8 November 2021

Australian Energy Market Operator
Submitted online to: planning@aemo.com.au

Dear Sir/Madam

Submission: Network Support and Control Ancillary Services Description and Quantity Procedure Amendments

CS Energy welcomes the opportunity to provide a submission to the Australian Energy Market Operator's (**AEMO's**) *First Stage of Consultation* – Network Support and Control Ancillary Services **(NSCAS)** Description and Quantity Procedure Amendments (**Consultation Paper**).

About CS Energy

CS Energy is a Queensland energy company that generates and sells electricity in the National Electricity Market (**NEM**). CS Energy owns and operates the Kogan Creek and Callide B coal-fired power stations and has a 50% share in the Callide C station (which it also operates). CS Energy sells electricity into the NEM from these power stations, as well as electricity generated by other power stations that CS Energy holds the trading rights to.

CS Energy also operates a retail business, offering retail contracts to large commercial and industrial users in Queensland, and is part of the South-East Queensland retail market through our joint venture with Alinta Energy.

CS Energy is 100 percent owned by the Queensland government.

Key recommendations

The NEM is changing and will continue to do so as it transitions to a market with more variable renewable energy (**VRE**) and an overall lower carbon footprint. The ability to effectively and efficiently manage power system security and reliability against this evolving landscape is paramount, and CS Energy supports the need to develop flexible and adaptive market, non-market and regulatory frameworks to ensure services such as NSCAS meet the requirements of the NEM particularly from both an AEMO and Market Participant perspective.

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CS Energy is strongly supportive of the need to review the existing assumption regarding line switching for voltage management in the current NSCAS description and quantity procedure.

The strategy of routine and patterned line switching for voltage management in the planning and operational domains, in CS Energy's view, does not represent good industry practice. However, under abnormal or emergency conditions, the appropriate use of line switching for voltage management is a legitimate action that reflects a last resort approach to manage power system security.

CS Energy has continued to express concern about the observed routine and patterned line switching for voltage management in the operational domain. This has been raised to AEMO both in written correspondence and at a variety of forums hosted by AEMO that included discussions on system security challenges.

The Reliability Panel's 2018 *Annual Market Performance Review*[1] outlined the implications of these interventions as per:

> *These manual line switching interventions can come at a cost to consumers, by impacting on the ability of the transmission system to effectively transport energy within and between regions. It may also result in transmission network reliability risks, as the system becomes more vulnerable to unexpected shocks if more lines are switched off and are unavailable to be used.*

The Australian Energy Market Commission (**AEMC**) also highlighted the need to address voltage control challenges, with:

> *The Commission's System Security Market Frameworks' review identified a need to continue to scope further power system security issues likely to arise from the ongoing transformation of the market, such as the adequacy of current voltage control arrangements.* [2]

Other unintended consequences arising from the practice of routine and patterned line switching for voltage management in the operational domain include but are not limited to:

- Adverse impacts on system losses due to the change in system impedance; and
- Adverse impacts on system strength levels, with an action to manage voltage control in the Queensland region resulting in an unexpected consequential adverse impact requiring the voltage control action to be reversed.

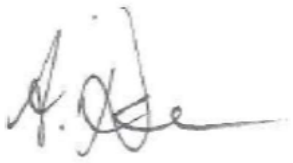
Since 2018, CS Energy with interest from the AEMC has encouraged AEMO to form a NEM voltage control working group that could reside under existing operational working groups or as a standalone group. While the NEM voltage control working group has not eventuated to date (and CS Energy continues to advocate for its formation), CS Energy is strongly supportive of AEMO's proposal to change the existing assumption regarding line switching for voltage management in the current NSCAS description and quantity procedure and considers it a step in the right direction.

[1] Reliability Panel, *2018 Annual Market Performance Review*, p. iv
[2] AEMC, *Review of the System Black Event in South Australia – Issues and Approach Paper*, 18 April 2019, p.58

CS Energy supports AEMO's proposal to expand its ability to plan for no pre-contingent line switching by broadening the wording in the description and quantity procedure as detailed on page 3 of the Consultation Paper. However, CS Energy would expect any agreement between the local Transmission Network Provider (**TNSP**) and AEMO to be transparent and available to Participants. The information would provide transparency and potential opportunities for viable non-network solutions, that could include VRE synchronous condensers required for connection to the network to be utilised in the management of voltages in the NEM.

If you would like to discuss this submission, please contact Henry Gorniak (Market and Power System Specialist) on 0418 380 432 or hgorniak@csenergy.com.au.

Yours sincerely



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