

27 August 2021

Energy Policy WA
Locked Bag 11
Cloisters Square WA 6850

Submitted via email by graham.pearson@energycouncil.com.au to Kate.Ryan@energy.wa.gov.au

Reserve Capacity Mechanism Market Evolution Review

The Australian Energy Council (the “**AEC**”) writes this letter in relation to the Market Advisory Committee’s (the “**MAC**”) proposed Reserve Capacity Mechanism (“**RCM**”) Market Evolution Review (the “**Review**”).

The AEC is the industry body representing 22 electricity and downstream natural gas businesses operating in the competitive wholesale and retail energy markets. These businesses collectively generate the overwhelming majority of electricity in Australia and sell gas and electricity to over 10 million homes and businesses.

Not fit for purpose

The RCM was designed to encourage investment in sufficient generation to ensure security of electricity supply and that the optimal mix of generating capacity was available to meet peak demand. However, as the market has evolved, and intermittent generation has increased, questions are raised as to whether the RCM is incentivising investment in the correct generation mix to meet future peak demand.

The RCM was developed around historical assumptions that the periods with the most capacity stress would be at times of peak consumption caused by hot weather. This would occur for a brief period only on a hot summer day typically after a series of hot days. However, the market has evolved considerably with the proliferation of solar PV and intermittent generation, meaning the most stressed time can occur in quite different conditions, such as during a series of hot days in summer, or when there is moderate demand but intermittent generation is low, or at some other time.

A further challenge is managing variations in duration of capacity stress events. Peak demand is a relatively short event, so energy limitations were irrelevant to the RCM. However, the combination of intermittent generation and storage can create extended capacity stress events of unpredictable duration. The type of facilities required to address the capacity stress for different durations could vary considerably and impact their role in the capacity market. In particular, shallow energy storage and short-term demand-side options may add complexity in the future power system.

For asset owners, the significant changes made to the RCM have undermined its ability to ensure an appropriate return. The establishment of the Essential System Services (“**ESS**”) markets may alleviate some of the income shortfall for some generators but there is no certainty, and the rules require the Economic Regulation Authority (“**ERA**”) to monitor prices and intervene in the markets to reduce prices if the ERA considers the prices are too high.

In summary, it is unclear whether the RCM targets the correct situations for capacity stress events and for investors the RCM no longer provides appropriate returns. For these reasons, the AEC considers that the RCM is not fit-for-purpose and the Review is necessary.

Scope of the Review

The entire RCM needs to be fully reviewed in a considered manner to ensure it is a functioning part of the WEM, and the AEC welcomes the Review proposed by the MAC.

The MAC has put forward the following high-level scope for the Review:

- *“whether the mechanism is still fit for purpose, taking into account the rapid transformation of the energy sector;*
- *the Planning Criterion (reliability criteria), including as part of the Taskforce’s end-to end security and reliability standard/framework;*
- *the method(s) for assigning Certified Reserve Capacity to the different technology types in the WEM;*
- *review of the “most efficient new entry” which sets the Benchmark Reserve Capacity Price; and*
- *the requirements applicable to different technology types (generation, Demand Side Programmes and storage).”*

The AEC suggests that this is a reasonable starting point and encourages the MAC to also consider the:

- Type, duration and frequency of peak demand events that the RCM is addressing;
- Likelihood of capacity stress events changing over the coming 5-10 years;
- Type of plant and technologies that can assist with meeting potential future supply shortfalls, in particular shortfalls caused by energy limitations rather than instantaneous capacity;
- Obligations of generating facilities, demand side management providers and battery storage for receiving revenue for their capacity credits;
- Transition arrangements for existing participants;
- Implications for the energy and ancillary services markets;
- Application of energy price caps.

The AEC’s members will also put forward their own views on the scope of the Review directly to the MAC and we encourage the MAC to fully consider their feedback. That aside, the AEC firmly believes that the Review should be considering a 5-10 year timeframe to assist with future-proofing the WEM and giving investors adequate confidence in the market.

Interactions with energy price caps

A challenge created by the current WEM market design is how to correctly recognise the value of capacity sources with non-infinite energy limitations and then to operate it effectively. Energy limited plants include battery storage and many forms of demand-side action. The current design uses on a deterministic allocation of RCM that ignores energy limits. Then subsequently, the energy market price is capped. Whilst fit for purpose in a traditional power system, two fundamental challenges emerge from this design in the twenty-first century power system:

- The energy limitations of storage and demand-side cannot be captured by a deterministic calculation. Typically, a single minimum energy limit (specified in a number of hours operability) is applied as a threshold of eligibility. This threshold is arbitrary and fails to recognise that the value of energy limited capacity to power system reliability is never zero, rather it increases progressively with its depth.

- The low price cap does not encourage efficient allocation of limited energy. This price cap discourages participants from conservatively building energy stocks and retaining it for the time when consumers value it most greatly, i.e. when the alternative is load-shedding. Instead, the incentive is to exhaust the energy as soon as the energy price rises, prior to the cap. The result is that accredited energy limited capacity unnecessarily exhausts prior to the period of most stress. A way to avoid this is to recognise that energy-limited plant may at times have a much higher cost than energy-unlimited plant – the value of energy-limited plant is the shadow price of other dispatch options, potentially the Value of Customer Reliability itself.

These interactions must be considered in the RCM review, which should be permitted to recommend a change to the capping of energy market prices.

Appropriate consultation & engagement

A comprehensive review of the RCM is a significant undertaking that requires a measured process, without compressed timeframes, and full engagement with stakeholders.

The AEC suggests that the MAC could adopt a similar process to the Australian Energy Market Commission (“**AEMC**”) when it undertook the Reliability Frameworks Review. The AEMC published its terms of reference for the Reliability Frameworks Review on 11 July 2017, an issues paper on 22 August 2017, an interim report on 19 December 2017 and a directions paper on 17 April 2018. As part of the process, a Reference Group comprising senior representatives of the AEMC, AEMO, the Reliability Panel, the Australian Energy Regulator, the senior Committee of officials, ARENA, the Clean Energy Regulator and the Clean Energy Finance Corporation provided high-level input. In addition, the AEMC established a technical working group comprising representatives from AEMO, the AER, ARENA, consumer groups, large energy users, conventional generators, renewable generators, retailers, demand response providers, and transmission and distribution network service providers.

The AEMC’s template should be adopted for the Review, with a dedicated working group established to create genuine two-way dialogue and input. Given the importance of the Review, the working group must include a wide range of participants, not only MAC members, and be given adequate time to work through the scope of the Review and rebuild the RCM for the next 5-10 years. This can’t be a rushed exercise with limited consultation.

Conclusion

The AEC appreciates this opportunity to provide feedback on the Review and encourages Energy Policy WA to consider the issues raised above.

Please do not hesitate to contact Graham Pearson, Western Australia Policy Manager by email on graham.pearson@energycouncil.com.au or by telephone on 0466 631 776 should you wish to discuss this further.

Yours sincerely,

Graham Pearson

Policy Manager, Western Australia
Australian Energy Council