10 February 2022

Energy Security Board

ALINTA ENERGY RESPONSE TO THE CAPACITY MECHANISM PROJECT INITIATION PAPER

Alinta Energy appreciates the opportunity to provide feedback on the ESB's *Capacity Mechanism Project Initiation Paper*.

Alinta Energy agrees with the ESB's observation that the influx of zero marginal cost energy, and the uncertainty that the energy transition creates is undermining the ability of NEM's energy-only structure to incentivise the capacity required to maintain reliability. To rectify this and avoid additional interventions further deteriorating the investment environment, Alinta Energy strongly supports installing a capacity mechanism that meets the Ministers' objectives to:

- ensure investment in an efficient (least cost) mix of capacity by facilitating timely entry of new generation and an orderly retirement of aging thermal generation;

- increase confidence that the market will deliver resource adequacy; and

- provide a signal to value capacity that best supports the reliability of the NEM during the energy transition.

Considering the capacity mechanism options presented, Alinta Energy recommends that option 2 – i.e. a capacity mechanism, with centralised forecasting, certification and procurement and an administered price – would be best placed to meet these objectives.

Further, when identifying an appropriate mechanism to value capacity, Alinta Energy considers that the following fundamental objectives should be addressed:

- Find the 'missing money' – i.e. the gap between revenue needed to attract (and maintain) efficient entry and revenue available from the energy-only market.

- Deliver resource adequacy – ensuring a diverse and sufficient range of new and existing reliable investments are available to meet a range of reliability scenarios. This includes providing an incentive to maintain maintenance schedules (or penalties for underperformance).

- Dampen volatility – reduce dispatch uncertainty through steady capacity payments to incentivise new and existing investments.

- Support the efficient expansion of capacity – provide the correct long term price signal to incentivise timely new supply.

- Address the inherent difficulty in forecasting future high prices for investment signals; and

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- Prevent future, disorderly exit.

For the reasons outlined in *APPENDIX 2*, Alinta Energy considers that only option 2 addresses all these fundamental objectives.

Alinta Energy considers that, as with the current RRO, the decentralised models 1a and 1b would not give policy makers the requisite confidence that there will be investment in the right type and quantity of capacity to maintain reliability, as detailed below:

- **Option 1a deficiencies**:
    - Policy makers would not know how much load retailers have forecast, nor whether retailers have procured enough capacity to meet demand until after system stress periods.
    - Regardless of their forecast accuracy, many retailers would likely procure less capacity than the level that policy makers consider is sufficient, given their differing risk appetites.
    - Besides risk appetites, there are many circumstantial reasons why retailers' forecasts could differ and not sum to an accurate NEM-wide forecast. This is because, unlike AEMO, retailers would not only be forecasting how much energy demand there will be in each region, but a range of volatile factors unique to their load, including their performance against competitors, and the behaviour of their customers.
- **Option 1 b deficiencies:**
    - Retailers would still have discretion as to how much capacity they procure, which may be less than the level that policy makers consider is sufficient.
    - Policy makers would not have clear transparency of whether there will be enough capacity available during system stress periods.
    - Where certification is decentralised, (and therefore there is no centralised testing) policy makers will not have assurance that the capacity being procured can perform as promised.

By contrast, Alinta Energy considers that option 2, a centralised mechanism, with the design features outlined below, would give policy makers confidence that it would deliver resource adequacy: it would highlight, from a long-term time horizon, whether the market has procured the right quantity and type of capacity to meet an appropriate reliability standard under various system stress scenarios. It would also enable a central body to test performance and apply penalties where capacity does not meet its obligations, rather than delegating this function and the risk of under-performance to each retailer.

Further, Alinta Energy considers that this option is better placed to ensure investment in an efficient (least cost) mix of capacity given that central procurement and certification enables the mechanism to select the quantity and capabilities of the capacity that are required from a whole of system perspective. This also allows the mechanism to support the transition to a net zero market by targeting capabilities such as long duration storage. Conversely, Alinta Energy considers that, under options 1a and 1b, decentralising certification and procurement limits the mechanism's ability to target these capabilities because each retailer would have to procure a quota of capacity with these capabilities, rather than simply covering a portion of the ultimate cost of the capacity mix.

Another advantage of option 2 is that it provides a more level playing field for retailers that aren't vertically integrated. Under a centralised model with an administered price, retailers can access capacity at a predictable rate, regardless of their size or whether they are vertically integrated. However, under the decentralised models, smaller retailers are exposed to an uncertain market price. Meanwhile, large players can benefit from volatile capacity pricing by leveraging their bargaining power, or vertical integration to access (and potentially withhold) low-cost, long-term capacity contracts that aren't available to the rest of the market.

Finally, Alinta Energy recommends that the ESB incorporate the following further design aspects into option 2:

- **A level playing field for capacity payments**. Once the certification criteria are set, Alinta Energy considers that the remuneration for capacity should be based on performance against these criteria, and not when the capacity was connected. Alina Energy is concerned that limiting accreditation to new capacity would unnecessarily limit competition, undermine the efficiency of the capacity mix, and fail to deliver an orderly transition.

- **Administered pricing, rather than an auction**. Alinta Energy considers that procuring capacity via an auctions risks causing the "zero times infinity" problem[1] wherein small changes in the amount of available capacity relative to the target results in significant changes in price, potentially undermining the certainty that the mechanism aims to provide.

  Additionally, Alinta Energy notes that under an auction, it would be more difficult to be selective about the capabilities of the capacity required (unless the mechanism employs multiple auctions for each capacity type, increasing complexity and the risk of the zero times infinity problem).

  Regardless of the administered price that Alinta Energy recommends, it considers that participants should be able to trade and contract capacity certificates over the long term. This would support price certainty for customers and long-term investment signals for project proponents.

- **Long term investment signals, balanced with future-focused certification criteria**. As recognised in the paper, the higher levels of near-zero marginal cost variable renewable generation, coupled with increasing government interventions is increasing uncertainty and undermining investment decisions. Alinta Energy considers that the mechanism will need to provide long term certainty to incentivise investment in this increasingly problematic commercial environment.

  Alinta Energy recognises that these longer-term signals will need to be balanced with selective, future-focused criteria, and testing requirements to ensure that the mechanism does not lock in capacity that undermines the NEM's energy transition, nor the efficiency of the capacity mix – failing to do so would invite future interventions.

  Noting that the aim of a capacity mechanism is to incentivise the capacity that is required over the long term, Alinta Energy recommends that in defining the capacity that the mechanism should procure, the ESB should carefully consider (e.g., via modelling) what capabilities the NEM's capacity mix will need to support the energy transition and whole of system efficiency over the next decades. Alinta Energy suggests that the ESB should not limit the mechanism to certifying one type of capacity against a set of criteria and one target

[1] For example, an auction that does not need to incentivise any additional capacity may clear at zero, while an auction that cannot attract sufficient capacity may not clear at all.

but consider accrediting many different types "buckets" of capacity, based on the diverse capabilities that the NEM's optimal capacity mix will require.

- **A pragmatic approach to pricing and constraints.** Alinta Energy considers that how the mechanism prices capacity and incorporates constraints in certification are two potential sources of significant complexity for negligible benefit. Alinta Energy encourages the ESB to take a pragmatic, risk-based approach to these design aspects, noting that for the mechanism to achieve its goals of giving
  - policy makers the confidence that it will deliver resource adequacy, and
  - investors the certainty to invest,

  it will need to be simple and its outcomes predictable over the long term.

A summary of Alinta Energy's assessment of the options (including its proposed mechanism) against the ESB's more detailed criteria is provided at *APPENDIX 1 – ASSESSMENT OF OPTIONS AGAINST ESB CRITERIA*.

Conclusion

Given the current context of the NEM, Alinta Energy agrees that a capacity mechanism is required to ensure that the market incentivises the investment required to maintain reliability and avoid additional interventions further deteriorating the investment environment.

Alinta Energy strongly believes that:

- only a centralised capacity mechanism, with the design features outlined above would meet the Ministers' key objectives.
- the decentralised models would fail to give policy makers the requisite transparency and assurance that retailers are procuring the right quantity and type of capacity required to maintain reliability during future system stress periods.
- these decentralised models will not be able to select and procure the diverse technology types and capabilities required to ensure the NEM's capacity mix maintains reliability and meets net zero targets at least cost from a whole of system perspective.

Thank you for your consideration of Alinta Energy's submission, should you wish to discuss this further, please contact Oscar Carlberg at oscar.carlberg@alintaenergy.com.au, or on 0409 501 570.

Yours sincerely

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APPENDIX 1 – ASSESSMENT OF OPTIONS AGAINST ESB CRITERIA

	Option 1a	Option 1b	Option 2 with AE design aspects
Achieving the optimal level or reliability	× The level of capacity procured would be based on retailers' assumptions and risk appetites, rather than an agreed reliability standard. × Policy makers would not have transparency of whether enough capacity has been procured for the longer term. × Without central certification there is limited ability for verification and ongoing testing to ensure that the capacity procured is capable of being available when required. × Compared with option 2, the ability for a central administrator (AEMO) to set certification criteria for different types of capacity that support reliability form a whole of system perspective is more limited.		✓ This option would highlight, from a long-term time horizon, whether the market has procured the right quantity and type of capacity to meet an appropriate reliability standard. ✓ Central procurement enables the mechanism to select the quantity and capabilities of the capacity that is required (and certified). This also makes this option better placed to support the transition to a net zero market by targeting capabilities such as long duration storage.
Appropriate allocation of risk	× Retailers may not be best placed to manage the risk that forecast errors lead to reliability issues, as policy makers would likely have more conservative risk appetites. × A central operator is likely to be better placed to forecast demand as they can take a whole of system view, whereas retailers' forecasts are complicated by more volatile factors that are unique to them, increasing the risk of forecast error when compared to a central operator.	× Retailers may not be best placed to manage the risk that forecast errors lead to reliability issues, as policy makers are likely to have more conservative risk appetites.	✓ A central operator is likely to be better placed to forecast demand as they can take a whole of system view, whereas retailers' forecasts are complicated by more volatile factors that are unique to them. Taking a whole of system view avoids this volatility and thereby reduces the risk of forecast error, ✓ A central operator is better placed to manage the risk of ensuring that capacity providers meet the certification criteria and will be available when required as it would enables more targeted certification criteria and rigorous testing regime,
Technological neutrality	Across all the options, Alinta Energy considers that technological neutrality will be dependent on how well the certification criteria defines the capabilities of the desired capacity mix. Ideally, the criteria should allow all technology types to compete based on their performance against these criteria, and not unduly preclude technology types from competing where they have these capabilities.		
Minimise regulatory burden	× The regulatory burden of forecasting demand and certifying capacity would be duplicated across all retailers	× The regulatory burden of certifying capacity and verifying that it meets a respective target would be duplicated across all retailers.	✓ Centralising forecasting, procurement and certification would minimise the regulatory burden by avoiding duplication of these functions across all participants.
Emissions reduction	× Decentralising certification and procurement would limit the mechanism's ability to set detailed capabilities that certified capacity should have (including emissions intensity and long duration storage) unless a NEG model is reconsidered, noting that presumably each retailer would have to procure a quota of capacity with these capabilities.		✓ Centralised certification criteria, including certification of different "buckets" of capacity across the system enables the capacity mechanism to take a whole of system approach to meeting net zero targets at least cost.

APPENDIX 2 – ASSESSMENT OF OPTIONS AGAINST ALINTA ENERGY'S FUNDAMENTAL OBJECTIVES

	Assessment of option 2's performance
Find the "missing money": the gap between revenue needed to attract efficient entry and revenue available from the energy market.	✓ Option 2 is better placed to achieve this as an administered price can be calibrated to the level that incentivises investment. A decentralised model may fail to resolve the missing money issue as retailers may not value capacity in the same way as policy makers, and therefore not pay the price required to deliver the new capacity (or retain the existing capacity) up to the mechanism's reliability standard.
Deliver resource adequacy by ensuring there is enough investment to meet peak demand	✓ Option 2 would ensure there is enough investment in the right quantity of capacity by setting a central target and ensuring the price settings (and potentially, contracting terms) are adequate to procure that capacity, sufficiently far in advance of when the capacity is required. ✓ Option 2 would ensure there is enough investment in the right type of capacity by employing certification criteria, and potentially different targets for each type of capacity required in the NEM's future capacity mix. Decentralised models may not procure the right quantity of capacity because: o Retailers may not correctly forecast their capacity requirement (a centralised forecast across the whole system will likely be more accurate than a sum of retailers' expectations) o Retailers may decide to not procure the right level of capacity up to the reliability standard due to differing perceptions of risk. Decentralised models may not procure the right type of capacity because: o Decentralising certification and procurement limits the mechanism's ability to set detailed capabilities that certified capacity should have noting that presumably each retailer would have to procure a quota of capacity with these capabilities.
Dampen volatility: The reduction in uncertainty through steady capacity payments may make investment more attractive	✓ A centralised administered price would reduce volatility, particularly compared to decentralised. Under decentralised models, price would be exposed to "zero times infinity" problem wherein small changes in capacity can result in disproportionate changes in price, particularly where the market fails to clear or there is a perceived excess of capacity. ✓ Standardised contracting terms with the central procurer may also further reduce volatility.
Efficiently expanding capacity by providing the correct price signal	✓ Option 2 is better placed to achieve this as an administered price can be calibrated to the level that incentivises investment. Whereas under a decentralised model, the price signal depends upon retailers' perceptions which can be misaligned with policy makers and the broader outlook for demand.
Address the inherent difficulty in forecasting future high prices for investment signals	✓ A centralised administered price means that project proponents won't need to rely on high price forecasts to make investment decisions. Under decentralised models, the capacity price signal is less certain, increasing the relative importance of energy prices in making investment decisions and potentially dissuading investment that the NEM requires to maintain reliability.
Prevent disorderly exit	✓ If unaddressed, the current context of the NEM will likely cause disorderly exit as zero marginal cost energy and interventions continue to erode generators' ability to recover their costs and manage their medium term risk. Option 2 may help to avoid this by providing generators the certainty they require to remain in the market – subject to them meeting certification criteria and performance standards. Decentralised models may fail to achieve this as they may not provide: o policy makers the confidence they require to avoid intervening, further deteriorating the commercial environment of the NEM. o incumbents the certainty that they will be able to recover their costs over the short to medium term.