

**Subject: Discussion Paper Submission**

Hi Christiaan,

Thank you for the opportunity to lodge a submission in response to your Discussion Paper: “Mechanisms to Enhance Resilience in the Power System – Review of South Australia Black System Event” dated 15 August 2019.

I provide this submission on behalf of SA Power Networks and have limited our response to those areas of the discussion paper where we can comment specifically.

**Question 1. Assessment Frameworks**

No comments

**Question 2. Context and Background**

SA Power Networks agrees with the principal that the system security framework should consider all situations that may have an adverse impact on system security, in the form of traditional contingent events and also including system security risks of a broad or distributed nature. This may include events such as severe weather conditions that may pose a heightened level of risk across the grid.

SA Power Networks is supportive of ensuring AEMO has the necessary authority to take precautionary and prudent steps to maintain system security for both contingent events and the non-traditional ‘indistinct’ events described in the discussion paper.

SA Power Networks cannot comment as to whether this is simply a clarification of the existing framework or whether an increase to the scope is necessary.

**Question 3. Managing Variability Arising from Credible Indistinct Risks**

SA Power Networks is supportive of the concept that broad or distributed network risks be taken into consideration for system security. This includes weather events and their impact on generation variability. SA Power Network accepts that this implies that a probabilistic approach may be necessary, however we cannot comment on how this could be applied in practice or the governance that would be necessary.

**Question 4. Expanding the Existing Power System Frequency Risk Review**

SA Power Networks understand that AEMO are investigating the risks posed by increasingly low levels of minimum demand (including low ratios of synchronous generation and high proportion of variable unmanaged distributed generation) and we encourage continued and urgent focus on this issue. As an

example there are times where there are reverse energy flows in parts of our network due to the high penetration of distributed energy resources and this may pose a challenge for the management of system security. This may be a particular concern for the effectiveness of the existing Under Frequency Load Shed schemes deployed at the majority of SA Power Networks substations.

SA Power Networks cannot comment on whether there is merit to expanding the scope of the PSFRR, however we do support and encourage the continued and urgent investigation into system security implications of increasing DER.

With a significant proportion of generation now sourced from within the distribution system at certain times (Solar PV) and the emerging potential of DER to provide grid stability services (e.g. contingency FCAS), DNSPs including SA Power Networks are rapidly developing capabilities to monitor, forecast and actively manage the network and DER to support high penetration DER integration. As such, we are supportive of incorporating DNSPs as formal members of the risk review process in order to capture risks associated with high levels of DER and understand what role DNSPs can play in informing and mitigating these risk. Of note, as part of our next regulatory control period (2020-2025) SA Power Networks are proposing to implement smart DER standards that would enable SAPN to monitor and set export limits on DER, a capability which could be used to forecast expected generation and reduce generation output in response to predicted or emerging system security events.

#### **Question 5. Expanding the Existing Protected Events Framework**

No comments.

#### **Question 6. Interconnector Standard**

No comments.

I would be more than happy to elaborate on our responses, if you would like any further information.

Regards,

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**Manager Network Planning**