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Australian Energy Market Operator

Lodged via email: 2024_security_consultations@aemo.com.au

AEMO's Amendments to NSCAS Description and Quantity Procedure consultation paper

Transgrid welcomes the opportunity to respond to the Australian Energy Market Operator's (**AEMO**) Amendments to Network Support and Control Ancillary Services (**NSCAS**) Description and Quantity Procedure consultation paper, which was published on 5 July 2024. The consultation paper introduces a description of inertia network services and system strength services as NSCAS and allows for consideration of broader system conditions for some NSCAS studies.

As the NSW primary transmission network service provider (**TNSP**), Transgrid must plan for, build, maintain and operate the backbone of this new grid while meeting our obligations to maintain the safety, reliability and security of the transmission system in accordance with the National Electricity Rules (**NER**). A new suite of technologies, services and products will be required to maintain safe, reliable and secure power system operations as the energy system transforms. Ensuring that the right methodologies are in place is vital to maintain these key aspects of the system.

We are broadly supportive of AEMO's recommendations in the consultation paper. We believe it incorporates the changes outlined by the National Electricity Amendment (Improving security frameworks for the energy transition) Rule 2024 (Amending Rule) published in March 2024. Specifically, we welcome:

- The inclusion of inertia network services and system strength services in the definition of an 'NSCAS need' in specified circumstances.
- The approach to use system typical cases as outlined in the consultation paper to recognise the impact of extended or more frequent outages of certain critical equipment.
- The consideration of future investment as per the methodology described in the consultation paper. This will align the various planning methodologies across the industry.

However, there are a few points which warrant further clarity, and we would encourage AEMO to address. These include:

- Transgrid supports AEMO's proposal to consider both committed and anticipated projects in their NSCAS assessments. However, we are concerned that the ability to address any advised shortfalls might be problematic if there are short timeframes attached to address a system security need. We would encourage AEMO to investigate ways to mitigate this risk.
- It appears that the 'NSCAS need' is defined as a requirement to maintain only the minimum three phase fault level above the level that a TNSP is required to meet at the applicable time (i.e. the requirement does not relate to the 'efficient level' of system strength, required to achieve stable

voltage waveforms of new inverter-based resources). Based on this, Transgrid encourages AEMO to provide clarity on the following:

- In the case where an NSCAS gap is declared for system strength RSAS or Inertia RSAD, if the TNSP already has existing contracts in place to meet the efficient level requirements with system strength solutions that can contribute towards, and would meet, the revised minimum level requirements, it is not clear whether TNSPs are able to rely on the existing contracts to fulfil the declared NSCAS gap or whether they required to procure specific contracts for System strength RSAS.
- Subject to the success of the Rule Change request by AEMO to improve NEM access standards, Network Service Provider's (**NSP**) synchronous condensers will be required to be registered with AEMO and meet applicable technical standards. We would encourage AEMO to provide additional information on the treatment of registered synchronous condensers in NSCAS studies. In particular:
 - Are the NSP's registered synchronous condensers included or excluded from NSCAS studies, and if included, are they assumed to be in-service continuously?
 - How are synchronous condensers that provide interregional contribution to fault level requirements (e.g. contribute towards requirements in both Vic and NSW) treated?
- Table 1 (page 15 of the consultation paper) refers to voltage control as a distinct type of NSCAS study to system strength. However, the efficient level of system strength requirements defined by AEMO require voltage control to ensure a stable voltage waveform can be maintained at specified capacities of IBR. If a project has a voltage control issue, we encourage AEMO to specify how it would be treated under the NSCAS framework. We also encourage AEMO to specify whether this is included under the efficient level system strength requirements and therefore be excluded from NSCAS or if it is included as a voltage control component of NSCAS.

We appreciate the opportunity to provide a submission to the consultation on amendments NSCAS Description and Quantity Procedure. If you would like to discuss this submission, please feel free to contact Zainab Dirani at zainab.dirani@transgrid.com.au.

Yours faithfully



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