



8 November 2021

Ms Samantha Christie
Manager Network Planning System Design and Engineering
Australian Energy Market Operator
GPO Box 2008
Melbourne VIC 3001
Lodged via email: planning@aemo.com.au

Dear Ms Christie

RE: NSCAS description and quantity procedure amendments

Shell Energy Australia Pty Ltd (Shell Energy) welcomes the opportunity to respond to the Australian Energy Market Operator's (AEMO's) initial consultation on amendments to the Network Support and Control Ancillary Services (NSCAS) description and quantity procedure.

About Shell Energy in Australia

Shell Energy is Australia's largest dedicated supplier of business electricity. We deliver business energy solutions and innovation across a portfolio of electricity, gas, environmental products and energy productivity for commercial and industrial customers. The second largest electricity provider to commercial and industrial businesses in Australia¹, we offer integrated solutions and market-leading² customer satisfaction, built on industry expertise and personalised relationships. We also operate 662 megawatts of gas-fired peaking power stations in Western Australia and Queensland, supporting the transition to renewables, and are currently developing the 120 megawatt Gangarri solar energy development in Queensland. Shell Energy Australia Pty Ltd and its subsidiaries trade as Shell Energy.

www.shellenergy.com.au

General comments

Shell Energy supports AEMO's intent to amend the NSCAS description and quantity procedure "to assume no pre-contingent line-switching for voltage management unless there is a regionally-specific justification"³. We agree that switching out lines during the middle of the day will increasingly expose the system to additional risk.

However, we suggest that AEMO makes the following change to its proposed amendment:

"AEMO will conduct the NSCAS review by applying the planning assumption that no transmission line per region may be switched out of service **before a credible contingency event** in order to meet system security and reliability obligations **post contingency** such as addressing high voltage levels. Exceptions to this approach may include plausible network conditions which permit the assumption that one or

¹ By load, based on Shell Energy analysis of publicly available data.

² Utility Market Intelligence (UMI) survey of large commercial and industrial electricity customers of major electricity retailers, including ERM Power (now known as Shell Energy) by independent research company NTF Group in 2011-2020.

³ AEMO, *Notice of First stage of consultation: Network Support and Control Ancillary Services Description and Quantity Procedure Amendments*, 4 October 2021, pp 3. Accessed from: https://www.aemo.com.au/-/media/files/stakeholder_consultation/consultations/nem-consultations/2021/ncas/nsacas-notice-of-first-stage-of-consultation.pdf



more lines may be switched in a region (or sub-region), informed by the experience of the relevant AEMO and TNSP system operators.”⁴

We believe our suggestion adds clarity and matches AEMO’s intent. It would clarify the line switching post a contingency event for voltage control is allowable to manage the next contingency event in the planning domain.

In addition to this change, we recommend that there is a formal, transparent process if there are any exceptions to the default ‘no line switching’ assumption. The consultation paper states that:

“AEMO expects that under this amendment any exceptions to the default assumption (no pre-contingent line switching) would be required to be based on regionally specific justifications. This would be accompanied by an agreement between the local TNSP and AEMO documenting which line may be switched and under which conditions and providing assurance that system security is not put at risk as a result of the switching action.”⁵

In our view, it is insufficient for there to be a non-publicised agreement between the local TNSP and AEMO. We recommend that, if there is an exception, AEMO should publish the rationale. This could be either as a short standalone report, or as part of an existing process (e.g. the General Power System Risk Review).

We also note that without pre-contingent line switching, the transmission network will require additional reactive power support to manage voltages. To date, we have observed a general reluctance from AEMO and some TNSPs when it comes to procuring this kind of service from power electronic devices like battery energy storage systems (BESS). We encourage AEMO to continue to develop its understanding on this topic. As the transmission network continues to evolve, we believe that the most efficient outcome will likely involve inverter-connected technologies like BESS providing reactive power support via network support agreements. An ideal situation to aim for (albeit possibly impractical in some circumstances) would be for the necessity of line switching to be eliminated completely. Taking lines out of service for any reason reduces system security and increases system losses, which is reflected in indirect costs to all stakeholders.

Finally, whilst not directly raised in this consultation, we ask AEMO to consider if a NSCAS contract(s) could be used to reduce or remove the need for ongoing directions in South Australia. We understand that, although the recent commissioning of new synchronous condensers has totally removed the system strength and inertia shortfalls for that region, AEMO’s concerns for further reducing the number of synchronous generators in-service in South Australia may be related to loss of a voltage reference point in the region for the double circuit trip of the Heywood interconnector. We consider this service may be able to be supplied via the use of BESS equipped with grid-forming inverters. We recommend this as an area for AEMO’s consideration as it may result in lower costs to consumers.

If you would like to discuss this submission further, please contact Matthew Ladewig, Policy Adviser at matthew.ladewig@shellenergy.com.au or on 03 9214 9397.

Yours sincerely

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⁴ Ibid

⁵ Ibid