 | 0.0404 | 0.0077 | 0.0075 |
| SAIFI | 0.2961 | 3.7379 | 1.0068 | 1.2600 |

Source: AER Analysis.

Table 11.2: Value of customer reliability

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | CBD | Urban | Rural short | Rural long |
| VCR | $44,856 | $38,566 | $38,566 | $38,566 |

Source: AEMO, Value of customer reliability review, final report, September 2014, p. 30. VCR values have been escalated to the March 2015 quarter; SA Power Networks, AER SAPN 011 – VCR Consumption, January 2015.

### Performance targets[[9]](#footnote-9)

We will apply the System Average Interruption Duration Index (SAIDI) and System Average Interruption Frequency Index (SAIFI) reliability of supply parameters. The targets will be set by reference to SA Power Networks' reliability performance in the previous regulatory period. Further, we have adjusted SA Power Networks' performance targets to take into account the changes in calculating the major events days for exclusion from the STPIS (see section 11.4.2 below).

We will also apply the telephone answering parameter, but not the STPIS Guaranteed Service Level (GSL) scheme. This is because SA Power Networks must comply with the existing jurisdictional GSL scheme.[[10]](#footnote-10)

Our preliminary determination on the performance targets for SA Power Networks' STPIS parameters are presented on Table 11.3.

Table 11.3: Preliminary decision of SA Power Networks' SAIDI and SAIFI targets 2015–20

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | SAIDI (Minutes p.a.) | | | | SAIFI (Interruptions p.a.) | | | |
|  | **CBD** | **Urban** | **Rural short** | **Rural long** | **CBD** | **Urban** | **Rural short** | **Rural long** |
| Preliminary decision | 12.48 | 121.50 | 231.06 | 311.70 | 0.132 | 1.353 | 1.930 | 2.027 |

Source: AER analysis.

****Telephone answering****

We will apply the telephone answering parameter to SA Power Networks. We accept SA Power Networks' proposed performance target that 67.8 per cent of calls will be answered within 30 seconds.[[11]](#footnote-11)

SA Power Networks' historical performance against the AER's targets

SA Power Networks' network performance in the current regulatory period has been generally better than its STPIS targets. This has resulted in a net positive revenue adjustment under the STPIS.[[12]](#footnote-12)

The STPIS targets for the next regulatory period have been adjusted to reflect the SA Power Networks' performance. That is, the STPIS targets have been tightened in accordance with the scheme to reflect SA Power Networks' historical performance.

## SA Power Networks' proposal

SA Power Networks regulatory proposal supported our framework and approach proposal to apply the national STPIS for the 2015–20 regulatory control period.[[13]](#footnote-13)

SA Power Networks currently operate under a variant of our national STPIS. Aligning to our STPIS scheme will alter the method of calculating SA Power Networks performance and the setting of targets for the next regulatory control period. SA Power Networks' regulatory proposal submitted a methodology to transition from its current application of the STPIS to the National STPIS.[[14]](#footnote-14)

## AER’s assessment approach

We are required to make a decision on how the STPIS is to apply to SA Power Networks.[[15]](#footnote-15) When making a distribution determination, the STPIS requires us to determine all performance targets, incentive rates, revenue at risk and other parameters required to apply the scheme.[[16]](#footnote-16)

We outlined our proposed approach to, and justification for, the application of the STPIS in our framework and approach paper for SA Power Networks.[[17]](#footnote-17) Our preliminary decision has adopted the position in the framework and approach paper, unless new information has become available or new arguments have been put forward which warrant a reconsideration of this position. We have considered material submitted to us by stakeholders and SA Power Networks, including its proposal to vary the scheme. In each instance we considered the relative merits of the alternative against the objectives of the STPIS.[[18]](#footnote-18)

### Interrelationship with other incentive schemes

In applying the STPIS we must consider any other incentives available to the distributor under the NER or relevant distribution determination.[[19]](#footnote-19) One of the objectives of the STPIS is to ensure that the incentives are sufficient to offset any financial incentives the distributor may have to reduce costs at the expense of service levels.[[20]](#footnote-20) For the 2015–20 regulatory control period, the STPIS will interact with the Capital Expenditure Sharing Scheme (CESS) and the opex Expenditure Benefit Sharing Scheme (EBSS).

The rewards and penalties amounts under STPIS are determined based on the average customer value for the improvement, or otherwise, to supply reliability (the VCR). This is aimed at ensuring that the distributor’s operational and investment strategies are consistent with customers’ value for the services that are offered to them.

Our capex and opex allowances are to be set to reasonably reflect the expenditures required by a prudent and efficient business to achieve the capex and opex objectives. These include complying with all applicable regulatory obligations and requirements and, in the absence of such obligations, maintaining quality, reliability, and security outcomes.

The STPIS on the other hand provides an incentive for distributors to invest in further reliability improvements (via additional capex or opex) where customers are willing to pay for it. Conversely, the STPIS penalises distributors where they let reliability deteriorate. Importantly, the distributor will only receive a financial reward after actual improvements are delivered to the customers.

In conjunction with CESS and EBSS, the STPIS will ensure that any additional investments to improve reliability are based on prudent economic decisions. Further reductions in capex and opex are achieved efficiently, rather than at the expense of service levels to customers.

## Reasons for preliminary decision

The following section sets out our detailed consideration in applying the STPIS to SA Power Networks for the 2015–20 regulatory control period.

### Revenue at risk

SA Power Networks' revenue at risk for each regulatory year of the 2015–20 regulatory control period will be capped at ±5.0 per cent. This is consistent with our framework an approach paper.[[21]](#footnote-21) Within this there will be a cap of ±4.5 per cent for the reliability of supply component and ±0.5 per cent for the customer service component.

Revenue at risk caps the potential rewards and penalties for SA Power Networks under the STPIS. We consider an incentive of ±5.0 per cent of maximum allowable revenue would balance the risk to both consumers and SA Power Networks and thus better meet the objectives of the STPIS.

### Reliability of supply component

The STPIS allows certain events to be excluded MEDs from the calculation of the S-factor revenue adjustment. These exclusions include the events that are beyond the control of SA Power Networks', 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 SA Power Networks' STPIS performance.

The STPIS measures underlying reliability performance by excluding MEDs. The vast majority of MEDs are associated with the Bureau of Meteorology reported significant weather events. A day is classified as a MED where the daily unplanned SAIDI exceeds a predetermined SAIDI threshold (TMED).

SA Power Networks is currently subject to a variant of the national STPIS scheme in the current regulatory control period, in relation to the calculation of MEDs. Changing the way MEDs are defined to align it to the standard approach under national STPIS will alter which days are classified as MEDs. That is, under the existing arrangement MEDs are calculated using the Box-Cox method to normalise data. Under our national STPIS, the natural log method is used to normalise data.[[22]](#footnote-22) This change will result in lesser number of major events days being excluded from the STPIS calculation.[[23]](#footnote-23)

However, the MED classification changes are likely to create a misalignment when calculating performance targets for the 2015–20 period. This is because targets set for the upcoming regulatory control period will be based on the most recent five years actual performance which will span both the current and previous periods.

To ensure consumers are not advantaged or disadvantaged because of the change in the MED setting method, we accept SA Power networks' proposal to:

* recalculate the actual performance of the 2010–15 regulatory control period using the national scheme’s normal method for calculating TMED and
* adjusting each year’s performance by an amount which achieves the equivalent revenue at risk that would otherwise be provided by the current STPIS regime.[[24]](#footnote-24)

Consequently, should SA Power Networks further improve its storm-day response to supply outages, it is likely to earn a higher reward and therefore customers will be paying higher charges because of the improvement in its storm-day response performance measurement. However, SA Power Networks will also face higher penalties if its performance does not improve in relation to this measure and customers will pay lower prices in such cases.

We have assessed SA Power Networks method of adjustment and consider that the method is sufficiently robust and reasonable. However, due to the potential cost impact on customers, we sought stakeholders’ submissions on this proposed change in the Issues Paper––to seek comments on whether customers would value further improvement in supply reliability during severe storms and heatwave days in terms of reduction in average supply restoration time and fewer supply interruptions. We received no submissions on this matter.[[25]](#footnote-25)

Performance targets

The STPIS specifies that the performance targets should be based on the average performance over the past five regulatory years. It also states that the performance target must be modified for any reliability improvements completed or planned where the planned reliability improvements are:[[26]](#footnote-26)

* included in the expenditure program proposed by the distributor in its regulatory proposal, or
* proposed by the distributor, and the cost of the improvements is allowed by the relevant regulator, in the distributor's previous regulatory proposal or regulatory submission.

SA Power Networks' proposed to set the performance targets based on historical averages as per the scheme guidelines after adjusting for the difference in data normalisation methods. We accept this approach as the capex allowance under this decision does not result in any material increases in reliability performance.

Adjustments for historical reliability improvement expenditure

SA Power Networks' regulatory proposal submitted performance targets that were based on its 5-year average historical performance. These targets were adjusted to account for the difference in data normalisation methods.

SA Power Networks' performance targets in the current regulatory control period have been established based on the previously approved capex.[[27]](#footnote-27) Hence, further adjustments to the next regulatory control period's performance targets are not required because the reliability benefits from the historical capex have been accounted for in the current reliability performance.

In essence, the STPIS is designed so that an improving performance trend will automatically tighten performance targets to ensure continuous reliability improvement. A further adjustment occurs where distributors are funded for reliability improvement capex that would lead to a material outcome in reliability improvement.

We have made adjustments to SA Power Networks' historical 5-year average target levels to take into account the differences in data normalisation methods. Our calculated performance targets for SA Power Networks are presented in Table 11.4.

Table 11.4: Preliminary decision of STPIS targets to apply to SA Power Networks

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  |  | 2015/16 | 2016/17 | 2017/18 | 2018/19 | 2019/20 |
| SAIDI | CBD | 12.48 | 12.48 | 12.48 | 12.48 | 12.48 |
|  | Urban | 121.50 | 121.50 | 121.50 | 121.50 | 121.50 |
|  | Short rural | 231.06 | 231.06 | 231.06 | 231.06 | 231.06 |
|  | Long rural | 311.70 | 311.70 | 311.70 | 311.70 | 311.70 |
|  |  |  |  |  |  |  |
| SAFI | CBD | 0.132 | 0.132 | 0.132 | 0.132 | 0.132 |
|  | Urban | 1.353 | 1.353 | 1.353 | 1.353 | 1.353 |
|  | Short rural | 1.930 | 1.930 | 1.930 | 1.930 | 1.930 |
|  | Long rural | 2.027 | 2.027 | 2.027 | 2.027 | 2.027 |

Source: AER Analysis.

Adjustment for new expenditures

Our preliminary decision for the next regulatory control period has not approved SA Power Networks' proposal for reliability improvement capex. Consequently, there is no requirement for us to modify SA Power Networks' performance targets for reliability improvement capex as per the STPIS.[[28]](#footnote-28)

Removal of catastrophic event days

SA Power Networks' proposal also submitted that catastrophic event days should be excluded from the calculation of TMED to ensure SA Power Networks is not penalised for an event beyond its control.[[29]](#footnote-29)

We received a submission from Energy Consumers Coalition of SA stating that it does not agree with SA Power Network's proposal to include an exemption for catastrophic event days in the STPIS. It considers that this is an attempt to reduce the efficiency of the STPIS and to make it easier for SA Power Networks to earn a STPIS bonus in the future.[[30]](#footnote-30)

We do not accept SA Power Networks' proposal to exclude catastrophic days from the TMED calculation. This is because it is beyond the scope of the STPIS.

We will review this proposed scheme design change when we conduct a full separate review of the STPIS— when the inter-relationship of all elements of the scheme are considered.

## Customer service component

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

Similar to the need to recalculate the SAIDI and SAFI targets due to the change in MED definition between the current and next regulatory control periods, there is also a need to recalculate the GOS target based on SA Power Networks' historical performance data due to the change to how MEDs are classified and the overall reduction in the number of MEDs.[[31]](#footnote-31) We have reviewed SA Power Networks' method to address both these matters,[[32]](#footnote-32) and confirmed its calculation result that this performance target should be 67.8 per cent of calls are to be answered within 30 seconds.[[33]](#footnote-33)

## Incentive rates

The incentive rates applicable to SA Power Networks for the reliability of supply performance parameters of the STPIS, as shown in Table 11.5, have been calculated in accordance with clause 3.2.2 and using the formulae provided as Appendix B of the National STPIS. The incentive rates for the customer service component will be - 0.040 per cent per unit of the telephone answering parameter.[[34]](#footnote-34)

Table 11.5: Our preliminary decision of incentive rates to apply to SA Power Networks' STPIS targets

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **CBD** | **Urban** | **Rural short** | **Rural long** |
| SAIDI | 0.0035 | 0.0404 | 0.0077 | 0.0075 |
| SAIFI | 0.2961 | 3.7379 | 1.0068 | 1.2600 |

Source: AER Analysis.

## Stakeholder submissions on the STPIS

Energy Consumers Coalition of South Australia

The Energy Consumers Coalition of South Australia submitted the following:

* Capex and opex allowance should be the same as the current level to maintain the targets that were achieved in the current period.
* ECCSA does not agree with SA Power Networks' proposal to include an exemption for catastrophic event days in the STPIS. It considered that this is an attempt to reduce the efficiency of the STPIS and to make it easier for SA Power Networks to earn a STPIS bonus in the future.
* ECCSA also disagreed with SA Power Networks' proposal to adjust the telephone grade of service to exclude major events days.[[35]](#footnote-35)

Our approach to the assessment of capex (and particularly that component relating to meeting existing standards) is to provide an allowance that reasonably reflects the expenditures required by a prudent and efficient business to meet its obligations. Our decisions about capex and opex can be found in their respective chapters in this preliminary decision.

As outlined in the inter relationship section earlier, the STPIS is an outcome focused mechanism intended to balance incentives to reduce expenditure with the need to maintain or improve service quality. It achieves this by providing financial incentives to SA Power Networks' to maintain and improve service performance where customers are willing to pay for these improvements. SA Power Networks will only receive a reward after actual reliability improvement is delivered to consumers.

We consider that ECCSA's submission regarding catastrophic events days relates to the design of the STPIS and should be considered when we review the scheme.

We consider SA Power Networks' proposal to adjust the telephone grade of service to exclude major events days is in accordance with the national STPIS.[[36]](#footnote-36) Similar to the above, we may consider this issue when we review the scheme should further submissions or detailed information become available.

South Australian Council of Social Services

SACOSS considered that SA Power Networks proposal to include catastrophic event days in the STPIS could be better explained.[[37]](#footnote-37)

We consider that SACOSS's submission regarding catastrophic events days relates to the design of the STPIS and should be considered when we review the scheme.

1. AER, Electricity distribution network service providers—service target performance incentive scheme, 1 November 2009. (AER, STPIS, November 2009). [↑](#footnote-ref-1)
2. AER, Final framework and approach for SA Power Networks Regulatory control period commencing 1 July 2015, April 2014, pp. 55. [↑](#footnote-ref-2)
3. AER, Final framework and approach for SA Power Networks Regulatory control period commencing 1 July 2015, April 2014, p. 59. [↑](#footnote-ref-3)
4. AER, STPIS, November 2009, clause 2.1(d)(2). [↑](#footnote-ref-4)
5. AER, STPIS, November 2009, clause 2.1(d)(3). [↑](#footnote-ref-5)
6. The VCR represents, in dollar terms, the willingness of customers to pay for the reliable supply of electricity. The values produced are used as a proxy in this way, and can be applied for use in revenue regulation, planning and operational purposes in the NEM. In network planning, the VCR is used by AEMO to assess the economic merits of carrying out additional investment in the electricity network. It is therefore important the VCR figures accurately reflect the value of reliability across a range of customers. [↑](#footnote-ref-6)
7. SA Power Networks, AER SAPN 011 – VCR Consumption, January 2015, p. 1. CBD data are based on an estimate of energy consumption by feeder type split by residential, commercial, agricultural and industrial. [↑](#footnote-ref-7)
8. AEMO, Value of customer reliability review final report, September 2014. [↑](#footnote-ref-8)
9. AER, STPIS, November 2009, clause 2.1(d)(4). [↑](#footnote-ref-9)
10. SA Power Networks, Regulatory Proposal 2015–20, October 2014, p. 74. [↑](#footnote-ref-10)
11. SA Power Networks, Regulatory proposal 2015–20: Attachment 23.13 Proposed adjustment to STPIS targets 2015-20, October 2014, p. 7. [↑](#footnote-ref-11)
12. SA Power Networks, Regulatory proposal 2015–20: Attachment 23.13 Proposed adjustment to STPIS targets 2015-20, October 2014, p. 9. [↑](#footnote-ref-12)
13. SA Power Networks, Regulatory Proposal 2015-20, October 2014, p. 292. [↑](#footnote-ref-13)
14. SA Power Networks, Regulatory Proposal 2015-20, October 2014, pp. 291–292. [↑](#footnote-ref-14)
15. NER, cl. 6.12.1(a). [↑](#footnote-ref-15)
16. AER, STPIS, November 2009, cl. 2.1(d). [↑](#footnote-ref-16)
17. AER, Final framework and approach for SA Power Networks Regulatory control period commencing 1 July 2015, April 2014, p. 14. [↑](#footnote-ref-17)
18. AER, STPIS, November 2009, cl. 1.8(f). [↑](#footnote-ref-18)
19. NER, cl. 6.6.2(b)(3)(iv). [↑](#footnote-ref-19)
20. AER, STPIS, cl. 1.5(b)(5). [↑](#footnote-ref-20)
21. AER, Final framework and approach for SA Power Networks Regulatory control period commencing 1 July 2015, April 2014, p. 14. [↑](#footnote-ref-21)
22. Both the Box Cox and natural log method are used to normalize a data set so that statistical tests can be performed to evaluate it properly. Under the Box-Cox methodology the number of MEDs for SA Power Networks is approximately 5 days per annum. Using the natural logarithm methodology, the number of MEDs will be approximately 2.5 days per annum — around half the number of days currently determined. [↑](#footnote-ref-22)
23. Under the Box-Cox method, approximately 4 to 6 most severe storms/heatwaves days each year are excluded from STPIS performance measures. The change to the log-normal transformation method would mean the number of major event days being excluded would be reduced to 2 to 4 days each year. [↑](#footnote-ref-23)
24. The methodology for SA Power Networks proposal can be found on our website at: <http://www.aer.gov.au/node/20941> under SAPN - 23.13 PUBLIC - SAPN Proposed adjustment to STPIS targets 2015-20. [↑](#footnote-ref-24)
25. The Issues Paper also highlighted that the incentive applies to network average performance outcome. Hence, improvements may not be universal across all parts of South Australia. [↑](#footnote-ref-25)
26. AER, STPIS, November 2009, cl. 3.2.1(a). [↑](#footnote-ref-26)
27. AER, STPIS, November 2009, cl. 3.2.1(a)(1A). [↑](#footnote-ref-27)
28. AER, STPIS, November 2009, cl. 3.2.1(a). [↑](#footnote-ref-28)
29. SA Power Networks, Regulatory Proposal 2015-20: Attachment 23.14 SA Power Networks: Proposed amendment to STPIS Guideline, October 2014. [↑](#footnote-ref-29)
30. Energy Consumers Coalition of SA, AER SA Electricity Distribution Revenue Reset SA Power Networks Application A response by Energy Consumers Coalition of South Australia, December 2014, pp. 70–71. [↑](#footnote-ref-30)
31. AER, STPIS, November 2009, cl. 5.4. [↑](#footnote-ref-31)
32. SA Power Networks, Regulatory proposal 2015–20: Attachment 23.13 Proposed adjustment to STPIS targets 2015-20, October 2014, pp. 13–15. [↑](#footnote-ref-32)
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