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10 February 2022

Ms Anna Collyer

Chair

Energy Security Board

Submitted via: Info@esb.org.au

Dear Ms Collyer,

Re: Capacity mechanism initiation paper

Flow Power welcomes the opportunity to make a submission in response to the ESB's initiation paper exploring the role of a capacity mechanism in the NEM.

Flow Power is an electricity retailer that works with business customers throughout the NEM. Our vision is to redefine how customers manage energy, putting them at the centre of the market and accelerating Australia's progression towards a net-zero future.

We empower our customers to take control of their energy usage, lower their bills and reduce their carbon footprint. We provide customers with:

- Transparent retail tariffs that reward demand flexibility and encourage electricity usage at times of plentiful renewable output.
- Hardware solutions that provide greater visibility and control over energy use.
- Access to renewable energy, either through distributed solar and storage installed on site, or through a virtual generation agreement with utility-scale wind and solar farms.

We believe that by equipping customers with these tools, we can lower costs for all energy users and support the transition to a net-zero carbon future.

Overview

The key points we would like to make regarding the ESB's paper are:

- **The introduction of a capacity mechanism has not been justified**. Flow Power disagrees with the ESB's previous assertions that the case for a capacity mechanism has been made. The ESB should clearly establish and quantify the extent of their concerns with

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the existing market design before committing to specific policies. This would reduce the risk of costly, unnecessary, and misguided regulatory change.

- **If a mechanism must be designed, a more targeted approach to supporting new investment should be considered**. This approach could support investment while minimising risks to consumers, as well as reducing the extent of the regulatory burden on participants.

We have provided some additional comments on various aspects of the consultation paper below.

The need for a capacity mechanism

Managing the balance of supply and demand for electricity will remain a central challenge in the energy transition. We will need to develop new supply, increase demand flexibility, and install energy storage to fill the gaps as thermal generation retires. Importantly it will need to do so in a way that meets energy consumers expectations of reasonable prices and service levels. Growing willingness from the Federal and State governments to intervene in the market, or set out their own broad energy policies, only adds to the challenge.

Despite the magnitude of this challenge, we are concerned that the ESB has failed to present the necessary analysis to assess whether any change is needed. The ESB has not adequately demonstrated how a capacity mechanism would improve outcomes for consumers. The ESB has even noted that the reforms it is considering could lead to:[1]

- imposing bigger regulatory burdens
- overcompensation of existing thermal generation assets
- reducing the liquidity of contract markets
- eroding competition on retail and wholesale markets.

The current framework, complete with market-based incentives and backstops, have been effective at managing reliability to date. In addition, the current RRO and interim reliability standard have only been recently introduced and so have had limited time to demonstrate their effectiveness in supporting reliability objectives. Further, the introduction of five-minute settlement and the wholesale demand response mechanism are expected to support more dispatchable capacity. Based on the most recent forecasts of reliability, there does not appear to be forecast risk that is not going to be addressed by the investment commitments that have already been made

The introduction of a capacity mechanism could represent a significant change to the financing and operation of generation, storage, and demand response in the NEM. It could also completely change the structure of the retail market. It would also create a period of uncertainty and cost during its implementation. For these reasons, the ESB should be certain of the need for a capacity mechanism before pursuing it further.

Comparison against a base case

For the reasons outlined above, we appreciate the commitment from the ESB to investigate whether a capacity mechanism is indeed necessary. When developing the base case, the ESB should:

[1] Energy Security Board, *Options Paper – Part A,* p. 36.

- Account for the impact on recent regulatory changes including the introduction of five-minute settlement and the existing RRO.
- Account for the impact of the future expansions of the market price settings, NSW Electricity Investment Roadmap, jurisdictional reserves, markets for fast frequency response, and other markets for essential system services.
- Look how a capacity mechanism will add costs for consumers, and the distribution of these costs across market customers coupled with an assessment of how this would impact the viability of small retailers and demand response projects.
- Clearly articulate the metrics for assessing the base case against the impact of a capacity mechanism. This is needed to assess the extent of the costs/benefits associated with moving away from our current regulatory and market frameworks.
- Look at the impact of a capacity mechanism on wholesale prices, and wholesale price volatility. The ESB should seek to understand how this might diminish the incentives to invest in storage and demand flexibility.

Noting the short timeframes for the ESB to provide advice on the development of a capacity mechanism, the ESB should focus the design of a mechanism on the deficiencies observed with the existing market. The ESB has previously suggested a capacity mechanism would have benefits including supporting investment, promoting demand response, and providing greater certainty regarding generator retirements. If the ESB's assessment finds the current market addresses a subset of these concerns, the design of the capacity mechanism should be refined accordingly.

A capacity mechanism does not clarify retirement dates

The ESB and governments have raised concerns with the speed of generator retirement. Early retirements themselves are not necessarily problematic. Instead, the far greater challenge is the unexpected withdrawal of capacity. Unexpected retirements can create security, reliability, and price concerns.

Under the current arrangements, the market and regulators have visibility on planned retirements through the notice of closure provisions and through forecasts like MT-PASA. Since the retirement of Hazelwood Power Station, greater emphasis has been placed on understanding the timing of these withdrawals to help manage the impacts.

However, we don't have visibility of unplanned outages or retirements that occur through technical failure. Indeed, it is impossible to accurately predict these technical failures in any deterministic manner. As such, the unplanned outages continue to pose a challenge for the NEM through the transition.

Despite suggestions to the contrary from the ESB, it is unclear how the introduction of a capacity mechanism provides any additional certainty regarding the timing of generator retirements. It was suggested there may be a marginal increase in visibility of planned retirement through withholding of certificates. However, aging thermal generators are likely to withhold certificates to hedge against the risk of unplanned outages. The withholding of certificates would be more pronounced over longer timeframes, as the risks of outages increase, and availability is less certain. Therefore, the introduction of a capacity mechanism seems to provide little additional certainty compared to existing notice of closure provisions.

The capacity mechanism would not change the risk of unplanned retirements. Occasional qualitative arguments regarding increased maintenance resulting from certificate trading have been made, but these ignore existing requirements to keep plant maintained to meet performance standards and license requirements. Additionally, it may exacerbate this risk by increasing incentives for plant operators to keep units in the market as they continue to age.

On top of this, the ESB and governments are separately exploring the introduction of contracts to fix the retirement date of large generators. These contracts (which state governments can, and have, already bilaterally entered) and the regulatory controls already in place to address the timing of generator retirements leave no residual role for a capacity mechanism designed to manage thermal generator retirements.

A more effective role for a capacity mechanism in the NEM

Subject to demonstrating a clear need for a capacity mechanism through an assessment of the base case, the ESB should consider options for a more targeted capacity mechanism.

Our observation is that trying to design a capacity mechanism that intends to provide greater certainty regarding the timing of generator retirements, in addition to being unnecessary, forces the mechanism to be far more complex and costly than would otherwise be necessary.

By setting aside generator retirements and focussing on new investments, a capacity mechanism could be designed to:

- Facilitate new investment when a reliability shortfall is expected, and does not cost anything if not needed
- Preserve competition and would not create market power risks
- Responds to political objectives
- Be implemented quickly and have lower implementation costs and regulatory burden.

More detail on what this model could look like, and its advantages is outlined below.

Proposed model

The ESB should consider the development of a targeted capacity mechanism. Broadly, this mechanism would:

- Set out a robust framework for assessing the likely risks of future reliability shortfalls.
- In the event of an expected shortfall that might not be resolved otherwise, undertake auctions for reliability options that would be intended to bolster the investment cases for projects being planned.
- The successful projects would receive the reliability option for a pre-determined timeframe, and the costs would be recovered across the market through energy retailers. These options would be intended to remove some of the downside risk of investing in the NEM and could come with conditions to protect consumers from excessive costs.

It would also aim to work with the objectives of state governments and provide an option for state governments to support greater levels of reliability, but still providing transparency and some competitive tension to the process.

Metric for determining auction trigger

The process leading into an auction should provide the market with transparency and foresight regarding expected shortfalls. It should leverage off the existing processes for triggering the retailer reliability obligation, where T-3 instruments are issued when reliability gaps are forecast three years out. This would both provide warning to market participants, and parties who would be interested in tendering for the reliability options. Closer to the shortfall, a second assessment is undertaken and, if the shortfall has persisted, the auction process would commence.

As is the case with the existing RRO, there would be processes in place to dispute the declaration of shortfalls. The AER or even the Reliability Panel could provide oversight of the modelling and stakeholders would have the opportunity to challenge the modelling inputs and outcomes.

While the targeted capacity mechanism would ideally be nationally consistent, it could be tailored to state-specific objectives. As demonstrated by the list of principles provided to the ESB from Energy Ministers, state governments have clearly indicated their preference to have some influence over the development of energy supply in their jurisdictions. Instead of creating an oversupply as the solution to political concerns about reliability (as the PRRO would do), this targeted capacity mechanism could provide a transparent, competitive process for state governments to guide the development of electricity supply in their states. For example, it would be amenable to state-specific technology requirements including exclusions on fossil-fuel based investments. It could also integrate with existing energy policies like the NSW Infrastructure Investment Roadmap. State governments would also be able to outline any additional specifications regarding the timing and structure of the forecasting process, such as the timeframes between triggers and the auction.

Auctions for options

If an expected supply gap is forecast, and it is not resolved by the second trigger, an auction is triggered for reliability options. The expectation would be that the numerous projects firming up their investment cases would apply to the auction for the reliability options to help de-risk the project and proceed into development. If these projects were likely to invest anyway, the auction prices should be driven down, reducing risks and costs to consumers. This could include supporting new investments in storage, renewables, or demand response if they can contribute to addressing the predicted shortfall.

These auctions could also be developed to coincide with flagged thermal generator retirements to provide confidence that projects would be available to replace lost supply.

As a default, the auctions would be technology-agnostic. It would be open to demand-side participation as well as new supply. However, as noted above, state governments have indicated technology preferences. If state governments did wish to impose specific requirements regarding technology types, this can easily be incorporated through the allocation of the options.

Awarding options

Successful projects can get reliability options which could come in a range of forms including:

- Annuity payments
- Reliability options like those auctioned through in the Irish electricity market
- Cap contracts.

Additional conditions could be added to the awarding of contract. For example, successful applicants could be required to provide market liquidity, and clawback mechanisms could be developed to address any subsequent windfall gains made by the projects supported through the mechanism.

The design of the options should also maintain a competitive balance between incoming projects, and incumbent generators and demand response. The reliability options should not shield projects from wholesale price signals.

The costs of the reliability options would be recovered from all retailers. There are multiple ways this could be achieved. The simplest is apportioning costs across all market customers on a MWh basis. This has the advantage of being simplest to administer and is consistent with cost recovery arrangements for other non-energy costs. Alternatively, more refined cost recovery could apply costs to market customers based on contributions to system peaks.

Advantages of the proposed model

The design of a targeted capacity mechanism has numerous advantages over the PRRO.

- The design is far simpler. Many aspects of the mechanism already exist in the existing RRO, and most of the design work relates to the preferred reliability option. This should also mean much lower implementation costs and reduced regulatory burden for existing participants.
- By focussing on new investment, emphasis can be placed on options most compatible with existing financing processes. Where the PRRO would create a volatile certificate price that will likely take years to be treated as a firm revenue stream in project financing, reliability options designed to reduce the downside of future energy prices the project will be exposed to could be easily incorporated into standard project financing.
- More amenable to state-specific requirements. A targeted capacity mechanism would work with state-specific technology requirements, or with states opting in/out of the mechanism.
- Preserves retail competition. The PRRO requires all retailers to purchase capacity certificates to cover demand, a cost that vertically integrated retailers have a pre-existing hedge against. Standalone retailers, who have long term price protection through *financial* hedges, would be left to pass on a cost their competitors have hedged. This would undermine retail competition. A targeted capacity mechanism would not give vertically integrated retailers a hedge and wouldn't undermine burgeoning retail competition.
- Protects consumers from excessive costs. The auction would only be triggered when new capacity is demonstrably needed. There is no risk of providing new, large revenue streams to large thermal generators on the verge of retirement for no benefit to consumers.

While there are numerous details and design questions unresolved with this model, we think it presents significant advantages over the models presented by the ESB in its paper. The ESB should consider this model, and other alternatives, alongside the options presented in its paper before arriving at the preferred design option.

Responses to questions in the paper

Design principles

The ESB's paper outlines an assessment criteria that would be used to inform the design of the capacity mechanism. Our feedback on the criteria is that the ESB should:

- Expand on references to the level of reliability that governments value and explain how this differs from what consumers value. While the consumer value of reliability has an established metric, it is not clear how the ESB intends to quantify the same value for governments.
- Reference costs to consumers as a key parameter. Reliability is a cost trade-off, and this trade off should be clearly referenced in the assessment criteria. For example, the first criteria could be updated to reference reliability that customers and governments value and are willing to pay for.
- Reference unintended consequences arising from the introduction of a capacity mechanism, such as the risk of a reduction in competition and innovation outside of the mechanism.

Centralisation vs. decentralisation

The introduction of a capacity mechanism increases the centralisation of the NEM. All the options detailed by the ESB come with an increase in the centralisation of risk, be it through the assessment of capacity certificates, the definition of risk periods of the liabilities of retailers.

In general, we support models that are more decentralised, as they shift risk onto commercial entities who are best placed to manage them. Indeed, the design of the energy only market is centred around this principle.

Rating capacity

Defining capacity, particularly over extended timeframes is exceptionally complex. The firmness of different resources varies with resource availability, production schedules, contract market positions etc. Trying to pre-determine a level of firmness or capacity oversimplifies the differences between these types of resources and is likely to favour a particular approach or resource. This introduces an uneven playing field between different resource types. In addition, this introduces significant administrative and compliance burdens on market participants - this administrative complexity would intuitively punish aggregations and decentralised resources compared to large, centralised generators. The most efficient solution for weighting types of resources against each other already exists in our energy market - a strong price signal that encourages market participants to trade off the value of different types of resources. These competitive efficiencies are exactly what we are putting at risk by introducing a capacity mechanism.

An area the ESB has not addressed is in the initiation paper is how capacity would be defined for non-traditional sources.

For retailer-led demand response, this is primarily delivered through innovative tariff structures that encourage consumers to respond to high wholesale prices. The ESB suggests retailers would be able to utilise this demand response to reduce their actual demand, and therefore reduce the number of certificates they would need to procure. However, this disregards the fact that most demand response occurs following high wholesale prices which is not necessarily the “risk periods” envisaged by the ESB. If the “risk periods” are administratively set, as opposed to based on wholesale prices, it makes it very difficult for retailers to rely on demand response.

The capacity mechanism gets even more complicated when envisaging non-retailer demand response. If a demand response aggregator or DRSP wished to participate in the capacity mechanism, the ESB would need to work through processes for:

- How AEMO would determine the number of certificates an aggregator would be eligible for. This would need to account for the capacity of aggregations that will grow and shrink over time, and that may not have the historical performance available for AEMO to benchmark against. This is also likely to create administrative challenges for AEMO dealing with large amounts of data either collected directly from thousands of devices or connection points for each aggregation.
- To avoid double counting of the response (i.e., through the creation of certificates and through the reduction of retail load) all the response from the demand response aggregator would need to be added back to the retailer's liability under the capacity mechanism. This would involve creating baselines for all the response and adding that back to each retailer that had their liable load impacted. This is almost impossible to do in any meaningful way at a residential level, especially so for highly flexible resources like electric vehicles and pool pumps.

If the ESB wants to maintain an equal playing field between DER, demand response and centralised generators, it must work out how to address these challenges. If it does not, it will exclude demand side resources participating in the capacity mechanism, undermining efforts from the ESB and industry to utilise the demand-side in moving toward a two-sided market.

Market power

The introduction of a capacity mechanism could very easily create the conditions for market power to be exercised.

The introduction of a capacity mechanism, by design, creates a revenue stream from consumers, via retailers, to specific generation assets. These generation assets are mostly parts of gentailer portfolios. Under the current market design, the retailers that have vertically integrated with large, dispatchable assets are typically large themselves. In the current market, smaller retailers looking for hedging products can use financial hedges to help mitigate the effects of this concentration.

The market power concerns highlighted by the ESB are legitimate, and of their own making. A mechanism that creates revenue for existing generators and excludes financial intermediaries and recovers costs from retailers is highly exposed to risks of market power emerging. Vertically integrated retailers have a pre-existing hedge against the introduction of a capacity mechanism through generation ownership. The most likely form of long-term hedge available to small retailers are PPA, which provide no protection against the introduction of a capacity mechanism. The ESB should focus on the imbalance between vertically integrated retailers and standalone retailers created by the introduction of a capacity mechanism.

The ESB's paper discusses some options for addressing market power issues, which are welcome. The ESB should explore options that support liquidity and pricing of certificates, with the aim of avoiding providing windfall gains to incumbent generators.

Alternatively, a capacity mechanism that excludes all incumbent capacity neatly avoids concerns regarding the concentration of dispatchable capacity and the associated market power risks.

To address these risks, the ESB will need to rely on imperfect regulation which also risks undermining the intent of the capacity mechanism's introduction.

Other things the ESB should consider

Some other issues the ESB should consider include:

- The duration over which it expects retailers to buy certificates/pay for capacity. Buying certificates multiple years in advance would be incredibly challenging for smaller retailers. There are economically prudent reasons why retailers do not contract this far in advance including:
    - The level of uncertainty in retail position
    - Risk of locking in high prices
    - Restricting our ability to build our hedge positions progressively and flexibly.

  Forcing retailers to fully contract further in advance primarily *for the sake of establishing a price signal* is difficult to understand. For example, requiring retailers to buy certificates three years in advance would add a massive level of compliance and risk to retailers and this is likely to disproportionately outweigh any marginal impacts in forward price signals for generators compared to those currently available. This timeframe is also too short to be used by incoming generators to create revenue certainty. If the timeframe is extended, the impacts on retailers are exacerbated. It stands to reason that longer-term price signals derived by forcing long-term contracting onto retailers adds significant cost, complexity, and risk. The targeted capacity mechanism detailed earlier in this submission sets out an approach that provides a longer-term price signal without pushing these risks onto retailers and consumers.
- The ESB has also provided no clarity on what the value of these certificates are likely to be. The ESB has noted that they are subject to supply and demand, potentially becoming a very volatile commodity, not unlike the wholesale price for electricity. As such, a physical RRO may not even address concerns about price volatility held by governments.

We look forward to continuing to engage with the ESB on this issue.

If you have any queries about this submission, please contact me on (02) 9161 9068 or at Declan.Kelly@FlowPower.com.au.

Yours sincerely,

Declan Kelly

Regulatory Policy Manager

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