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7 February 2018

Lodged online: escosa@escosa.sa.gov.au

Dear Ms McKeown,

RE: ESCOSA - SA Power Networks 2020 reliability standards review: objectives and process, December 2017

As the peak body for the health and community services sector in South Australia, the South Australian Council of Social Service (SACOSS) has an established history of interest, engagement and provision of proposed advice on the necessary market mechanisms and policy for essential services, including electricity. SACOSS would like to thank the Essential Services Commission of South Australia (ESCOSA) for their paper outlining the proposed process and objectives for the SA Power Networks 2020 reliability standards review, dated December 2017 (the Review Paper), and their broader consultation with SACOSS.

ESCOSA is seeking feedback on the objectives and process proposed for the review of the SA Power Networks Reliability Standards for 2020 (the Review). The objective of the Review, as stated by ESCOSA, is 'to establish reliability standards that require SA Power Networks to provide distribution services valued by customers at an acceptable cost'. The two stage process contemplated by ESCOSA involves firstly gaining an understanding of the reliability service levels that customers want and expect, and secondly undertaking an economic assessment of the trade-off between the reliability service levels customers want and expect, with the cost of meeting those levels. SA Power Networks is the owner and operator of the main distribution electricity network in South Australia, and the economic regulation of SA Power Networks is undertaken jointly by ESCOSA and the Australian Energy Regulator (AER).

As part of the Review, ESCOSA has indicated it will also address whether or not:

- reliability targets should be imposed on the basis of geographical regions, as opposed to network feeder types

- the reliability standards can further encourage the provision of timely and accurate information to customers
- customer communication standards can be updated to include SMS, social media, print, television and radio media
- the current Guaranteed Service Level Scheme (GSL Scheme) is meeting its objectives
- expressing standards as a ‘best endeavours’ obligation continues to be effective in assessing SA Power Network’s performance.¹

Background

SACOSS understands the objective stated by ESCOSA is intended to summarise the process of the Review in broad terms in order to make it more accessible for stakeholders to understand, and is not intended to be a legal objective. However, SACOSS believes it is important for us to be clear at the outset that we believe it is in the long term interests of consumers in South Australia that the objective of the Review clearly reflects an economic approach. Without a focus on economic assessments, the inherently subjective assessment of ‘what customers’ value’, may be used to support an increase in levels of reliability, with a corresponding increase in costs to customers.

For the purposes of providing feedback on the objective and principles of the Review, SACOSS submits it is useful to firstly summarise the broader objectives that apply to the regulation of electricity services, as well as ESCOSA’s powers and functions with respect to setting the reliability standards.

The National Electricity Objective (NEO) requires electricity distribution network service providers to operate their networks in the long term interests of consumers:²

The objective of this Law is to promote efficient investment in, and efficient operation and use of, electricity services for the long term interests of consumers of electricity with respect to-

- (a) price, quality, safety, reliability and security of supply of electricity; and*
- (b) the reliability, safety and security of the national electricity system.*

The interpretation of the NEO and the long term interests of consumers has been the subject of judicial and academic consideration.³ The Australian Energy Market Commission (AEMC) notes that this objective has replaced ‘a number of competing objectives in previous state-based laws with a single objective focussed on efficiency in the long-term interests of consumers. The NEO is an economic concept and is intended to be interpreted as promoting efficiency in the long-term interests of consumers’⁴. The Expert Panel reviewing governance arrangements in the National Electricity Market (NEM) also confirmed that ‘the overall objective for the energy sector in Australia is that the long-term interests of consumers are efficiently served’.⁵

¹ ESCOSA, SA Power Networks 2020 reliability standards review: objectives and process, December 2017, p.14

² National Electricity (South Australia) Act 1996, National Electricity Law – Schedule, section 7

³ See Energy Consumers Australia Research Report No. 1, Interpreting the LTIC, 9 May 2016 and Transcript of Proceedings, Australian Competition Tribunal, No. ACT 11 of 2015, Adelaide, Wednesday, 1 June 2016, pp. 2 and <http://www.judgments.fedcourt.gov.au/judgments/Judgments/tribunals/acompt/2015/2015acompt0002>

⁴ AEMC, Applying the Energy Objectives: A Guide for Stakeholders, 1 December 2016 p. 3

⁵ Dr Michael Vertigan AC, Professor George Yarrow, Mr Euan Morton, Review of Governance Arrangements for Australian Energy Markets, Final Report, October 2015, pp.22

The Australian Energy Market Agreement (AEMA) places the responsibility for developing standards to ensure network security and reliability with state and territory governments.⁶ The *Essential Service Commission Act 2002* (the ESC Act) establishes ESCOSA's authority to make, monitor and enforce industry codes and rules.⁷ The ESC Act further provides that in undertaking its functions, ESCOSA's **primary objective** is 'the protection of the long-term interests of South Australian consumers with respect to the price, quality and reliability of essential services'⁸, in line with the NEO.

The *Electricity Act 1996* sets out ESCOSA's powers and functions under the licensing regime that applies to SA Power Networks. The Electricity Act provides that SA Power Networks must comply with code provisions made by ESCOSA under the ESC Act 'imposing minimum standards of service for customers that are at least equivalent to the actual levels of service for such customers prevailing during the year prior to the commencement of this section and take into account relevant national benchmarks developed from time to time and requiring the entity to monitor and report on levels of compliance with those minimum standards'.⁹ It is worth noting that the Electricity Act uses the term 'customer' as opposed to 'consumer'.

The National Electricity Rules (NER) place an explicit obligation on network service providers to demonstrate how they have engaged with electricity consumers and sought to address any relevant concerns identified as a result of that engagement.¹⁰ To assist network service providers with this task, the AER published the Consumer Engagement Guideline for Network Service Providers (the Guideline) in November 2013. The objective of the Guideline is to assist Network Service Providers to better engage with their consumers, so they can provide services that better align with consumers' long term interests.¹¹ The NER requires network service providers to engage with consumers and for the AER to have regard to 'the extent to which the forecast includes expenditure to address the **concerns** of electricity consumers identified by the DNSP in the course of its engagement with electricity consumers'¹² (the Consumer Engagement Factor). The AER uses the term 'consumer' within the Guideline, which is consistent with the NEO, and is also reflected in the NER (which refers to 'electricity consumers'). The AER acknowledges 'consumer' and 'customer' have distinct meanings, but also acknowledges that these terms are used interchangeably.¹³

The current Jurisdictional Service Standards that apply to SA Power Networks for the 2015-2020 regulatory period (the Standards) are contained in the Electricity Distribution Code EDC/12, July 2015 (the Code). Compliance with the Code forms part of the conditions of SA Power Network's licence to operate the electricity distribution network in South Australia¹⁴. A breach of the Code, is a breach of SA Power Network's licence conditions. The current standards in the Code are comprised of four main elements. The first two elements involve targets set by ESCOSA; average reliability performance targets and customer service targets. The second two elements of the Standards comprise the Guaranteed Service Level Scheme (GSL Scheme) and monitoring and reporting requirements.

⁶ Australian Energy Market Agreement, Annexure 2, State and Territory Functions, Clause 19, Service Reliability Standards

⁷ *Essential Services Commission Act 2002*, section 5(c)

⁸ *Ibid*, section 6(a)

⁹ Electricity Act 1996, section 23(1)(n)(v)

¹⁰ National Electricity Rules, cl. 6.8.2(c1)(2) (distribution) and 6A.10.1(g)(2) (transmission)

¹¹ AER, Explanatory Statement – Consumer Engagement Guideline for Network Service Providers, November 2013 p.10

¹² NER Clause 6.5.6(e)(5A)

¹³ AER, Consumer Engagement Guideline for Network Service Providers, November 2013, p. 6

¹⁴ Electricity Act 1996, section 21

The Standards and targets set by ESCOSA will directly influence the amount of revenue SA Power Networks proposes to recover from consumers for the next regulatory control period: increased reliability and service levels, supports increases in revenue to improve SA Power Network's distribution services. Once ESCOSA has established reliability standards, the Australian Energy Regulator (AER) is responsible for assessing the efficient level of expenditure required for SA Power Networks to meet the standards specified. This price / service dichotomy is fundamental to the regulatory process. The AER's 2015 determination allowed SA Power Networks to recover \$3837.5 million from consumers over the 2015-2020 period,¹⁵ representing around 26.2% of a typical South Australian residential customer's annual electricity bill.¹⁶

Objective of the Review

ESCOSA has stated the objective of the Review is 'to establish reliability standards that require SA Power Networks to provide distribution services **valued by customers at an acceptable cost**'. ESCOSA has also developed a set of six principles to provide a frame of reference for the determination of the reliability standards. The principles are that reliability standards should:

1. Promote economic efficiency, and neither duplicate incentives nor create perverse incentives.
2. Reflect, to the extent possible, reliability outcomes that are satisfactory to customers over both the short and the long term.
3. Reflect, rather than constrain or dictate good business practice.
4. Reflect what SA Power Networks can influence, and exclude what is beyond SA Power Networks' control while still requiring appropriate planning for risk and uncertainty.
5. Be based on reliable data that is not costly to obtain. Where options meet all other criteria but data is unreliable or expensive to collect, they should be avoided.
6. Improve consistency with other jurisdictions, where all else is equal.¹⁷

SACOSS notes that ESCOSA has decided to use 'customers' as opposed to 'consumers' in the objective and principles, in line with the Electricity Act, the Code and the AEMO's Value of Customer Reliability measure. Whilst the NEO, the NER, the Guideline and the ESC Act objective refer to 'consumer' we agree with the AER's acknowledgement that although these terms have different meanings, they are used interchangeably.

SACOSS supports the targets set by ESCOSA being economically determined in line with the AEMC's recommended framework for distribution reliability,¹⁸ and considers that this economic assessment is not reflected clearly enough in the proposed objective. SACOSS submits that the overarching objective of the Review should be on **efficient reliability outcomes** in the long term interests of customers, in line with the NEO and the ESC Act objective. SACOSS recognises that the proposed objective of the Review incorporates the two stage process contemplated by ESCOSA, namely identifying customer preferences in terms of reliability (what services customers 'value') and the economic assessment (the 'acceptable cost'). However, SACOSS considers that the objective as stated by ESCOSA places more weight on the services valued by customers (which is inherently subjective), than on an independent economic assessment process. The long term interests of consumers may not be efficiently served if the primary concern of the objective is based on evidence of what 'customers' value', albeit tempered by 'acceptable cost'.

¹⁵ AER, Final Decision: SA Power Networks determination 2015-16 to 2019-20, October 2015 p.

¹⁶ SAPN, Regulatory Information Session, 5 & 6 July 2017, p. 24

¹⁷ ESCOSA, SA Power Networks 2020 Reliability Standards Review – objectives and process, December 2017, p.12

¹⁸ AEMC, Final Report: Review of the national framework for distribution reliability, 27 September 2013

The Review process must of course determine which areas of reliability are particularly important to customers in order to develop reliability scenarios for testing, but the economic testing of the costs and benefits of these scenarios will ensure efficient outcomes in the long term interests of consumers. Also, the concepts contained in the NEO (and therefore the ESC Act objective) have been the subject of detailed analysis and commentary (as outline above), whereas the objective of the Review has not.

Further, the use of the term ‘acceptable cost’ within the objective is potentially problematic. An ‘acceptable cost’ for the services valued by customers is arguably a subjective value judgment; acceptable to whom? How has the acceptance of these costs been determined by SA Power Networks and ESCOSA? An acceptable cost for one customer may not be acceptable for another. SACOSS submits the concept of ‘efficiency’, which is more widely used and understood, is more preferable to ‘acceptable cost’ and is not adequately represented in the objective proposed by ESCOSA. SACOSS notes that ESCOSA has included the promotion of economic efficiency in the first principle used to guide the determination of the reliability standards, and submits that this should be reflected in the objective.

More broadly, SACOSS considers the usefulness of a separate objective for the setting of the standards is limited, and that ESCOSA’s primary objective to protect ‘the long-term interests of South Australian consumers with respect to the price, quality and reliability of essential services’¹⁹, in line with the NEO, is sufficient. If ESCOSA considers it is necessary to have separate objective for the setting of the standards, SACOSS suggests the objective could be to ‘establish network service standards and targets requiring SA Power Networks to provide efficient reliability outcomes in the long term interests of South Australian customers’. This position is supported by SA Power Network’s feedback from the directions workshop that ‘SAPN should strive to achieve the lowest possible price while maintaining satisfactory service levels, through efficiencies and innovation’.²⁰

SACOSS submits ESCOSA’s stated objective may not necessarily be consistent with its primary objective under the ESC Act. The complexities and pitfalls associated with identifying what customers’ value casts a shadow over the usefulness of that evidence, and it should therefore not be the focus of the objective. SACOSS submits the overarching objective when setting the Standards should be to ensure the long term interests of consumers are efficiently served, this would encompass the independent economic assessments contemplated by the AEMC.

Proposed two-stage process for the Review

ESCOSA has indicated that the Review will involve a two-step process aimed at understanding ‘how customers value reliability of distribution services’.²¹ The first stage of the process has commenced, with ESCOSA overseeing and observing SA Power Network’s consumer engagement program to gain insights into what customers want and expect (which began in April 2017). The second step will involve an economic assessment to assess the trade-off between the reliability service levels customers want and expect, with the cost of providing those services (informed by a survey of SA Power Networks customers to be conducted over December 2017 and January 2018).

¹⁹ Ibid, section 6(a)

²⁰ ESCOSA, SA Power Networks reliability standards review, presentation to stakeholders , p.5 which summarises SA Power Networks’ customer engagement feedback

²¹ ESCOSA, SA Power Networks 2020 reliability standards review: objectives and process, December 2017, p.2

The process is represented in Figure 2 of the Review Paper²², with the first stage being to identify reliability standard options, and the next stage being the economic assessment of reliability standard options. ESCOSA has allocated one month for the economic assessment stage, with the Draft Decision scheduled for release in March 2018. This is in contrast with the AEMC's 'Proposed process flow for setting reliability targets' illustrated in Figure 1.1 in the Review of the National Framework for Distribution Reliability²³ which allocates 6 months for the economic assessment of reliability scenarios. SACOSS submits that ESCOSA's processes around the economic assessment of reliability scenarios identified through the consumer engagement process could be more robust, in line with the process proposed by the AEMC. ESCOSA has indicated it is also reflecting on the success of the current reliability standards informed by reliability outcomes, and drawing on direct conversations with stakeholders to inform how customers value reliability.²⁴

The first stage of the process – identifying reliability options

The purpose of the customer consultation process is to determine which areas of reliability are particularly important to SA Power Networks' customers, reliability scenarios can then be developed, which will then be economically assessed by ESCOSA. SA Power Networks has indicated that the feedback they have so far received from their consumer engagement program demonstrates that price impacts are felt most keenly by vulnerable and business customers, that customers are willing to pay for safety and reliability and that reliability and resilience are the highest priority overall for customers.²⁵ ESCOSA has echoed this feedback, noting that two themes have emerged from consultation so far:

- *'Electricity prices are a concern. This is particularly so amongst vulnerable and business customers. There are customers that expect SA Power Networks to innovate and improve efficiency to manage the cost of distribution services.'*
- *'Reliability is a priority. Customers expect SA Power Networks to deliver at least current levels of reliability. There is support for ensuring acceptable levels of reliability for all customers, and some support for improving reliability for regional and poorly served customers.'*

In contrast with this assessment, our discussions with energy advocates have indicated that what customers want and expect is lower electricity bills, and there is a willingness to receive lower levels of service and reliability, if that would result in lower electricity bills (feedback from various member organisations including the Anti-Poverty Network and COTA). Evidence from consultations undertaken by our member organisations has found electricity prices are undeniably and consistently a priority for families, people in public housing, people who rent, people over 50²⁶, even children as young as 8 are worried about electricity bills in South Australia.²⁷

SACOSS refers ESCOSA to the evidence provided by 16 South Australian organisations to the Australian Competition Tribunal on 1 June 2016 in the Federal Court of Australia, Adelaide, as part of a community consultation process, which formed part of the ACT hearing of SA Power Networks' review of its Regulatory

²² Ibid, p.10

²³ AER, Review of the National Framework for distribution reliability, p.6

²⁴ ESCOSA, SA Power Networks 2020 reliability standards review: objectives and process, December 2017, p.3

²⁵ SA Power Networks, Vulnerable customer conversations - PowerPoint, October 2017, p. 22

²⁶ See COTA's 2018 State Election Platform, at p. 20 where the results of COTA's extensive survey found that 'the burden and stress caused by the rising cost of electricity and gas was the **headline issue** from all our research and is causing great anxiety for people on low fixed incomes'.

²⁷ Feedback from consumer consultation undertaken by the Office of the Guardian for Children and Young People.

Determination.²⁸ The Tribunal noted in its decision that ‘when considered according to the elements of the NEO – price, quality, safety, reliability and security of supply of electricity – the only element with which consumers were dissatisfied was price.’²⁹ In other words, in terms of what consumers wanted and expected from the SA Power Networks, it was generally submitted that consumers were most concerned about price, not reliability. SACOSS submits this evidence is useful to inform the discussion around SA Power Network’s consumer engagement findings that reliability is a priority, and that there is support for ensuring ‘acceptable levels of reliability for all customers, and some support for improving levels of reliability for regional and poorly service customers’. SACOSS submits that price is a priority concern, and considerations of efficiency are in the long term interests of consumers.

The Tribunal further held that the ‘the consultation process and the submissions of consumers (and the Minister) may have become particularly significant (if error had been found in the final decision) in the consideration of the materially preferable NEO decision.’³⁰ In other words, had the Tribunal found that the AER had erred in its Regulatory Determination for SA Power Networks, the evidence of the consumer organisations (which overwhelmingly focussed on the impact of electricity prices), may have been sufficient for the Tribunal to make a determination consistent with the long term interests of consumers with respect to price. The Tribunal’s decision to uphold the AER’s determination was recently affirmed by the Full Court of the Federal Court.³¹

ESCOSA has noted the declining levels of demand in South Australia, stating that ‘falling demand means distribution network expenditure will necessarily focus more on maintenance, repair, replacement and in places localised network reinforcement than on expanding network capacity’³². SACOSS agrees with ESCOSA, and submits that it is against this background that reliability options should be economically assessed. SACOSS submits ESCOSA should carefully consider the evidence in support of ‘*ensuring **acceptable** levels of reliability for **all customers**, and some support for improving reliability for regional and poorly served customers*’. SACOSS refers ESCOSA to our previous comments regarding the subjective value judgments of what is ‘acceptable’.

The second stage of the process – economic assessment of reliability standard options

The purpose of the economic assessment is to identify which reliability standard options / scenarios provide ‘the greatest net benefit for SA Power Networks’ customers’.³³

The economic assessment proposed by ESCOSA will involve two stages, with the first stage including two approaches:

- Quantifying the value customers place on reliability improvements, through
 - choice modelling to estimate customers’ willingness to pay for reliability improvements and discern the importance of elements of reliability,
 - the use of AEMO’s estimate of the Value of Customer Reliability (VCR)(with ESCOSA leading the analysis on the basis of cost information provided by SA Power Networks).

²⁸ <http://www.competitiontribunal.gov.au/current-matters/community-consultations/act-11-of-2015>

²⁹ Application by SA Power Networks [2016] ACompT 11, para 59

³⁰ Ibid, para 103

³¹ <http://www.judgments.fedcourt.gov.au/judgments/Judgments/fca/full/2018/2018fcafc0003>

³² ESCOSA, SA Power Networks 2020 reliability standards review: objectives and process, December 2017, p.8

³³ Ibid, p.13

- Comparing the value customers place on reliability improvements, with the cost of delivering them.

SACOSS notes that ESCOSA is planning to economically assess the costs of ‘reliability **improvements**’, and submits that a base line level of reliability as well as costs of reduced levels of reliability should also be economically assessed.

Quantifying the value customers place on reliability improvements

The question of what distribution services are ‘valued by customers’ is inherently challenging. As the AEMC notes, ‘determining the value placed on reliability by customers is significantly more difficult and uncertain than assessing the expected costs of meeting reliability standards or targets’³⁴. Different customers place different ‘values’ on services and reliability. There are numerous variables which can affect a customer’s value of reliability, including the characteristics of the customer and (relevantly for South Australian purposes) whether the customer has recently experienced a supply interruption, and the length, duration and timing of the supply interruption, etc.³⁵

ESCOSA has noted the impact of the extreme weather in 2016-17, which it states has ‘focused attention on the capability of the distribution network to withstand extreme weather, the way SA Power Networks responds when outages occur, and the timeliness and accuracy of communication with customers’.³⁶ SACOSS submits ESCOSA should consider the effect of the relatively recent blackouts and storms on the customer’s **perception of reliability** in South Australia. Customers may be influenced by those events into believing that they require increased levels of reliability from the network, when in fact the extreme weather and damage to transmission networks played a significant role in the outages.

Quantifying the value customers place on reliability improvements – Choice modelling

The fulfilment of ESCOSA’s objective with respect to identifying services ‘valued by customers’ is relying heavily on evidence obtained through SA Power Network’s engagement process, including choice modelling surveys. SACOSS supports ESCOSA in ensuring SA Power Networks conduct their consumer engagement process in line with the AER’s Guideline and the principles provided by ESCOSA.³⁷ SACOSS is seeking ESCOSA inform stakeholders of the details of the proposed choice modelling process, including who is conducting the survey, the demographics and the questions asked, so we are in a position to provide informed comment. SACOSS is also seeking ESCOSA thoroughly evaluate the willingness to pay evidence provided by SA Power Networks to ensure that well-designed choice modelling is employed,³⁸ and outline how it will account for the variance in customer willingness to pay information obtained from different customer classes.

We further suggest ESCOSA have regard to the recommendations contained in the Consumer Challenge Panel’s submission to the AER in relation to the NSW DNSP Regulatory Proposal.³⁹ The sub-panel recommended that:

³⁴ AER, Review of the National Framework for distribution Reliability, p.23

³⁵ Ibid, p.23

³⁶ ESCOSA, Review Paper, p.9

³⁷ Ibid, p.12

³⁸ In line with the recommendations of the Consumer Challenge Panel to the AER, detailed further in the submission, below.

³⁹ Consumer Challenge Panel, Jam Tomorrow? Submission to the AER re: NSW DNSP Regulatory Proposals 2014-2019, August 2014, p.11 <https://www.aer.gov.au/node/25314>

- the AER evaluate the robustness of any willingness to pay information provided by businesses, particularly where such information is the principal support for specific programs or activities proposed by network businesses as part of the regulatory proposal;
- only willingness to pay information provided through well-designed choice modelling be considered by the AER as possible support for a program or activity;
- the AER confirm that willingness to pay information is insufficient, in and of itself, to support a proposed business program or activity;
- the AER ensure that each network business has a clear and legitimate business case for expenditure that is being otherwise based on information obtained via willingness to pay studies; and
- the AER consider the extent to which a network business' CEO and Board have been engaged as part of its consumer engagement activities.⁴⁰

The Consumer Challenge Panel submission questioned the evidence provided in support of the reliability levels valued by customers, detailing the fact that customers were not asked how much risk they were prepared to take for different levels of reliability. The Consumer Challenge Panel highlighted the difficulty with using willingness to pay surveys to justify the ongoing high reliability related network expenditure.⁴¹ Identifying what customers value **must** involve those customers surveyed being informed of the service level / cost trade-offs. As previously stated by ESCOSA, when determining customer preferences 'customers need to be in a position to assess whether their preference would be for a lower / higher level of service in return for a stated reduction / increase in bills'.⁴²

In the 2013 Expenditure Objectives Rule determination, the AEMC stated that 'in light of the evidence provided it should be made clear in the NER that where the jurisdiction determines a regulated standard for reliability it is this level of reliability that expenditure in an NSP's regulatory proposal should be based on and not any other level. In practice this means that the NSP should propose no more expenditure than is necessary to comply with the reliability standard, and for the AER not to approve any more expenditure than required by the standard'.⁴³ This statement reinforces the importance of ensuring the process of setting the standards is transparent and robust.

The amended expenditure objectives specify that there is no requirement to **maintain** existing reliability and quality levels, other than in accordance with the regulated standards. SACOSS notes that section 23(1)(n)(v) of the Electricity Act requires the standards of service to be 'at least equivalent to the actual levels of service for such customers prevailing during the year prior to the commencement of this section and take into account national benchmarks from time to time'. The relevant section came into force in July 2000, as a result of the *Electricity (Miscellaneous) Amendment Act 1999* (see section 23 of the Amending Act which substituted sections 21 – 24).⁴⁴ Therefore, in accordance with the legislation, the standards of service set by ESCOSA need to be equivalent to the actual levels of service received by customers in July 1999 to July 2000.

⁴⁰ Ibid p.7

⁴¹ Ibid p.6

⁴² ESCOSA, SA Power Networks Jurisdictional Service Standards for the 2015-202 regulatory period, Final Decision, May 2014, p.6

⁴³ AEMC Rule Determination National Electricity Amendment (Network Service Provider Expenditure Objectives) Rule 2013, 19 September 2013 p 16

⁴⁴ http://www.austlii.edu.au/au/legis/sa/num_act/ea60o1999400/ea60o1999400.pdf

SACOSS submits that apart from the requirement under the Electricity Act, there is no additional legal requirement to maintain existing levels of network reliability.

In terms of potentially reducing reliability targets, the AEMC's Review of Distribution Reliability Outcomes and Standards 'suggests there are benefits to NSW consumers from reducing the level of distribution reliability in NSW'. It found that '...a relatively small reduction in reliability can lead to a large reduction in the investment required by electricity distribution networks'.⁴⁵ SACOSS submits that any engagement with consumers around preferences, and what services customers' value, should involve those customers being informed that a small reduction in ESCOSA's service reliability standards, may result in more affordable, but slightly less reliable, energy network services.

Quantifying the value customers place on reliability improvements – AEMO's VCR

AEMO's Value of Customer Reliability (VCR) measure, represented in dollars per kilowatt-hour, indicates the value different types of customers place on having reliable electricity supplies under different conditions.⁴⁶ AEMO published its final VCR report in September 2014.

AEMO's current VCR values relate to residential and business customers. It is well known from VCR studies that different customer classes value reliability differently. For commercial and industrial customers, power supply is critical for them to conduct business and many businesses would be forced to cease trading if they lost power supply. On the other hand, for many residential customers, interruptions are an inconvenience but are not as costly (except for customers on life support equipment). Often, these different preferences for reliability are reflected in different reliability standards in the CBD (where commercial customers are more common) compared to outer urban or rural areas.

SACOSS welcomes ESCOSA using VCR to quantify the value customers place on reliability, but encourages ESCOSA to continue the conversation about how the community view VCR, given the changes in new technologies and community views since the surveys were undertaken by AEMO. SACOSS notes that the increasing uptake of batteries and solar indicates those customers have effectively created their own VCR. Once those customers have 'islanded themselves', they may not care about network reliability and therefore will pay less, whereas customers without access to batteries may pay more for reliability. It is worth noting that VCR reflects the value customers place on reliability at a household level, not a social level. Customers with batteries may still place a high value on network reliability when looked at in terms of ensuring hospitals, schools and traffic lights (for example) have reliable power.

Comparing the value customers place on reliability improvements, with the cost of delivering them

The AEMC's recommended framework promotes an economic assessment process to inform the setting of reliability targets, and SACOSS supports this approach. The AEMC notes this will 'involve evaluating the way network costs vary with different levels of reliability and explicitly assessing the expected costs of

⁴⁵ AEMC (2012) Final Report NSW Workstream: Review of Distribution Reliability Outcomes and Standards at <http://www.aemc.gov.au/getattachment/a5bbc0be-e7e3-4fcd-b856-feaf4088d38a/NSW-workstream-final-report.aspx>

⁴⁶ AEMO Value of Customer Reliability – Application Guide, Final Report, December 2014 <http://www.aemo.com.au/-/media/Files/PDF/VCR-Application-Guide--Final-report.pdf>

investments against the value that customers place on reliability and the cost of interruptions'.⁴⁷ SACOSS submits that the Review Paper could provide more information on the methods to be employed by ESCOSA in comparing the value customers place on reliability improvements with the cost of delivering them. In our view, further detail on the assessment of distributor willingness to supply (WTS) is required.

Information on SA Power Network's willingness to supply is critical as it:

- Clarifies if there is value in offering the improvement in reliability. Where WTS is above WTP, or in other words, where the cost of a reliability improvement by the distributor is above what customers value it at, then SA Power Networks should not be required to make the investment; and
- Where WTS is below WTP, ESCOSA can assess whether to set the target at that level taking into consideration the long term interests of customers.

Example 1	Example 2
Improving SAIDI by 10 minutes	Improving SAIFI by 1 average interruption per year
WTS or cost is \$100 million	WTS or cost is \$250 million
WTP is \$200 million	WTP is \$150 million
Outcome: The improvement should be considered as the value that customers put on it is higher than the cost of supplying it.	Outcome: The regulator should not set the improved target, as it could lead to a \$250 million cost in regulated revenues and customers are not WTP that much for it.

The revenues set by the AER are based on the targets set by ESCOSA, and therefore an economic assessment of the proposed service targets by ESCOSA is central to assessing the trade-off between costs and benefits, thereby ensuring efficient reliability outcomes and the protection of the long term interests of consumers.

The AEMC further discusses how to conduct the assessment of reliability (where the 'economic advisor' is ESCOSA) by stating (our emphasis):

- 'During the economic assessment process, the relevant DNSP would be required to provide information to the economic adviser on the expected change in capital and operating expenditure and expected unserved energy for each reliability scenario and any additional reliability measures. The economic adviser would **assess whether the information provided by the DNSP represented a reasonable forecast of the expected changes in costs and reliability performance**. This would **include the ability for the economic adviser to interrogate, and if necessary, amend the DNSP's forecasts**, if the economic adviser does not consider that they represent a reasonable forecast of the expected changes under each scenario.
- **If the DNSP did not provide sufficient information to the economic adviser for it to perform its assessment, the economic adviser would also have the ability to develop its own forecast of the expected changes under each scenario.**
- The economic adviser would also **undertake a range of sensitivities to test the key assumptions** and inputs for each scenario. The range of sensitivities to be undertaken by the economic adviser would

⁴⁷ AEMC, Review of the National Framework for Distribution Reliability, p.i

be set out in guidelines. However, it is anticipated that **at a minimum, sensitivities would be undertaken around the expected costs of each scenario**, demand forecasts, and the VCR.⁴⁸

As noted earlier, the AEMC allocated a six month period for undertaking the economic assessment of reliability scenarios (see Figure 1.1 in the Final Report). The Review Process (Figure 2) in the Review Paper, indicates that ESCOSA is intending to conduct the economic assessment in one month, with the Draft decision to be released in March 2018. SACOSS submits the importance of the economic assessment process should be more clearly reflected in the proposed objective, principles and process for the Review, than is currently outlined by ESCOSA in the Review Paper.

Whether reliability targets should be imposed on the basis of geographical regions, as opposed to network feeder types

The current reliability targets (USAIDI and USAIFI) imposed by ESCOSA vary according to the Feeder (CBD, Urban, Short Rural, Long Rural) in line with the AER's Service Target Performance Incentive Scheme (STPIS). The AER is currently consulting on changes to their STPIS and a new Distribution Reliability Measures Guideline (AER's STPIS Issues Paper).⁴⁹ SACOSS submits that although there are issues with the performance of the STPIS in terms of its perceived failure to incentivise network service providers to focus on worst performing areas⁵⁰, SACOSS supports the continued imposition of reliability targets on the basis of feeder types, in line with the recommendations of the Productivity Commission and the AEMC.⁵¹

Attachment 1 to this submission contains charts from the AER's STPIS Issues Paper which demonstrate the results of the application of the STPIS. It is worth noting that the STPIS only measures the average performance of the NSP (per feeder). There may be situations where there are a high number of customers receiving very poor supply reliability, but the average performance measures do not clearly identify these customers. The AER has recognised this issue and has proposed in its STPIS Issues Paper⁵² that it should start collecting information / data on worst served customers.

Concerns about regional variations in reliability in South Australia led to ESCOSA's inquiry in to the reliability and quality of electricity supply on the Eyre Peninsula. In the Final Report on the Inquiry, ESCOSA noted that (our emphasis) 'the current feeder-type reliability standards in the Electricity Distribution Code do not provide strong and clear incentives to SA Power Networks to maintain reliability on the Eyre Peninsula. The reliability standards are set on a feeder-type basis rather than a locational basis and reliability performance

⁴⁸ Ibid, p.60-61

⁴⁹ AER, Issues Paper: Reviewing the Service Target Performance Incentive Scheme and Establishing a new Distribution Reliability Measures Guidelines – Electricity distribution network service providers, January 2017. https://www.aer.gov.au/system/files/AER%20Issues%20paper%20-%20Reviewing%20the%20Service%20Target%20Performance%20Incentive%20Scheme%20and%20Establishing%20a%20new%20Distribution%20Reliability%20Measures%20Guidelines_0.pdf

⁵⁰ Dufty, Gavin, Manager Policy and Research, St Vincent de Paul Society, Submission to the AER STPIS and DMRG Issues Paper, 3 March 2017. <https://www.aer.gov.au/networks-pipelines/guidelines-schemes-models-reviews/service-target-performance-incentive-scheme-2017-amendment/initiation>

⁵¹ See discussion in paragraph 2.2.2 of ESCOSA's Final Decision on SA Power Networks Jurisdictional Service Standards for the 2015-2020 Regulatory Period, December 2017

⁵² AER, Issues Paper Reviewing the Service Target Performance Incentive Scheme and Establishing a new Distribution Reliability Measures Guideline, January 2017 p29 <https://www.aer.gov.au/networks-pipelines/guidelines-schemes-models-reviews/service-target-performance-incentive-scheme-2017-amendment>

in certain regions has the potential to be 'hidden' in aggregated performance data, **although a decline in regional performance has not been evident based on data reported to date.**⁵³

Despite the claims of poor reliability, ESCOSA's inquiry found that 'reliability of electricity supply on the Eyre Peninsula was **relatively stable** between 2006-2007 and 2015-2016'. Severe weather events in late 2016, that mainly impacted transmission services affecting large parts of the Peninsula, created more recent reliability problems.⁵⁴ The Inquiry received representations suggesting poor quality of supply (voltage variations) in parts of the Eyre Peninsula, 'although complaints data suggested there were few problems'.⁵⁵

ESCOSA also found that 'further evidence is required to determine any quality of supply problems on the Eyre Peninsula. That evidence is being obtained through voltage testing by SA Power Networks.'⁵⁶ SACOSS will wait to obtain the results of the voltage testing undertaken by SA Power Networks (which is being undertaken at six sites until 31 March 2018) prior to commenting on any network supply problems to the Eyre Peninsula, which may require further investment from SA Power Networks.

SACOSS submits that ESCOSA should continue to set reliability targets on the basis of feeder categories. We submit that remaining consistent with the design of the AER's STPIS, reduces the complexity associated with assessing the effectiveness of the incentive scheme and minimises the potential for conflicting incentives. Also, the review of the STPIS may identify solutions to the perceived problem that SA Power Networks does not have 'strong and clear' incentives to maintain reliability in geographical areas (i.e. the Eyre Peninsula), and changing the basis upon which the targets are imposed prior to the completion of the review of the STPIS, may be premature.

ESCOSA has indicated that it will continue to report reliability performance on a regional basis, through its quarterly reports on SA Power Networks' operational performance⁵⁷, and SACOSS welcomes this measure. Regional reliability performance data can be used to inform the review of the STPIS and future measures to address regional reliability issues, including through the use of new technologies.

Whether the reliability standards can further encourage the provision of timely and accurate information to customers

As mentioned earlier, ESCOSA has indicated that the extreme weather in 2016-17 'focused attention on...the timeliness and accuracy of communication with customers.'⁵⁸ SACOSS considers the circumstances surrounding the network outages and loss of electricity supply during this time were largely beyond SA Power Networks' control, with generation and transmission playing a role. Therefore, we would require further evidence of SA Power Networks' failure to provide timely and accurate information to customers unrelated to the extreme weather events, prior to supporting the inclusion of additional standards.

⁵³ ESCOSA, Final Report: Inquiry into the reliability and quality of electricity supply on the Eyre Peninsula, October 2017, p.7

⁵⁴ ESCOSA, Final Report: Inquiry into the reliability and quality of electricity supply on the Eyre Peninsula, October 2017, p. 7- 9

⁵⁵ Ibid, p.6

⁵⁶ Ibid, p.4

⁵⁷ Ibid, p.7

⁵⁸ ESCOSA, SA Power Networks Reliability standards review: Objectives and Process, December 2017, p.9

Whether customer communication standards can be updated to include SMS, social media, print, television and radio media

SACOSS supports the updating of customer communication standards to include SMS, social media, print, television and radio media.

Is the current Guaranteed Service Level Scheme (GSL Scheme) meeting its objectives?

The objective of the GSL Scheme, as stated by ESCOSA, is ‘to provide SA Power Networks with the incentive to assess the relative costs of making the payment versus making the investments in the infrastructure to improve poor service (where economic to do so)’⁵⁹.

The current GSL Scheme relates directly to the service experienced by individual customers in the following areas:

- timeliness of appointments, connection of a new supply address and repair of faulty street lights
- frequency and duration of supply interruption.⁶⁰

The principles underpinning the GSL Scheme are:

- customers value that aspect of the service
- the GSL target is a reasonable measure of the customer’s expectation
- the GSL payment is made to customers receiving a level of service below a pre-determined level, and
- the reason for the failure to meet the GSL is within SA Power Network’s control.⁶¹

Under the Scheme, customers benefit from individual payments in recognition of poor levels of service (by reference to guaranteed service standards contained in clause 2.3 of the Code). However, these payments are made to relatively few customers. The benefits to consumers from the EBSS, CESS and STPIS incentive schemes are only realised at the end of the regulatory determination period in the form of a lower RAB for the next determination period, but these benefits are distributed to all consumers, not just a few.

Whilst the objective of the Scheme is **not** to compensate customers for supply interruptions, it is apparent that most customers view the Scheme as a form of compensation. In this regard, the Scheme is failing to meet its objective, which is to penalise and therefore incentivise SA Power Networks to consider alternatives to improve poor service.

It is important that the penalties imposed are set at an amount which is strong enough to incentivise alternative responses by SA Power Networks to address reliability issues. SACOSS agrees with the AEMC that ‘in order to create the proper incentive, DNSPs should not be able to recover the cost of the GSL payments in their current or future revenue allowances’.⁶² ESCOSA has noted the AEMC’s position and stated that ‘... a certain level of GSL payments should be allowed for in SA Power Networks’ costs (and recovered from all customers), as recognition of the uneconomic expenditure required to increase service levels for certain

⁵⁹ Ibid, p.33

⁶⁰ ESCOSA, SA Power Networks Jurisdictional Service Standards for the 2015-2020 Regulatory Period, Final Decision, May 2014, Version 2 p.31

⁶¹ ESCOSA, SA Power Networks Jurisdictional Service Standards for the 2015-2020 Regulatory Period, Final Decision, May 2014, Version 2 p.31

⁶² AEMC, Final Report: Review of the National Framework for Distribution Reliability, 27 September 2013, p.39

customers who may never receive the average service levels...'.⁶³ SACOSS is seeking that ESCOSA further review its position in this regard, we submit that the GSL Scheme may only meet its objective if the payments made by SA Power Networks are not a recoverable cost item. If the costs of the Scheme are recoverable from all customers, then there is no effective penalty, and therefore no incentive to assess the relative costs.

It is difficult to determine what percentage of the GSL payments is paid by SA Power Networks, and what percentage is recovered from all customers. ESCOSA has noted that 'ultimately, the decision on the funding arrangements for the GSL Scheme will be considered as part of the AER's assessment of SA Power Network's Regulatory Proposal'⁶⁴. However, ESCOSA did note that the GSL measures and payment amounts set by ESCOSA influence the total cost of the Scheme.⁶⁵

SA Power Networks have noted that SA is the only state where GSL payments are made to customers that experience interruptions during Major Event Day excluded events (MEDs).⁶⁶ **\$18,504,975** in duration outage GSL payments were made by SAPN as a result of the **major storm in late December 2016**. SACOSS questions whether ESCOSA should consider excluding GSL payments for interruptions that occur as a result of a MED, in line with the STPIS and the exclusion of performance on MEDs from the reliability targets. The inclusion of MED in the GSL Scheme, does not align with the objective to incentivise SA Power Networks to consider the costs of investing in infrastructure to improve poor levels of service, when MEDs are outside of SA Power Network's control.

Further, excluding MEDs from the Scheme may reduce the amount of GSL payments made by SA Power Networks, and therefore the amount of flow on costs to consumers (where those costs are recovered). SACOSS notes the force majeure clause, where the 'GSL clock will be stopped', if SA Power Networks is unable to access equipment due to flooding, impassable roads, lightning etc. or authorities prevent access.

SACOSS believes the current GSL Scheme is failing to meet its objective. We consider that measures which incentivise SA Power Networks to better perform are central to the regulatory framework, but we are yet to view any evidence confirming the positive impact of the Scheme on SA Power Networks' performance and response to the needs of the worst served customers. Once again, the success of the Scheme depends on the amount of the penalty incurred by SA Power Networks; it needs to be strong enough to incentivise SA Power Networks to consider alternative responses.

The AEMC has briefly discussed the possibility of a national GSL Scheme with payments linked to the VCR, which it stated may provide the necessary incentive⁶⁷, but did not provide further recommendations on the appropriate design of a national GSL Scheme.

SACOSS recognises that customers feel they need to be 'compensated' for poor service, but the GSL Scheme is not a compensation scheme. SACOSS supports ESCOSA undertaking a review of the Scheme, as we feel it is

⁶³ ESCOSA, SA Power Networks Jurisdictional Service Standards for the 2015-2020 Regulatory Period, Final Decision, May 2014, Version 2 p.33

⁶⁴ ESCOSA, SAPN Jurisdictional Service Standards for the 2015-2020 Regulatory Period, Final Decision, May 2014 p.33

⁶⁵ Ibid p.33

⁶⁶ SAPN, Media Release, Guaranteed Service Level payments for 28 December storm, Tuesday 11 January 2017

⁶⁷ AEMC, Final Report: Review of the National Framework for Distribution Reliability, 27 September 2013, p.39

important to more fully examine the Scheme and its operation, to ensure that only the most effective incentives are in place. SACOSS will provide further comment on the operation of the Scheme, at that time.

Whether expressing standards as a ‘best endeavours’ obligation continues to be effective in assessing SA Power Networks’ performance

ESCOSA has also indicated the Review will examine the ‘best endeavours’ standard and its application.⁶⁸

The current Standards require SA Power Networks to use its ‘best endeavours’ to meet the reliability targets in each year of the regulatory period. This means where targets are not met, the focus of the Standards is on the **efforts** of SA Power Networks. SA Power Networks must provide evidence to ESCOSA that it has acted in good faith and used all reasonable efforts, skill and resources⁶⁹ to achieve unmet targets. Where SA Power Networks has failed to meet the target, and has also failed to prove to ESCOSA that it has used its best endeavours to meet that target, then SA Power Networks will be in breach of the Code and its licence conditions.

ESCOCA’s Final Decision on the Service Standards to apply to SA Power Networks for the 2015-20 regulatory period, found that ‘the Commission will continue to require SA Power Networks to demonstrate that it has used its best endeavours to meet the reliability service standards and targets in each year of the regulatory period.’⁷⁰ ESCOSA noted that it was not prepared to rely solely on the STPIS to incentivise SA Power Networks to meet its reliability targets and service standards.

SACOSS supports the continued application of the ‘best endeavours’ standard, which we consider is well established and works to ensure compliance with the standards is sufficiently monitored and enforced. Until the review into the STPIS is completed, and further evidence supporting its effectiveness in incentivising SA Power Networks to meet the standards and targets is provided, SACOSS supports the continued application of the best endeavours standard.

Summary of Submissions

Objective of the Review

- SACOSS supports the targets set by ESCOSA being economically determined in line with the AEMC’s recommended framework for distribution reliability, and considers that this economic assessment is not reflected clearly enough in the proposed objective.
- The overarching objective of the Review should be on efficient reliability outcomes in the long term interests of consumers, in line with the NEO and the ESC Act objective.
- The concept of efficiency is not adequately represented in the objective.
- The usefulness of a separate objective for the setting of the standards is limited, and the existing ESC Act objective is sufficient.

Proposed two-stage process for the Review

- **First stage of the process – identifying reliability options**

⁶⁸ ESCOSA, SA Power Networks 2020 reliability standards review: objectives and process, December 2017, p.5

⁶⁹ ESCOSA, Electricity Distribution Code EDC/12, July 2015, Clause 1.5.1, p.3

⁷⁰ ESCOSA, SA Power Networks Jurisdictional Service Standards for the 2015-2020 Regulatory Period, Final Decision, May 2014, Version 2, p.26.

- Evidence received from energy advocates that price, rather than reliability is a priority for customers.
- ESCOSA should carefully consider evidence in support of ‘ensuring acceptable levels of reliability for all customers’ and support for ‘improving reliability for regional and poorly served customers’.
- ESCOSA should consider how the relatively recent blackouts have affected SA Power Networks’ customers’ perception of reliability.
- **Second stage of the process – economic assessment of reliability standard options**
 - The Review Paper does not contain enough information about the economic assessment process which will be employed by ESCOSA in determining the standards and targets.
 - The process around the economic assessment of reliability scenarios should better align with the processes proposed by the AEMC in its Review of the National Framework for Distribution Reliability.
 - A base-line level of reliability and costs of reduced reliability should be economically assessed.
 - ESCOSA should provide SACOSS and other stakeholders with details of the choice modelling methodology employed by SA Power Networks, including demographics.
 - ESCOSA should thoroughly evaluate the choice modelling evidence.
 - ESCOSA should have regard to the CCP submission to the AER with regard to willingness to pay information.
 - Customer engagement should include a reliability scenario where there are reduced levels of reliability.
 - SACOSS supports the use of AEMO’s VCR, and encourages further conversation around those values.
 - Further detail on the assessment of distributor willingness to supply is required.

Should Reliability targets be imposed on the basis of geographical regions, as opposed to feeder types?

- SACOSS supports the continued imposition of reliability targets on the basis of feeder types, pending the AER’s review of the STPIS and Distribution Reliability Measures Guideline.
- A decline in regional performance has not been evident based on data to date.
- SACOSS supports ESCOSA continuing to monitor and report on SA Power Networks’ reliability performance on a regional basis.

Should reliability standards further encourage the provision of timely and accurate information?

- SACOSS seeks further evidence of SA Power Networks’ failure to provide timely and accurate information, prior to supporting the inclusion of additional standards.

Should customer communication standards be updated to include SMS, social media, print, television and radio media?

- SACOSS supports updating communication standards.

Is the current GSL Scheme meeting its objectives?

- SACOSS believes the current GSL Scheme is failing to meet its objective.

- The success of the Scheme depends on whether the penalties imposed incentivise SA Power Networks to consider alternatives (including new technologies) to address the requirements of worst served customers.
- SACOSS submits GSL payments should not be a recoverable cost item.
- ESCOSA should consider removing payments for supply interruptions which occur as a result of MEDs from the Scheme, as MEDs are outside SA Power Networks' control.
- SACOSS supports ESCOSA conducting a review of the Scheme.

Is the 'best endeavours' obligation effective in assessing SA Power Networks' performance?

- SACOSS supports the continued application of the 'best endeavours' obligation, pending the completion of the AER's Review of the STPIS.

We thank you in advance for consideration of our comments. If you have any questions relating to the submission, please contact Jo De Silva via jo@sacoss.org.au or 08 8305 4211.

Yours sincerely,



Ross Womersley
Chief Executive Officer

Attachment 1

Charts from AER's Issues Paper: Reviewing the Service Target Performance Incentive Scheme and establishing a new Distribution Reliability Measures Guidelines – Electricity distribution network service providers, January 2017

Appendix B. Distributors overall SAIDI and SAIFI outcomes - the charts show distributors' SAIDI and SAIFI (against the performance targets) in normalised form for 2011-2015⁷¹

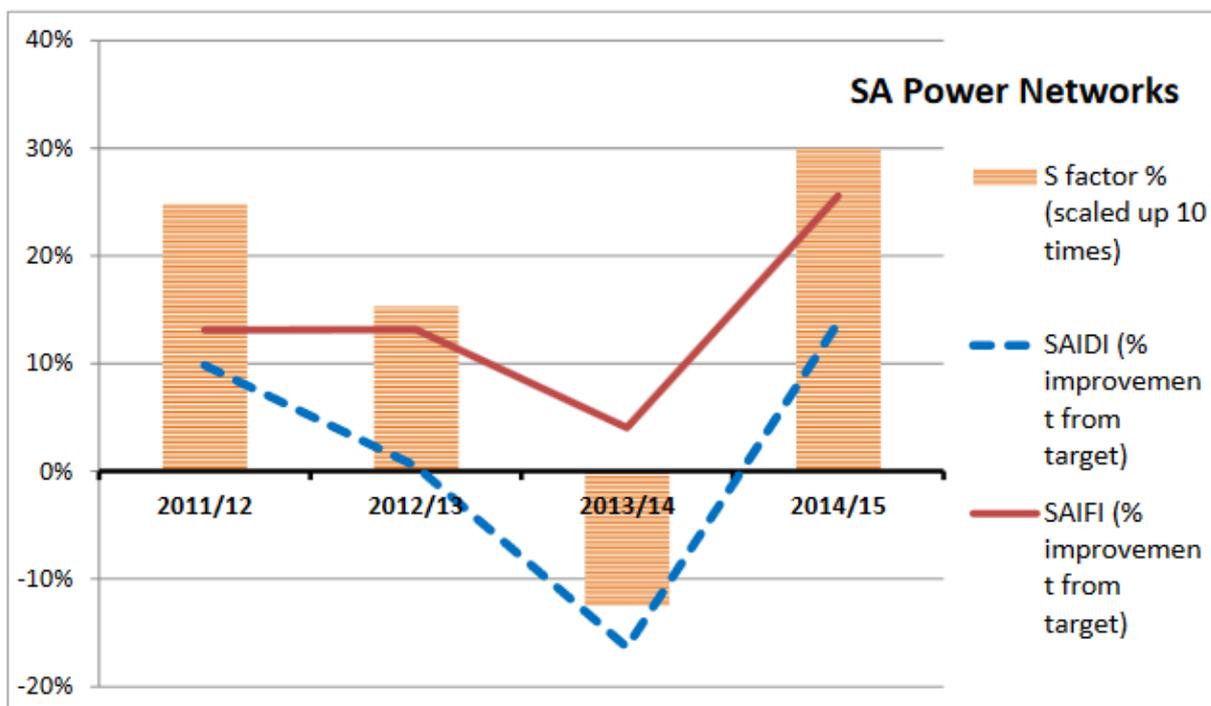
SA Power Networks

Parameter	Previous period (2011/12-15/16)	Current period (2016/17-20/21)	Change
Unplanned SAIDI - CBD	27.1	12.48	54% improvements
Unplanned SAIDI - urban	104.4	121.5	16% deterioration
Unplanned SAIDI - short rural	184.0	231.1	26% deterioration
Unplanned SAIDI - long rural	270.2	311.7	15% deterioration
Unplanned SAIFI - CBD	0.263	0.132	50% improvements
Unplanned SAIFI - urban	1.292	1.353	5% deterioration
Unplanned SAIFI - short rural	1.736	1.93	11% deterioration
Unplanned SAIFI - long rural	2.111	2.027	4% improvements
Unplanned CAIDI - CBD	103.042	94.545	8% improvements
Unplanned CAIDI - Urban	80.805	89.800	11% deterioration
Unplanned CAIDI - short rural	105.991	119.720	13% deterioration
Unplanned CAIDI - long rural	127.996	153.774	20% deterioration

⁷¹ AER, Issues Paper: Reviewing the Service Target Performance Incentive Scheme and Establishing a new Distribution Reliability Measures Guidelines – Electricity distribution network service providers, January 2017. P.15

Attachment 1 cont..

Appendix D. Detailed result of the first application of the STPIS (as reflected in the changes of the SAIFI and SAIDI targets of the current period from the previous period)⁷²



⁷² AER, Issues Paper: Reviewing the Service Target Performance Incentive Scheme and Establishing a new Distribution Reliability Measures Guidelines – Electricity distribution network service providers, January 2017. P.56