

2 February 2018

Essential Services Commission of South Australia
GPO Box 2605
ADELAIDE SA 5001

Attention: Rowan McKeown, Senior Policy Officer

Dear Rowan,

Review of SA Power Networks' 2020-25 reliability standards

SA Power Networks supports the Commission's review of the 2020-25 reliability standards. We believe it is imperative that the review should result in standards for the 2020-25 regulatory control period (**RCP**) that will reflect the prevailing environment and our customers' expectations during that period. We believe it is important therefore, that the Commission recognises key changes have occurred since the Commission's last review, five years ago.

The 2020-25 operating environment

Firstly, the electricity industry, particularly at the distribution level in South Australia, will undergo profound change over the 2020-25 RCP. This transformation is being driven by new technology, particularly the continued increase in distributed energy resources (**DER**)¹ being connected to our network, and customers' changing electricity usage patterns and expectations of SA Power Networks as the distribution network service provider. Recent high wholesale and retail electricity price increases, community desire for more 'green energy' and the emergence of more affordable battery technology and energy management systems, will lead customers to connect even greater levels of DER to our network in the 2020-25 RCP. Increased DER will lead to more energy being exported into the distribution grid by customers but, if not properly managed, could present wider network voltage and power system stability issues adversely impacting supply to customers.

Secondly, since 2010 there has been a significant increase in the average number of major severe weather events (**MSWEs**) from 1-2 per year prior to 2010 to 3-5 since 2010. These events have significantly impacted the reliability of the network but there has been no consistent pattern to the location of these events or to the timing of these events. MSWEs in 2016 led the South Australian Treasurer to initiate an enquiry by the Commission into the reliability of supply on Eyre Peninsula which concluded that there were some short-term, medium term and long-term options to improve reliability of supply to customers on Eyre Peninsula. The options included standby generation, targeted hardening of the network to prevent lightning related interruptions and reinforcing the transmission network.

Thirdly, there has been a recent decline in the performance of the reliability of the CBD due to cable faults with older 11kV cables, which we are currently investigating. However, the establishment of

¹ Distributed energy resources are currently dominated by wind generation and residential photo-voltaic systems but will increasingly include larger scale commercial and industrial photo-voltaic systems, battery systems and electric vehicles.

reliability standards for the Adelaide CBD needs to be cognisant of the infrequent nature of supply interruptions within the CBD leading to volatility in short-term actual performance outcomes. It is important to establish standards based on the inherent reliability of the network within the CBD which is reflected by historic performance over a longer period than five years. Due to the importance of restoring supply to customers in the CBD once an interruption has occurred, the Commission may wish to consider specifying response times for the CBD as part of its Service Standard Framework (SSF) deliberations.

Finally, our 2020 Reset Customer Engagement Program (CEP) commenced in 2017 and our early engagement with customers and stakeholders across the State has provided diverse feedback, which we will incorporate in our planning for the 2020-25 RCP. While broader electricity price increases are impacting customers, particularly those who are vulnerable or running a business, customers indicated that the reliability of the distribution network remains a high priority. In some regional areas, customers asked for improvements to be made to local supply reliability, recognising that those improvements may come at a cost. Customers indicated a preference for SA Power Networks to invest in improving the reliability of the network over any increase in the payments associated with the current Guaranteed Service Level (GSL) scheme. We believe the willingness of customers to pay for such reliability improvements will be assessed through the Commission's forthcoming choice research, which will inform reliability standards for the 2020-25 RCP. Customers also asked that SA Power Networks plans for the future, and invests responsibly in the network to realise the potential benefits of DER.

With reference to the Commission's Objectives and Process paper, SA Power Networks supports the Commission's:

- objective for its review of the SSF that will apply to SA Power Networks during the 2020-25 RCP, which is *"To establish reliability standards that require SA Power Networks to provide distribution services valued by customers at an acceptable cost"*;
- six principles developed for the SSF review; and
- process to engage with customers to determine the appropriate level of reliability performance at a reasonable cost to customers.

SA Power Networks provides the following additional comments about the SSF for the 2020-25 RCP.

Normalisation of reliability performance

There are large annual variations in the reliability performance of the whole distribution system. These large variations result mainly from the variation in the number and severity of major severe weather events (MSWEs)². The large variations in performance make it difficult to determine underlying trends in normal daily performance of the whole network. In addition, the impact on the performance of the distribution network from a single MSWE can vary enormously. Consequently, it is important in any monitoring regime to separately assess the performance of the whole distribution network during MSWEs.

² The Bureau of Meteorology (BoM) on average reports about 40 SWEs annually with around 10% of those being MSWEs which significantly impact the reliability performance of the whole distribution network.



To this end, the Commission adopted a normalisation regime for the 2015-20 RCP which establishes reliability standards for normal daily (or underlying) network performance and separately assesses SA Power Networks' performance in responding to MSWEs. The normalisation method adopted excludes statistical outliers in performance. These statistical outliers are known as Major Event Days (**MEDs**) and are correlated with MSWEs.

The exclusion of MEDs is an effective method for normalising the performance of the whole distribution network (ie at a state-wide level). This normalisation method uses state-wide daily reliability data to exclude statistical outliers. However, it is not as effective for normalising reliability at a sub-distribution network level (eg regional), as a localised severe weather event (**SWE**) can significantly affect the reliability at sub-distribution network level but not be classified as a MED nor a MSWE. These localised SWEs must be excluded at a sub-network level to enable effective monitoring of underlying (ie normalised) reliability at that level. Consequently, if the Commission was to impose reliability standards on a regional basis (ie sub-network level), a different normalisation method would need to be adopted, to monitor underlying reliability at a regional level.

Guaranteed Service Level payments

South Australia has the highest cost GSL payment regime in the National Electricity Market (**NEM**). Ultimately, customers bear the costs of this regime. A GSL regime needs to provide simple and clear signals to SA Power Networks about what are acceptable levels of service, and not apply to events which are beyond the control of SA Power Networks. However, on average more than 80% of reliability GSL payments are associated with interruptions on MEDs, which are clearly beyond SA Power Networks' control. All other jurisdictions have exclusions for certain types of SWE or for types of MSWEs. We would like to discuss with the Commission the exclusion of certain types of MSWEs from the reliability GSL regime.

The original objective of the reliability GSL was to recognise that the cost to improve reliability to certain customers would be prohibitively expensive. However, the current reliability duration GSL regime provides payments to all customers, who except for interruptions on some MSWEs receive acceptable levels of reliability. MSWEs are random in nature with typically different customers affected by each MSWE. The exclusion of some types of MSWEs would not be inconsistent with the original intent of the reliability duration GSL regime.

Other distributors' financial costs of reliability GSL payments are significantly mitigated during non-excluded MSWEs with the maximum payment being \$80 for most distributors, \$114 for two distributors and \$160 for one distributor. In comparison, the maximum payment in South Australia is \$605.

The current South Australian reliability GSL regime is also the most complex in the NEM - with different payments applicable, dependent on five different duration bands. This complexity creates difficulties both for SA Power Networks' staff who manage the payment process and for customers in understanding their eligibility for a GSL payment. Our staff must first determine the outage duration for each individual customer to identify into which band those customers fall, corresponding to the correct GSL payment. This renders communicating with individual customers regarding their eligibility or non-eligibility for different payments more difficult. Other jurisdictions have one or two thresholds and we consider a lower number of bands in any revised scheme would both streamline



our operations and allow more effective communication with customers. A SSF with fewer bands would not dilute the incentive for us to restore customers' supply as soon as practicable.

Feeder Category based vs Regional based reliability standards

SA Power Networks considers that it is too early to conclude that the current Feeder Category reliability service standards will necessarily lead to a decline in regionally based reliability performance. SA Power Networks' current assessment is that, adjusting for the impacts of MSWEs and localised SWE separately, there has been no decline in underlying reliability performance of the network from a regional perspective.

SA Power Networks can report reliability on a regional basis as it currently does in accordance with the Commission's Guideline No.1. The cost of providing dual reporting (ie for both regions and feeder categories) is minimal, provided that the basis for recording an interruption remains aligned with our reporting obligations under other regulators' reliability reporting regimes. For example, the Commission adopts the same definition of a customer and a momentary interruption as is used in the Australian Energy Regulator's (AER's) Distribution Reliability Measures Guideline.

Customer communication standards

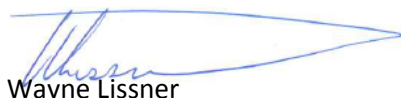
SA Power Networks would also like to explore with the Commission possible methods/measures to establish customer communication standards that better reflect new communication channels for which customers have already demonstrated strong preferences.

This stronger preference for other new communications channels was evident in the 27-29 December 2016 storm where SA Power Networks had 194,000 unique visitors to our web-site to seek information about the event and the associated interruptions to supply. SA Power Networks sent over 280,000 messages (via SMS and email) to more than 50,000 properties to provide information and updates about the event. In comparison, we received only 60,000 telephone calls. We received more than 8,600 reports of customer supply interruptions and almost 80% of those reports were via our web-site. In addition, SA Power Networks employed Facebook and, Twitter social media and radio media to keep customers informed of the event. This preference of customers for information via a range of more contemporary communications channels was also reflected in the outcomes of customer research conducted by SA Power Networks in 2017, with its design involving the Commission.

SA Power Networks looks forward to working with the Commission to finalise the SSF for the 2020-25 RCP.

If you wish to discuss this submission or clarify any points please contact Mr Grant Cox on 8404 5012.

Yours sincerely



Wayne Lissner

Acting General Manager Corporate Strategy

