Shell ENERGY

17 June 2021

James Hyatt
Australian Energy Market Commission
PO Box A2449
Sydney South NSW 1235

Dear Mr Hyatt

RE: Efficient Management of System Strength on the Power System

Shell Energy Australia Pty Ltd (Shell Energy) welcomes the opportunity to respond to the Australian Energy Market Commission's (AEMC) draft determination on the Efficient Management of System Strength on the Power System.

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 gas, electricity, environmental products and energy productivity for commercial and industrial customers. The second largest electricity provider to commercial and industrial businesses in Australia[1], we offer integrated solutions and market-leading[2] 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.

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General comments

Shell Energy does not support the rule change as proposed. We believe the rule change if implemented will result in the transfer of risks best managed by network service providers (NSP's) and connecting parties to consumers and invariably increase costs to consumers. We do not agree with the AEMC's argument that the current "do no harm" framework for provision of system strength, which was only introduced in 2017, has failed to facilitate the market provision of system strength. In our view it is failure of forecasting the requirements for system strength in the various electrical sub-regions, as required as part of the generation connection process by the Australian Energy Market Operator (AEMO) and NSP's, that has been the major issue rather than the current system strength framework itself. For the overwhelming majority of system strength issues currently being experienced in the National Electricity Market (NEM), connecting generators were approved to connect by the NSP's and AEMO without the requirement to provide system strength support, as AEMO's and NSP's analysis indicated at that time there was to be no system strength shortfall in the forecast period.

[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.

In assessing this rule change, Shell Energy believes the AEMC has failed to consider what would have changed under the counterfactual, i.e. had the proposed ruled been implemented back in 2017. It is likely that AEMO and NSP's would still have not forecast a shortfall in system strength requirements in the electrical sub-regions, (or system strength node) and generators would have still connected without the requirement to provide system strength services. The status quo that exists today would still exist unless AEMO's and NSP's assessment process and forecasting capability had dramatically improved or alternatively, AEMO imposed a requirement to provide system strength services on the connecting generators despite AEMO's assessment that additional system strength was not required.

Shell Energy is concerned that in response of the inability of AEMO and the NSP's to adequately forecast the system strength requirements for the NEM, a more conservative framework is proposed where its outcomes will impose the provision of large quantities of system strength service requirements, in effect on a '*just in case*' basis, leading to stranded asset risks and additional costs that will be borne by consumers.

In our view this Draft Determination stands in strong contrast to the 2011 Scale Efficient Network Extension rule change Final Determination where the AEMC determined that stranded asset and connection risks were to be borne by NSP's and connecting parties as these were the parties who could best manage such risks.

> '*the Rule as Made more efficiently allocates the asset stranding risk associated with building an extension in anticipation of future generation to those entities best able and willing to manage that risk (registered participants or investors) as opposed to those who are unable to manage such risk (consumers)*', [3] and
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> *"the Rule as Made promotes more efficient investment in electricity services by maintaining a market based approach to connections rather than requiring nonmarket facing entities to take risks on generator investment decisions."* [4]

This determination was made despite strong support from NSP's for the rule change proposal which sought to impose these risks on consumers. It is unclear to Shell Energy why in this case the AEMC has made such a diametrically opposed draft determination.

Shell Energy also questions the validity of the AEMC's arguments around the price (cost) impact on consumers due to delays in the connection process or output curtailment. Overall spot price outcomes may not have been lower if additional output from inverter connected low short run marginal cost (SRMC) variable renewable energy (VRE) generators currently impacted by system strength services constraints had been higher; such an outcome may have simply resulted in reductions in output from other low SRMC VRE generators due to the impact of network constraints or consumer demand requirements at the time of high VRE output. In addition, low spot price outcomes associated with higher output from low SRMC VRE generation may not necessarily flow through to wholesale or retail contract prices. Whilst VRE generators may offer low dispatch offers, higher long run cost prices must be achieved to meet any investment decisions. We note that the Draft Determination contains no evidence to support the AEMC claims in this area.

Shell Energy have considered how the Draft Rule proposal, had it existed previously, would have impacted decision making around the requirements for system strength in the previous few years. We note that in the South Australian region, the NSP, ElectraNet, in 2019 sought and gained approval for the provision of system strength services for South Australia via the provision of four synchronous condensers as a prescribed service.

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[3] AEMC - 2011 Scale Efficient Network Extension Rule Change Final Determination Page 12

[4] AEMC - 2011 Scale Efficient Network Extension Rule Change Final Determination Page 13

The cost benefit analysis to justify this was based on AEMO's and the NSP's assessment that this should meet most of South Australia's system strength requirements, with only limited need for operation of any synchronous generating units in South Australia. In ElectraNet's view this represented a *'no regrets measure to meet the minimum system strength requirement'*.[5] However this measure will continue to be borne by consumers who will pay for these assets for the many years ahead.

In reflecting on previous decisions with respect to the setting of requirements for system strength services, it is less clear to stakeholders on how the level of system strength services requirement has been set. With regards to the South Australia regional requirements in particular, AEMO set a minimum requirement of providing at least 1,200 MW of inverter connected generator output capability as the basis for the minimum level of synchronous generation to be maintained in-service for the provision of system strength services. It is also unclear as to how it was initially determined that the four synchronous condensers would be sufficient to remove the need for synchronous generators to be maintained in-service, noting that this has now be reassessed by AEMO and at least two synchronous generators will need to be retained in-service following the commissioning of the four synchronous condensers. This opaqueness and lack of explanation around such decisions and subsequent changes in requirements must in Shell Energy's view be addressed under this rule change process.

In Shell Energy's view, despite the proposed revisions set out in the Draft Determination to the requirements of Clause 5.20.6 - Publication of system strength requirements methodologies in the National Electricity Rules, (the Rules), the current lack of transparency in AEMO's and NSP's assessment processes remains of concern and must be removed. Whilst not supportive of the draft determination, if the final rule to implement the proposed change is made, we believe additional requirements should be placed on AEMO under the System Strength Requirements Methodology to bring greater transparency around assessing and determining system strength requirements in the NEM.

The following additional improvements to the Methodology will bring transparency and robustness to decision making around system strength requirements and should also help to mitigate over investment and stranded asset risk in the provision of system strength services as a prescribed service paid for by consumers:

- Ensure the methodology is subject to the Australian Energy Regulator's Best Forecasting Practice Guideline, given the forecasts of required levels of system strength services will be determined alongside AEMO's existing planning processes, including outcomes derived from the ISP.

This would ensure that the Methodology adopts best forecasting practice objectives in its development.

- Clearly set out AEMO's assessment and decision making process on the level of potential system strength services that will be self supplied by connecting parties.

This last dot point should be drafted to ensure that the Methodology takes into consideration that any connecting party is not restricted to solely procuring system strength services from the NSP and have the opportunity to provide the services themselves, which could be achieved via the choice of type of inverter technology - grid forming vs grid following, inverter tuning, etc. Ensuring such an assessment is included in the forecasting process should reduce the potential for oversupply of NSP provided services and reducing stranded asset risk for consumers. This concern is further supported by the fact that the decision to use NSP provided system strength services is reviewable by a connecting party at any time and they retain the right to opt out in the future if a lower cost provision of the service can be acquired.

[5] ElectraNet - February 2019 - Addressing the System Strength Gap in SA Economic Evaluation Report Page 5

In the absence of increased transparency in this area, stakeholders will remain concerned that the rule change is unwarranted and will only lead to invariable cost increases to consumers.

If you would like to discuss this submission further, please contact Ben Pryor, Regulatory Affairs Policy Adviser, 03 9214 9316 – ben.pryor@shellenergy.com.au

Yours sincerely

[signed]

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