



21 October 2021

Stuart Morrison
Australian Energy Market Commission
GPO Box 2603
Sydney NSW 2000

Dear Mr Morrison

RE: Capacity commitment mechanism and synchronous services market rule change

Shell Energy Australia Pty Ltd (Shell Energy) welcomes the opportunity to respond to the Australian Energy Market Commission's (AEMC) directions paper (the Paper) on the capacity commitment mechanism and synchronous services markets rule change.

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 has engaged with the AEMC and the Energy Security Board (ESB) on a number of system services issues over the course of the past few years. We provided the AEMC with detailed comments on the original set of system services rule changes in August 2020 through our Power System Security Ancillary Services model. We have commented on the Unit Commitment for Security (UCS) and synchronous services market (SSM) concepts through the ESB's post-2025 market design work. Shell Energy also participates as a member of the AEMC technical working group (TWG) on this rule change.

With the energy transition well and truly underway with more variable renewable energy generators coming online and conventional thermal generators exiting, both permanently and temporarily, it is clear changes to the market are needed to support the kinds of system services that are necessary to keep the system operating in a secure state. The existing process of using Directions to ensure power system security services are available works, but it is hardly an enduring solution. Developing a mechanism to value system services like inertia 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.



system strength and ensure providers are paid in a fair and efficient manner for the provision of these services is a logical response.

Yet changes of this scale do not come without costs, and Shell Energy holds concerns around what the impact on overall costs to consumers will be. We therefore consider that as part of any approach to procure system services there needs to be a strong degree of transparency, an assessment of the total costs to the market and careful consideration of how costs are recovered.

Currently, issues regarding the level of need for power system services are opaque as to their cause and actual ongoing and future needs. While the Paper discusses this lack of transparency issue, the inability to define what it is that is being procured to deliver system strength means it is challenging to assess the need for the market and how to value the services. It is unclear to Shell Energy that there has been sufficient analysis undertaken and shared with the market to demonstrate the need for either the Market Ancillary Service (MAS) or Non-market Ancillary Service (NMAS) proposals or whether they represent an efficient approach. Neither mechanism exhibits an appropriate level of transparency to the market or clear price signals. In our view, the development of any mechanism to procure system services in an operational timeframe without a clear procurement metric or standard can lead to inefficiency and risk. We recommend the AEMC should first provide clarity through the National Electricity Rules (the Rules), on the definitions of power system security standards and system adequacy standard, similar to that set out for the frequency operating standard, before any system security mechanism is developed.

We are concerned that AEMO's desire to maintain the current "bundling" approach via the use of synchronous generation unit configurations for the procurement of power system services is more to do with the fact that some power system services, for which markets already exist, most notably frequency control ancillary services, are being procured for free through the "bundling" of services. We understand from participation in the TWG that AEMO's service provision check sheet for the South Australian region, on which the synchronous generating unit configurations are based, includes for the provision of sufficient headroom and at times foot room for contingency, primary and secondary frequency response in the South Australian region. This is despite markets for these services existing and the mandatory primary frequency response rule specifically setting out that provision of headroom, foot room and stored energy by generators is not required. We note that the AEMC is considering a separate rule change for the provision of primary frequency response and Shell Energy considers that the provision of primary frequency response should not form a component of AEMO "bundled" synchronous generator unit configuration assessment requirements.

Shell Energy recommends that a primary consideration of this rule change process must be the transparent detailing of AEMO's processes and data in this area. To date, this is completely opaque and not subject to independent review. We also consider that steps must be implemented at the earliest time achievable to move away from the provision of power system services as "bundled" synchronous generator unit configurations. This will ensure that the correct incentives exist for the future provision of these services as the existing synchronous thermal generator fleet retires. This can only be achieved if AEMO is forthcoming in transparently setting out the power system needs for now and the future. This must be a priority objective of this rule change process.

Although Shell Energy is supportive of what the AEMC has set out in the Paper, we consider that further analysis and detail regarding the interaction of this rule change with the Efficient Management of System Strength on the Power System rule change should be undertaken. If the purpose of this rule change is to simply manage the dispatch of contracts between network service providers and suppliers, we question why this could not be efficiently managed by network service providers themselves.



Non-market Ancillary Services

We share the AEMC's view that based on the current level of information provided by AEMO, including through the pre-dispatch process, the non-market ancillary services (NMAS) option is a preferable initial approach for enabling system services to be valued by the market. Largely, we see that there are significant advantages in terms of the implementation costs and timeframes to have a mechanism in place within a reasonable timeframe. There is currently a large pipeline of system changes that market participants and AEMO need to make. Adding an additional major change in the form of a market ancillary services (MAS) proposal would add additional costs to consumers that may not be warranted.

That said, Shell Energy broadly supports the use of market ancillary services for auxiliary services to the energy market and over time would welcome amendments to the framework that deliver a markets-based approach to the provision of power system services. This may include improvements to the NEM dispatch engine (NEMDE) for the efficient dispatch of power system services both in the pre-dispatch and dispatch timeframes. While the NEMDE is not currently configured to ensure the efficient dispatch of power system services, we support the AEMC's view that as these power system services are better defined, and as new service providers arrive, dispatch via an improved NEMDE is feasible and should result in improvement in dispatch efficiency. As the AEMC noted in the directions paper:

The MAS approach relies on dynamic scarcity of providing system security support services, as well as allowing resources to manage risk and trade-offs in the co-optimised energy and FCAS markets. In principle, this approach, if workable, may be expected to result in more efficient outcomes, when compared with the NMAS approach. This is because it would align the financial incentives of market participants to maximise their own profits with the efficient outcomes for the system as a whole.³

Notwithstanding our general support for the NMAS approach as an initial mechanism, Shell Energy is concerned about the cost impacts that this reform may have on consumers. It is reasonable to assume that activating contracts for system strength, etc. will add costs to the system, even taking into account the existing cost of directions. Given the purpose of this approach to procurement of essential system services is to enable different kinds of generation to be able to generate at higher levels, we argue that the cost recovery mechanism must reflect this. It is not acceptable for consumers to continue to bear the brunt of cost increases via the default recovery of costs for new services where they are not necessarily the direct beneficiaries of the changes.

In the case of this reform, we recommend that costs be recovered from beneficiaries. That is, to the extent that improving inertia levels or system strength ahead of time can allow certain generators to generate more, then those generators benefitting should be paying the associated costs. If customers benefit in other ways, then there would be a case for consumers to bear some of the costs as well, however these claimed benefits to consumers must be clearly demonstrable.

Enabling additional output for low short run marginal cost (SRMC) generation in one geographical area, which in turn simply reduces output for low SRMC generation in another geographical area, due to a difference in dispatch bids, may offer little in the way of real benefit to consumers in the short-, medium- or long-term. Similarly, short-term lower spot price outcomes may not result in lower prices to consumers in a market where minimal levels of consumer demand is spot facing, significant supply side capacity is forecast to retire and where future prices to consumers will be dominated by the costs of replacement supply side resources and in this case, the costs of firming variable renewable generation output with firm standby capacity.

³ AEMC, Capacity commitment mechanism and synchronous services markets rule change, Directions Paper, 9 September 2021. p 62



In addition, seeking to claim benefits to consumers through the use of UCS or SSM contracts to reduce spot price outcomes over short periods of time may also be counterproductive as this may simply result in synchronous generators that had intended to remain in-service at currently forecast spot prices decommitting due to change in spot price outcomes post UCS/SSM contract activation, resulting in the need for exercise of additional UCS or SSM contracts. What could be perceived initially as a small benefit in spot price outcomes, may end up as increased costs to the market overall. The final framework will need to contain sufficient safeguards to prevent such an outcome.

Shell Energy is also intrigued by whether the NMAS approach will effectively become the UCS, based on how the latter has been described in the ESB's work so far. This also raises the question of the timeframes for the UCS process – i.e. when will AEMO signal that a contract is due to be tendered for and put in place and then activated – and the proposed system security mechanism (SSM) which has been described as a short-term close to real time procurement option. From our perspective, there are competing dynamics between the UCS and SSM processes. As noted in the directions paper, the AEMC suggests contracts for system services would be non-binding until activated, and that activation could be at the latest possible time. However, it is unclear to Shell Energy how such an outcome would provide incentives for current service providers to remain available to provide the services on an “as needed” basis. In our view, UCS contracts in particular, may need to be subject to facility or availability payments to facilitate service providers maintaining capability. Notwithstanding, we are encouraged by the AEMC's view that contracts should be activated at the latest possible time. This outcome may prevent over-dispatch of resources by AEMO. We urge the AEMC to include specific provisions in any rule change to prevent AEMO from using its discretion to activate more contracts than required, “just in case” and activating contracts earlier than needed.

In considering the need for UCS style NMAS contracts, it is possible that every service-providing generator will need to be awarded a UCS or SSM NMAS contract to ensure that AEMO has sufficient resources to manage the provision of power system services. Simply awarding UCS/SSM NMAS contracts to selected service providers has the potential to disincentivise non-contracted generators from continuing to operate when another provider's contract has been activated, returning the power system to an insecure state unless they too are activated for system services provision.

We are also conscious of the risks that could emerge under the SSM as a short-term procurement option. While we would generally prefer short-term procurement (and would want to see any contracts entered into and activated at the latest possible time), we are concerned by what may happen if AEMO is looking to enter contracts for system strength or inertia on a short-term basis without previously having arrangements in place. It is logical to assume that if AEMO suddenly goes to market seeking contracts for short-term response, then they are unlikely to see favourable terms. However, if AEMO is looking to use a short notice RERT Panel style approach, whereby there is a range of potential providers with pre-agreed terms and conditions, then this approach would make more sense. Shell Energy would find this latter arrangement to be preferable compared to one where facility costs are incurred, and contracts activated significantly ahead of when an actual need is established. Cost risks in this area could also be managed by the use of an appropriate market price cap for the provision of SSM contracts. This notes that in our view the provision of system services would be on a marginal as opposed to full cost recovery basis and does not require service providers to optimise between energy and frequency control ancillary services (FCAS) provision.

While a system services contract could be used to maintain or commit a service provider into service, if the service provider is a generating unit, any proposed framework must allow the remaining available capacity of the generating unit to remain available to the market for the provision of energy or FCAS. To facilitate such an outcome, we recommend that the contracting for system services should take the form of a floor type contract where generators are reimbursed the difference between the contract price and the spot price. As spot prices rise, the payment for provision of system services would reduce. The framework would require generators to bid any additional dispatch volume above the system services contract price.



Considering all the risks that could be associated with either or both UCS and SSM contracting for the provision of power system services, as well as the incentives required to facilitate both the continued supply by existing suppliers and new entrants, we consider that initially only SSM contracting should be approved for use by AEMO with further justification required to allow the adoption of UCS style contracting by AEMO. We believe that the SSM contracting provision better serves the long-term interests of consumers. This is supported by the fact that network service provider contracting under the Efficient Management of System Strength on the Power System rule is expected to facilitate the provision of system services in the planning timeframe.

Shell Energy also has concerns around the structure of contracts and going to market to source system strength or inertia. We want to see that these arrangements are designed in such a way that they do not lead to perverse outcomes, where providers who would otherwise remain in the market look to bid unavailable to ensure that a contract is activated. Where there is sufficient competition in the market as a whole, we think this risk is limited. In regions where there is only a limited number of providers of essential system services in a particular geographical area, the risks do appear to be magnified. However, in considering any potential framework in this area, the legitimate ability for a participant to self decommit when the sum of outcomes across all revenue sources fails to cover a participant's costs, must be maintained.

We are also seeking clarification on how the process for activating and pricing of TNSP system strength contracts procured under the Efficient Management of System Strength on the Power System rule, as part of the NMAS approach. Shell Energy wants to understand how AEMO will transparently identify and communicate to the market shortfalls in power system services and make the decision to activate TNSP contracts for system services or procure and activate AEMO's own contracts for system services. Given that costs may be recovered differently across the two kinds of contracts, there may be incentives for AEMO to activate one form of contract ahead of another for differing reasons. To the extent that the choice of contracts to be activated could be justified for reasons other than the overall cost impact of the contracts themselves, we would be troubled. In particular, we would reject giving AEMO the ability to choose or activate contracts for the purpose of controlling wholesale spot market price outcomes as this would seem to go beyond the intent of the rule change. Shell Energy considers the AEMC will need to establish clear rules governing how contracts are procured and activated across the two different processes. Further, transparent information regarding the process AEMO has used to justify procuring and activating one kind of contract over another will also be crucial for market participants.

On a related issue, Shell Energy considers that there will need to be a strong degree of transparency around the activation, costs and timing of system strength contracts. We would expect that market participants are informed of information including:

- the identified shortfall in system services in which region(s),
- the duration of a shortfall
- AEMO's intention to activate a contract,
- the time at which contracts would be activated
- when contracts have been activated
- the time at which contracts are expected to be deactivated
- when contracts have been deactivated.

Shell Energy envisages that this could take a similar form to market notices such as Lack of Reserve (LOR) notifications or Reliability and Emergency Reserve Trader (RERT) activation and dispatch. We then consider that a summary of those activations is provided for each region on a regular basis including aggregated costs. A monthly or quarterly report outlining this overall detail would seem to us to be a reasonable requirement. Where contracts are dispatched on the basis of deriving a "market benefit" AEMO must be required to detail what



potential market benefit was being sought and the extent to which this market benefit was actually delivered including the subsequent dispatch of any additional system services contract during the same time period in any region.

Conclusion

Shell Energy agrees with the AEMC that the NMAS approach to procuring system services is in this instance the more preferable initial option. We consider that the lengthy implementation timeframes along with the likely costs to upgrade systems and rework the dispatch engine associated with the MAS approach, are key factors in this decision. However, as changes in the market progress, this decision should be regularly reviewed by the AEMC to determine if it continues to remain the best option with regards to the National Electricity Objective. It may be that with the retirement of existing service providers and the commissioning of alternative service providers, which may include different technologies, provision of the required power system services may be better achieved by new market ancillary services.

The AEMC should first provide clarity through the National Electricity Rules (the Rules) on the definitions of power system security standards and system adequacy before any system security mechanism is developed. In our view the development of any mechanism to procure system services in an operational timeframe without a clear procurement metric or standard can lead to inefficiency and risk.

We believe any framework adopted under this rule change process must set out a program to more granularly identify the required services and move away as quickly as achievable from AEMO's current "bundled" procurement approach via the use of synchronous generation unit configurations. AEMO must be given a fixed timetable to achieve defined objectives in this area. In the first instance AEMO must provide full details of its current process for determining these "bundled" requirements.

Notwithstanding our support for the NMAS model, we urge a degree of caution to ensure that total costs, inclusive of procuring and activating contracts, provide a demonstrable net benefit to the market. Shell Energy also believes that cost should be recovered on a beneficiary pays basis rather than simply imposing by default all costs directly on consumers.

We wish to see strong transparency around the decisions to procure and activate contracts for essential system services. This should be in the form of real-time reporting to the market on activation decisions and timeframes as well as regular reports outlining the total cost impacts.

Any framework must maximise the potential for providers of power system services to remain in the energy and FCAS markets without the need for activation of a system services contract. The framework for activation of a system services contract for potential "market benefits" must be tested prior to its application to ensure that it will not lead to negative consequences where the activation of further system services contracts are required. Such a framework should not prevent efficient decommission decisions by generators who do not at the time have an active system services contract.

Where a system services contract is used to maintain or commit a service provider into service, if the service provider is a generating unit, the remaining available capacity of the generating unit must remain available to the market for the provision of energy or FCAS.

Shell Energy strongly recommends that initially only SSM contracting should be approved for use with further justification provided to allow the adoption of UCS style contracting. We believe that the SSM contracting provision implemented with a "fit for purpose" market price cap better serves the long-term interests of consumers.

Finally, Shell Energy considers that more information is required detailing exactly how the mechanism will function in terms of procuring and activating contracts and the interaction between AEMO's contracts for system services and TNSPs' contracts for system strength. At this stage, there is a distinct lack of detail around how the



two types of contracts would interact and what rules would govern their procurement and dispatch given the competing (but similar) aims. In this light, we encourage the AEMC to set clear requirements around the contractual decision-making processes in the rules, rather than leaving too much discretion to AEMO.

Yours sincerely

[signed]

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