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Reliability Panel Australian Energy Market Commission PO Box A2449 SYDNEY SOUTH NSW 1235

Submitted via: https://www.aemc.gov.au/contact-us/lodge-submission

## **Issues Paper - Review of the System Restart Standard**

Alinta Energy appreciates the opportunity to provide feedback on the Reliability Panel's Review of the System Restart Standard.

We consider that the system restart regulatory framework will require reform to support larger, longer-term investments in system restart capability in order to deliver services at the lowest long-term cost. This may require:

- · Higher value contracts
- Longer contracting periods
- The provision of more detailed information on system requirements to inform investors
- More strategic, longer-term planning that incorporates other system services

As noted in the issues paper, large thermal generation units form a significant portion of the current available system restart capability in the NEM. These technologies have been able to provide the service as a byproduct or with relatively marginal further investments; whereas inverter-based resources (acting independently) face limitations in the SRAS they can provide, noting that:

- Even batteries with grid forming capability do not have the same inherent capabilities as thermal generation, which can limit their ability to provide fault current support and regulate frequency and voltage following large disturbances as can be encountered during system restart.
- Stand-alone batteries will need to withhold significant capacity from arbitrage services to be available for SRAS, materially impacting their economics and shortening technical life (maintaining a high state of charge for long periods leads to higher rates of self-discharge and BESS degradation).
- Duration generally will be an issue considering the length of time a black start Facility must be operational and the volume of power required.

We note that even new thermal capacity may have disadvantages compared to the large thermal synchronous facilities that have historically provided SRAS, considering that smaller facilities may not be able to provide the requisite power required to energise large transformers and long transmission lines in the system following a system black event.

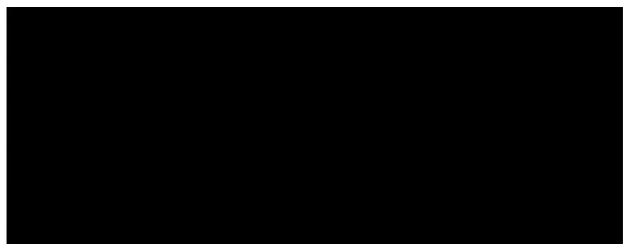
As follows, we anticipate that meeting SRAS requirements in future will require mechanisms to avoid premature retirement of existing SRAS capable assets, larger, longer-term investment signals, more strategic planning and more information on forecast requirements.

In the absence of other investment signals, the system restart regulatory framework may need to transition from providing ancillary funding to driving investments that are purpose-built for SRAS.

We note that some SRAS providers will likely be capable of providing other essential services, including system strength, inertia and dynamic frequency and voltage control that are also crucial in maintaining system security and may similarly face a dearth of investment signals over the longer term with the retirement of large thermal generation units and the entrance of underwritten renewable capacity. Given this, if the SRAS framework is to support larger investments, it may be efficient from whole of system cost perspective, to

consider potential SRAS solutions in conjunction with system requirements more generally – i.e. in order to provide essential services at the lowest long-term cost (NER clause 3.11.7(a1)), the revised framework and procurement activities should:

- place a high value on existing synchronous assets that are capable of providing the full range of services and offer long term contracts to avoid premature retirement of those assets before replacements can be built,
- incentivise augmentation of existing assets to provide a wider range of essential services, and
- incentivise developers of new assets to provide a more comprehensive suite of those essential system services that are required to maintain system security for the longer term.



Confidential information has been omitted for the purposes of section 24 of the Australian Energy Market Commission Establishment Act 2004 (SA) and section 31 of the National Electricity Law.

Thank you for your consideration of Alinta Energy's submission. Should you wish to discuss this further please contact me at Oscar.Carlberg@alintaenergy.com.au or on 0409501570.

Yours sincerely

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