

Energy Security Board

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### **Capacity Mechanism – High-level design paper**

The Australian Energy Council (AEC) welcomes the opportunity to make a submission to the Energy Security Board's (ESB) High Level Design Paper (the paper) on a NEM Capacity Mechanism.

The Australian Energy Council is the peak industry body for electricity and downstream natural gas businesses operating in the competitive wholesale and retail energy markets. AEC members generate and sell energy to over 10 million homes and businesses and are major investors in renewable energy generation. The AEC supports reaching net-zero by 2050 as well as a 55 per cent emissions reduction target by 2035 and is committed to delivering the energy transition for the benefit of consumers.

The NEM's energy-only market design has served it well, and, in the AEC's opinion, has historically resulted in more efficient investment levels and lower customer costs than have been experienced elsewhere. The AEC however recognizes the tremendous transformation occurring in the sector and the natural uncertainties that arise about the appropriateness of this design through these changes.

Throughout the ESB Post 2025 review and the current process, AEC members have held divergent and evolving views on whether these uncertainties justify a major change in the energy-only market regime. In this submission, the AEC has engaged with respect to the high-level design presented, rather than the question of whether a major change to the NEM is justified.

Divergence also arises in relation to specific features of the design. That divergence will emerge in members' submissions rather than this submission, which is primarily informed by the AEC's long-standing preference for national, competitive approaches.

Importantly, the AEC recognises that the desire for a mechanism relates to the future capacity resource adequacy of the NEM, it is intended to provide confidence in the level of available dispatchable capacity to meet the forecast needs of customers. It is not intended to, however, secure energy sources at a permanently low cost. The AEC wishes to dispel stakeholder confusion linking the existing NEM design to the energy crisis of winter 2022. That crisis relates to a sudden escalation in the cost of *energy* rather than *capacity*, which a different market design would not have averted. Markets with an explicit capacity mechanism continue to also operate energy markets, which look very like the existing energy-only NEM. Indeed, many such markets facing similar exogenous conditions, for example the United Kingdom, have experienced almost identical challenges to the NEM's winter 2022.

Typical capacity mechanisms were mostly developed in the 1990's for traditional power systems of homogeneous technology that was well understood and comparable. The NEM has moved far beyond that point with numerous bespoke generation, storage and demand-side technologies, all of which have very different performance characteristics in their ability to provide power system assurance. Further, they have considerable variation within classes.

It is already very difficult for owners to predict the expected performance of these technologies at times of power system stress. However, it is additionally difficult for a central procurer to arbitrate its value, and thus the introduction of a capacity mechanism is a tremendously challenging task. In adopting a capacity mechanism, the AEC accepts that these arbitrations will always be far from perfect, and the inevitable anomalies will invite criticism and ongoing adjustments that will in turn invoke new controversies.

## Summary

### *National Approach*

The great microeconomic reform achievement of the NEM is the application of a consistent design across six states and territories. The AEC has always opposed jurisdictional variation. It accepts that jurisdictions have applied a growing number of parochial deviations from the national rules. These have, however, generally avoided the fundamental operating parts of the NEM, particularly its “chapter 3” components. For examples, states appear to have recognized that AEMO can only possibly run one national dispatch engine.

In the AEC’s opinion, a capacity mechanism, were it introduced, would become one of those fundamental parts. Capacity flows across interconnectors as naturally as energy and was a key justification for the NEM. Consistent with this, capacity across interconnectors should be recognized in the auction process.

The Minister’s Principles given to the ESB, by including the ability for states to opt out and be involved in technology selection present a challenging design dilemma for the ESB. The AEC hopes the ESB’s design is not detracted by these Principles.

### *Technological Neutrality*

The AEC supports the approach presented in the paper. A capacity mechanism is intended to provide resource adequacy assurance to meet customer needs with respect to reliability. Although some capacity mechanisms overseas are considering incorporating environmental constraints into their eligibility, in the AEC’s opinion these objectives are more readily and efficiently achieved through policies transparently targeted at the specific objective.

In reality, a certificated capacity mechanism is not at all technology neutral, because technologies vary greatly in their ability to provide resource adequacy. Clearly solar technology cannot provide overnight capacity, but when married with storage technology, it can.

The AEC recognises that legacy technologies do not provide perfect resource adequacy and that any mechanism will need to de-rate them against their true ability to support the future power system. Indeed, plants that were at one time well designed to meet the resource needs of a traditional stable power system have naturally declining value in the new power system dominated by zero cost intermittent supply.

The paper has touched on the need to discount the capacity value of legacy plants for observed forced outage rates, which the AEC accepts and recognizes will be material for some coal plants. Coal plants also have, to varying degrees, a disadvantage of inflexibility and slow recall. This is already being punished somewhat in energy-only market returns which will continue. And, to the extent that it interferes with the plants’ ability to support resource adequacy, expects it would be recognized in a capacity mechanism.

### *Treatment of Incumbency*

The AEC has always preferred neutrality between incumbency and new entry. There are good economic and competition rationales for such a starting point and unintended consequences arise from different treatment. The AEC supports the ESB’s recognition of this.

Whilst considering that the value of capacity should be rewarded equally with respect to the age of the resource, the AEC is nevertheless comfortable with the ESB’s exploration of packaging this value differently for new entrants, for example through a longer-term contract. This should not be seen nor implemented in order to favour entry over incumbency, but instead used as transitional measure recognising the change from energy-only market to capacity mechanism and the different positions that different resources have inherited.

An issue that arises with respect to a forward allocation of capacity value, is that assurance of delivery of the promised capacity cannot be enforced by simply withholding the capacity payment itself, which would then become a “free option”. Without some form of “make good” obligation, capacity auctions would become distorted with dubious supply, and power system reliability forecasts would be undermined. This issue applies to both new-entry and incumbency.

#### *Retaining energy-only market risks and incentives*

A feature of many electricity markets with explicit capacity mechanisms is very strict and low (by NEM standards) energy market price controls. Indeed, in many cases these low price caps by themselves have necessitated their adoption of a capacity mechanism, as investment returns were clearly inadequate from a capped energy market alone.

However, it should be recognised that these low caps were always a *political* imperative, rather than a natural choice for a market with a capacity mechanism. The AEC posits that in all such markets, given the choice, designers would have chosen energy market price freedom with its ability to signal real-time scarcity. The NEM has the advantage of, after 25 years of operating with relative price freedom, not having this political imperative placed upon it and so the AEC sees no reason to invite it now.

The challenges that Australian energy markets have experienced in winter 2022 in rationing gas and electricity when subject to administrative price caps reminds us of the many serious unintended consequences of not allowing the value of energy to reach its natural value, even for short periods.

The experience of energy scarcity in winter 2022 will arise frequently in a future market whose dispatchable capacity will, over time, become much more energy limited than it has been previously, for example being limited by energy storage.

Furthermore, as discussed above, it will never be possible to get the centralized recognition of the true value of capacity exactly right nor will it be possible to correctly recognize the impact of a failure to deliver on the promise of capacity. Keeping the energy-only market settings in place has the advantage that even if these calculations are seriously wrong, the energy-only settings will naturally correct for the errors. For example:

- If a good resource’s ability to support power system adequacy is unfairly discounted by the capacity mechanism, then the energy-only incentives and contracts market still provide it a means to earn revenue;
- If a poor resource is incorrectly over-allocated a capacity reward or underpenalised when it fails to deliver, the price risks naturally emerging from the energy market will counteract this; and
- If a period of stress emerges outside a predefined “at risk” period, the market will still retain the incentives for resources to take every step possible, for example by recalling maintenance, to support the power system.

A widespread uninformed view has emerged that retention of the NEM’s price settings in the presence of an explicit capacity mechanism would lead to a form of “double-dipping” because capacity will be valued both through the mechanism and through the energy market. This is not the case.

Participants always determine their entry into (or exit from) a market on the basis of the full basket of returns available to them from their participation. Ultimately the competitive marginal price of services delivered to customers relates to the new-entrant cost (or incumbent retention cost) of participation. If strong revenues are available from the capacity mechanism, then lower revenues from energy-market would be required to justify entry or retention and vice versa. Thus the customer should not end up paying more.

An excellent example of this “basket” approach already exists in the NEM with respect to its revenues from energy and ancillary services. Battery storage’s ancillary services revenue has been strong, and so the NEM is observing battery storage entry at levels of energy market return that on their own would be insufficient to justify the investment.

Indeed if, as the ESB hopes, the capacity mechanism’s revenue is seen as lower risk than energy-market revenue, then customer costs should fall overall, as the required profit for entry or retention will fall with the lower cost of capital.

#### *Decentralised versus Centralised Capacity Mechanisms*

The AEC’s natural preferences for market design is to rely where possible on decentralized decision making and risk allocation. However, the AEC recognizes that the adoption of any capacity mechanism will necessarily imply a very significant centralization from status quo, and that the reform is motivated by stakeholders’ insistence in being able to see a centralized long-term pathway to resource adequacy.

As a result of this recognition, the AEC’s position in relation to the ESB’s broad options for the acquisition of capacity has shifted over time from its initial position of a clear preference for decentralized options. The AEC however notes that if existing market settings are left in place, retailers will still have a decentralised incentive to actively understand, and where possible, manage their load to support the power system during times of scarcity.

#### *Flexibility versus Stability*

As the paper recognizes, if a mechanism is to be adopted as early as 2025, there will necessarily be quick applications that will require refinements over time. Furthermore, the evolving power system, and the rapid development of new technologies, implies that the design, particularly the most controversial questions of de-rating and at-risk periods, will require regular adjustment.

This however conflicts with the value of stability and investor confidence and there is a challenging trade-off. The AEC’s experience with the Western Australian Wholesale Energy Market (WEM)’s Reserve Capacity Mechanism (RCM) is that in that case, needed alterations to these values have been excessively slow, even in light of new technical information. Notwithstanding the risks that it entails, the pace of power system change suggests that these key parameters should not be hard-wired but will need to be promulgated in a readily adjustable transparent procedure.

#### *Implementation*

The AEC notes ESB’s and ministers’ desire to implement the capacity mechanism as early as 2025 or even earlier, and, as a result of such haste, accepts that its first version will require ongoing refinement. Whilst the AEC understands the desire to provide urgent capacity assurance, it is concerned that rushed timeframes to implement this type of major reform may introduce new risks, which can in turn undermine the confidence objective. Consider, for example, the fast frequency response market ancillary service<sup>1</sup>, which, despite being straightforward duplication of existing ancillary services, is being implemented with a three-year lead time to provide this implementation confidence.

In considering the appropriate implementation period, the AEC suggests the ESB undertake research into *transitional* matters, particularly the likely impacts upon existing traded instruments, commercial operations and relationships. For example, retailers and customers will need to agree on whether the cost of capacity should be included within an agreed tariff or passed through to the customer. Another example is the expected impact on contract markets that are usually traded about three years into the future.

<sup>1</sup> <https://www.aemc.gov.au/rule-changes/fast-frequency-response-market-ancillary-service>

These considerations may change the preferred implementation period or approach. It may be appropriate for the first delivery year to occur several years after the first auction.

### *Retail Reliability Obligation*

The AEC has a firm view that the introduction of a capacity mechanism should coincide with the retirement of the entire existing financial Retail Reliability Obligation (RRO) regime. This is an obvious outworking of developing a more substantive reform and if retained would be duplicative and distracting. The ESB has recognised in page 69 that the capacity mechanism would replace the RRO and seeks that the ESB clarifies its commitment to abolish it.

### **Listed Questions**

*Q2 Do you agree that the capacity mechanism should provide for multiple zones being the existing NEM regions?*

Yes, this seems the appropriate starting point for the design for participant familiarity purposes. This is not to say that the regional approach should not evolve over time as the market does.

*Q3 Is there sufficient evidence to say that the at-risk periods can be defined on a time-based definition?*

*Q4 If there is a risk of the emergence of more than one at-risk period in the NEM how should that be addressed?*

Section 5.3 is a good discussion of the many challenges of pre-identifying the periods of greatest power system risk in a rapidly changing industry. These were also discussed by AEC research into the WEM<sup>2</sup>. The events of winter 2022 have shown that the NEM's stresses are not restricted to very hot evenings, which, as customers adopt shallow behind the meter storage, will decline in relative importance.

Ultimately a capacity mechanism will need to re-align its at-risk periods with the changes in the power system. The event-driven approach appears to do this, but to reduce implementation complexity, a limited seasonal approach may be initially appropriate. The AEC notes that retaining the existing market incentives by not lowering market settings provides confidence that should the "at risk" periods not align with critical intervals, the resulting reliability performance should at least be no worse than that achieved in the energy-only market.

*Q5 The de-rating factors produced by different at-risk period definitions and modelling methodologies can show large ranges particularly for non-traditional technologies. How should this and potential year to year variability in de-rating factors be addressed?*

*Q6 What approaches should be used to de-rate different technologies? Should different approaches apply to different technologies?*

*Q7 What is the right balance between transparency/simplicity and accuracy?*

*Q8 Should de-rating factors be determined at a technology class/region level or at a station level?*

As discussed in the introduction, these decisions are extremely challenging for a central operator to determine and in other capacity markets prove extremely contentious. Simplistic short-cuts, such as region and technology-wide factors, were used in the RRO. However, the AEC considers that the balance between accuracy and simplicity lies much more towards accuracy for a capacity mechanism given its direct influence on a resource's income and its direct influence on power system reliability.

Performance varies substantially by resource within technology classes. For example, newer windfarms are exhibiting much greater low wind speed performance than older turbines. Coal fired

<sup>2</sup> <https://www.energycouncil.com.au/media/xlab4zma/mja-final-report-generator-revenue-adequacy.pdf>

generators show considerably different forced outage rates within a region. The hydrological circumstances of every hydro generator are unique.

Despite the complexity, it seems inevitable that the de-rating will need to be on a station basis, and make use of modelling for new plant, as well as historical performance for existing plants. This will also require routine adjustment.

Participants should also be given the option to group multiple projects into a single “portfolio asset”, at least within a region, for the purpose of evaluating its capacity contribution. International literature on capacity markets recognises that the capacity value of a portfolio is greater than the sum of its parts<sup>3</sup>.

Chapter 9 of the paper discusses inter-regional constraints but defers questions of intra-regional congestion. The AEC expects this matter to be relevant to de-rating but appears to have not yet been engaged in this paper.

*Q9 Do you agree with the approach to setting the forecast capacity requirement and the target capacity in a region?*

The AEC supports the use of the probabilistic approaches used by AEMO for its medium and long-term reliability forecasting, which is more accurate than deterministic approaches. There will inevitably be mismatches with a deterministic capacity mechanism, but this does not mean these probabilistic tools should be “dumbed down” to match the capacity mechanism. These tools should remain in use for the over-arching reliability forecast and inform intervention decisions.

Broadly the approach proposed seems appropriate for a deterministic reserve calculation.

*Q10 How should the target capacity be determined where there are gaps in more than one region?*

If, in section 9.3.1 option 1 is chosen with respect to interconnectors then the capacity requirement needs to assess the ability to draw on surplus capacity in other regions. The existing PASA tools permit sharing of reserve between regions without double counting, and this approach could be drawn from for the reserve calculation.

*Q14 How should the timing of the auctions align with the notice of closure obligation?*

The choice of auction lead time has trade-offs in terms of flexibility versus certainty. Three years was chosen for the WEM, although in practice RCM delays have led to periods shorter than this. Fortunately, the lead time to develop future capacity providers such as battery storage is shorter than traditional providers, so the WEM has been able to cope with this.

*Q15 What are your views on how existing and new capacity should be treated in the auction process?*

As noted in the introduction, the AEC prefers equal treatment of incumbency and entry from a value perspective but is open to “tailoring” the arrangement for new-entry. It may be possible, for example, to have each form of capacity equally competing in the short-term auctions, but where new entrants are successful, providing them the option to extend that short-term value for the agreed entrant period.

*Q16 Are there other considerations the ESB should take into account for the detailed design?*

<sup>3</sup> [https://www.ethree.com/wp-content/uploads/2019/06/E3\\_Long\\_Run\\_Resource\\_Adequacy\\_CA\\_Deep-Decarbonization\\_Final.pdf](https://www.ethree.com/wp-content/uploads/2019/06/E3_Long_Run_Resource_Adequacy_CA_Deep-Decarbonization_Final.pdf)

Capacity providers should not be obliged to offer capacity on a unit-by-unit basis, but should be permitted, should they desire, to offer on a whole-of-station basis. This is particularly the case as decisions around closure are very much taken from a whole-of-station standpoint.

As noted at Q8, the ESB should also consider whether capacity can be offered on a portfolio basis beyond the station, at least within a region.

*Q18 Do stakeholders have a preference as to whether the investment support scheme provides guarantees of price only, or of both price and quantity?*

If the lead time is short, say less than three years, then a lock-in of price and quantity seems appropriate. If the quantity degrades in the meantime this will emerge in the performance obligation mechanism.

For longer-term arrangements, such as those that might apply for new entrants, it is also desirable to lock in quantity to the extent it technically can be. “Make good” may be appropriate in response to internal performance declines. However, over time, as the power system changes, technologies’ de-rating factors will change. It may be necessary to re-assess long-term contracted capacity in that regard.

*Q19 Internationally, capacity mechanisms rely on some multiple of the net-cost of new entry (net-CONE) assessment to determine the capacity mechanism market price cap. Is this appropriate or should an alternative approach be used?*

If a demand curve is used (Q21), then an explicit price cap becomes irrelevant: even if set at some very high number, the natural elasticity of the demand curve would effectively constrain price in a circumstance of low competition.

*Q20 How should the price settings interact with the energy market price? Over time, when settings are regularly reviewed, should the price settings in the capacity auction and the energy market be jointly determined?*

The AEC considers the energy market price settings should be determined independently of the capacity market arrangements by the Reliability Panel on a similar basis as is done presently. To the extent capacity market price resettings are relevant to its performance, these should also migrate to the Panel.

*Q21 Are there other considerations the ESB should take into account when determining demand curves in the detailed design?*

The AEC would support the use of a demand-curve that recognises the finite value of reliability as is presented in the Value of Customer Reliability (VCR) promulgated by the AER. Ideally this can be mechanically converted into a demand curve shape, however if it requires judgement, this is best allocated to the Reliability Panel.

*Q22 While the RRO requires mandatory participation for the largest three participants in a region, the ESB considers a methodology for determining market power should be applied to account for changing market concentration over time. Are there specific market concentration thresholds of concern?*

*Q23 Should market power mitigation measures be applied to capacity providers with large market shares in supply-side regardless of their market share in retail?*

As presented in the AEC’s previous submissions, the AEC does not consider market power as a priority concern for the design. As we have stated, the motivation for this reform is that the energy-only market results in “missing money” if it is obliged to deliver a level of reliability consistent with

stakeholders' increasing expectations. This motivation is directionally inconsistent with a circumstance of a lack of competition.

The ability for new-entrants to participate in the auctions, combined with a demand-curve on the auction volume, will work far more effectively in addressing perceptions of a lack of competition than any direct control arrangements. The AEC considers policy makers should never choose a sub-optimal design to address some perceived risk of market power. Instead, the AEC expects the AER will operate its normal market monitoring function, and appropriate actions taken only upon their observing serious and sustained concerns.

*Q24.1 Do you have preliminary views on compliance obligations for capacity providers?*

Setting performance obligations around a capacity mechanism is an inherently challenging, judgemental, and contentious matter. This is one of several reasons why the AEC supports retaining the existing energy-only market settings, as they are how a strong real-time performance incentive is automatically conveyed to all capacity. Having retained these settings, concerns about inaccuracy in administratively recognising the consequences of performance of accredited capacity are substantially lessened, and the performance obligations can be safely made less punitive.

Instead, where performance is shown to be below expectations of accredited capacity, this should primarily be considered in subsequent de-rating analyses.

The paper notes the expectation that matters outside of a provider's control will be exempted from the performance obligation. The AEC notes network limitations as a matter that, if addressed in the de-rating approach, should not be double counted at this stage.

However, there is a great range of matters that providers would need guidance upon as to whether it constitutes a form of *force majeure*, such as the availability of fuel stock, be it gas, liquid-fuel, mine-mouth coal, transported coal, water, or even sun and wind.

*Q24.3 Do you support the ESB's proposed performance model for consultation? If no, what other proposed model would be better and why?*

*Q25 Are there any issues with using LOR2 and LOR3 as the trigger for capacity payments? If yes, please explain the issues and any alternative triggers.*

*Q26 How would an appropriate methodology year-round availability be determined?*

*Q27 Do you support the ESB considering capacity payments based on availability throughout the year and during periods of system stress?*

*Q28 If you support payments based on two factors, what is the preferred distribution of the first and second payment? Should more or less weight be given to responding to events?*

Within option 3, two matters emerge that cause the AEC some concern:

- The application of a continuous availability measure may inefficiently disincentivise maintenance outages at times of low system requirement. The WEM employs an approach where AEMO releases plant to take outages at such times without performance penalty.
- Weighting the mechanism for actual low reserve periods seems appropriate, where it has not been forecast, a short grace period seems appropriate.

*Q32 Are there any other compliance issues the ESB should be mindful of in detailed design?*

With respect to operational performance, the AEC concurs with the suggestions in 7.3.3 and 7.3.4 that the direct consequences of underperformance should be limited to forfeiture of capacity payments and future de-rating. This may seem low-powered, but this is not problematic where the existing energy-only market settings and risks are retained.



As discussed in the introduction, the AEC does support stronger obligations, such as “make good” requirements, where promised capacity is not physically delivered or is permanently withdrawn.

The AEC also concurs that any punitive action be limited to untimely, inaccurate or deliberately misleading information, which is already adequately sanctioned.

*Q33 Are there any other implications the ESB should consider in detailed design?*

Ideally the capacity products will be sufficiently fungible for a traded physical and forward market to develop that could involve both the supply and demand side.

As is common for major reform, the rules should include a major statutory review carried out, say, no longer than three years after implementation date. This could be linked to reliability reviews carried out by the Reliability Panel.

*Q37 Do you think the MPC should be reduced if a capacity mechanism is introduced, and if so, by how much? What key issues should the ESB take into account when considering this issue?*

For the reasons outlined in our introduction and in response to earlier questions, the AEC firmly considers the MPC and other settings should not be reduced if a capacity mechanism is introduced.

Further to those arguments, should the energy-market cap be reduced, there will be unintended consequences outside capacity and energy. For example, the Frequency Control Ancillary Services (FCAS) markets are co-optimised with energy, which implies that their price caps must align. The WEM demonstrates exactly this challenge where its price caps limit the returns available for investment in assets targeting the FCAS markets such as shallow battery storage. This then has opened a new discussion about whether a form of capacity mechanism for FCAS is then required.

The AEC notes the Reliability Panel has recently recommended<sup>4</sup> a real increase in the Market Price Cap (MPC) to between \$21,000/MWh to \$29,000/MWh, implying energy-only market returns will be insufficient to achieve the existing reliability standard. For the reasons stated in the introduction, this recommendation is still relevant in the presence of a capacity mechanism and should not necessarily raise consumer costs. However, if a concession regarding the MPC was felt necessary for stakeholder acceptability, then rejecting the upper bound of this range may be a low-risk way to satisfy this concern.

Importantly, a decision about retaining or significantly lowering the MPC should be taken early, as it is fundamental to the design of the scheme. Lowering the energy only market incentives would require much more change, for example by requiring more high-powered performance obligations.

*Q38 Do you agree that costs should be passed on via retailers, rather than NSPs?*

The AEC considers retailers are the appropriate representative for customers in their engagement with the wholesale market, and as a result the arrangements should be via them. It is appropriate for retailers and customers, upon seeing the final design, reach commercial agreement as to whether these costs sit best within retailer risk management, in which case they will be incorporated into the competitive energy tariff offer, or separated as a line-item pass through. A NSP can do only the latter.

*Q39 What do you consider to be the most appropriate mechanism to allocate costs to retailers?*

<sup>4</sup> <https://www.aemc.gov.au/sites/default/files/2022-06/2022%20RSS%20Review%20Draft%20Report%20-%20FINAL%20for%20publication%20%281%29.PDF>

The paper has noted that other capacity arrangements, such as the WEM, have strong peak-demand weighting approaches to the recovery of costs. This is fair in the traditional power system where reliability stress emerges only at such times and so the allocation of costs appropriately falls on the customers who create the issue. However, a future power system will not necessarily see the stress points quite so clearly correlated with demand peaks and will need capacity to be ready at a wider range of times.

Heavy peak weighting has also been shown to create an excessively strong and sometimes inefficient incentive for retailers to activate demand-side operations even when the power system is not stressed. Lumpy payments can also complicate the commercial arrangements between retailers and customers.

*Q40 Do you think that Option 1 or Option 2 better meets the assessment criteria?*

*Q41 Are there any other factors that the ESB should consider when assessing the relative merits of the options?*

As per the paper, the AEC is attracted to option 2 in principle as a way to more fully realise the efficiency of national trade but recognises it adds complexity and does not yet understand how it can be operationalised. The ESB is encouraged to resolve these issues in conjunction with market participants.

*Q42 Are there other ways to ensure that procurement of interstate capacity resources does not exceed inter-regional transmission limits, in addition to the two approaches outlined above?*

The existing PASA optimisation employs a sophisticated reserve sharing approach that both models the performance of inter-regional capacity and avoids double-counting reserves. It may be possible to leverage this existing design to determine the ability to share capacity between regions.

*Q43 Do you think that where a market interconnector exists between two regions, it should be the entity that is eligible to submit inter-regional capacity bids?*

*Q44 Do you think that proposed new market interconnectors should be able to participate in the capacity mechanism?*

Consistent with the original intent of market interconnectors, its beneficial owner should benefit from its participation in the energy market, including benefiting from the capacity mechanism in the same way as other technologies to the extent it is firm.

Any questions about this submission should be addressed to me directly, by email to [ben.skinner@energycouncil.com.au](mailto:ben.skinner@energycouncil.com.au) or by telephone on (03) 9205 3116.

Yours sincerely,



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