



18 November 2021

James Lindley
Australian Energy Market Operator
Level 22, 530 Collins St
Melbourne VIC 3000

Dear Mr Lindley

RE: Market Ancillary Services Specification

Shell Energy Australia Pty Ltd (Shell Energy) welcomes the opportunity to respond to the Australian Energy Market Operator's (AEMO) Market Ancillary Services Specification (MASS) second draft determination.

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 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.

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General comments

Shell Energy is broadly supportive of AEMO's MASS second draft determination. We welcome the effort AEMO has put in to refine the MASS following the release of the first draft determination. In particular, we support the changes made to the measurement requirements for distributed energy resources (DER), to allow for 200ms metering for fast frequency control ancillary services (FCAS) markets participation.

In response to the first draft determination, we considered that the proposed 50ms metering requirement would have imposed significant costs on virtual power plant (VPP) participants, potentially reducing the volume of fast FCAS available to the market.

We also suggested that the proposed transitional arrangements should apply permanently, to allow supply with metering in the 50-200ms range to continue to participate with a 5 per cent discount applied to the quantity of FCAS delivered. We are pleased to see that AEMO had adopted this concept in the second draft determination. This change from the first draft determination should allow for increased participation of VPP participants in fast FCAS markets.

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.



We consider that the proposed requirements to allow a measurement time resolution of 200 ms for aggregated ancillary service facilities with a 5 per cent discount applied when the number of sites within an aggregate is less than 200, is a reasonable approach that efficiently balances the need for appropriate metering resolution, costs on participants and the risk of measurement error. Further, we support the use of a transitional period to 30 June 2023 to allow for existing VPP demonstration participants to comply with the new measurement requirements.

Shell Energy welcomes AEMO's decision to revise the descriptions of Regulating Raise service and Regulating Lower service in Table 3 of the draft MASS to clarify that provision of Regulation FCAS involves controlled deviation from a facility's reference trajectory or basepoint. We are also pleased to observe AEMO's addition of a statement in the draft MASS "the total expected change in output is subject to enabled quantities of each FCAS and a facility's PFR obligations where applicable". We consider these additions provide additional clarity to the MASS.

AEMO has addressed our concerns about the Setpoint Change Deadband and the behaviour of AGC regarding the ramping of facilities. This is reflected in the addition of a detailed description of how the NEM Dispatch Engine (NEMDE) caters for bid and telemetered ramp rates is contained in AEMO's guide "FCAS Model in NEMDE". AEMO has also added a footnote to section 10.4 of the draft MASS, which states "AEMO's AGC will control facility output within the ramping rates telemetered to AEMO by the facility" to clarify how AGC uses telemetered ramp rates. Shell Energy thanks AEMO for addressing these issues and supports their inclusion in the MASS.

However, we continue to remain concerned about what appear to be conflicting requirements between sections 2.2 and 10.3 relating to the provision of combined primary frequency response, contingency FCAS response and regulation FCAS response. In our view, the wording in the MASS continues to lack clarity.

Section 2.2 indicates that there should be no priority in the delivery of FCAS types, yet this section then indicates that "*Unless directed by AEMO to do otherwise, subject to clause 4.9.4 of the NER, an Ancillary Service Facility providing Regulation FCAS should follow AGC instructions at all times, noting that AGC instructions are subject to local frequency as outlined in 10.3.*"

Section 10.3 then indicates that "*Occasionally, the direction of the Contingency FCAS or PFR response may oppose an AGC control signal,*" and that this should not be unexpected. It is therefore unclear as to whether AEMO wants service providers to follow AGC instructions at all times. Fortunately, the draft determination makes the issue somewhat clearer by indicating "*The aim of the MASS amendments is to establish that frequency co-ordinated control means that AGC instructions are subject to frequency. This means that AGC instructions are specified as if frequency is at 50 hertz (Hz), but may be offset by local controls (if those controls are active) if frequency is not at 50 Hz.*" We understand this to mean that responding to local frequency via automated narrow band primary frequency response (PFR), or if the frequency deviation is large enough, via any enabled contingency FCAS response, should take priority to following an instruction to alter energy output received via the AGC system. If our understanding is reflective of AEMO's intent, then we consider additional changes are required to the MASS to clearly indicate AEMO's intent.

Additionally, we support AEMO's position, consistent with the first draft determination that measurement should be at or close to the connection point. We agree with AEMO that power measurement at the connection point (or as close to as technically achievable) is the least distortionary way to accurately measure the FCAS delivered to the power system. Recognising that the MASS allows for alternative measurement methodologies, and that AEMO may approve alternative methodologies, we consider it would be good regulatory practice to require AEMO to detail its reasons for allowing (or disallowing) alternative approaches. This is still absent from the second draft determination and we note that AEMO has not addressed this issue. We encourage AEMO to factor this in as it prepares its final determination.

Shell Energy also remains concerned with regards to the verification of contingency and regulation FCAS response and its interaction with narrow band primary frequency response. While the verification methodology



allows for the declaration of a "Contingency Event Time" by AEMO, and the use of the "reference trajectory", both of these only consider an outcome absent the specific frequency disturbance and any AGC response.

The verification process fails to include any narrow band primary frequency response which may have already been provided in the lead up to the frequency disturbance event. As such, the verification methodology appears to fail to account for any contingency or regulation FCAS reserves which may have already been consumed by narrow band PFR. We recommend the verification methodology be amended to clearly indicate that the use of contingency and regulation FCAS reserves by narrow band PFR is also included as compliant response in the verification calculation. Excluding narrow band PFR from the calculation creates an unmanageable compliance risk for service providers as the magnitude of narrow band PFR is unknown at any time and cannot be included in a service providers energy or FCAS dispatch bids. The alternative to including narrow band PFR in the verification methodology would be for narrow band service providers to limit narrow band PFR so as to ensure sufficient headroom, foot room or stored energy is maintained to ensure contingency or regulation FCAS dispatch compliance.

Finally, we note that AEMO is awaiting the outcome of the primary frequency response (PFR) rule change before making any decisions on proportional controller trigger ranges. While there is still uncertainty on the precise timeframes of the PFR rule change, the AEMC's scheduled date for completion of the PFR incentive arrangements rule change is 9 December 2021. AEMO proposes to publish the final MASS by 22 December 2021 meaning that no sooner will the MASS be finalised than changes may be necessary to accommodate the PFR rule changes.

That said, we are eager to see the final MASS determination by 22 December in order to deliver certainty for those seeking to enable VPP participation in fast FCAS markets outside of the VPP trial. The lack of certainty and inability to enter the VPP trial since February 2021 has led to VPP participation being put on hold since that time.

For more information on this submission, please contact Ben Pryor (0437 305 547 or ben.pryor@shellenergy.com.au)

Yours sincerely

[signed]

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