

Iberdrola Australia Response to P2025 Market Design Consultation Paper

09 June 2021

To: ESB by email

From: Iberdrola Australia

1. Overall comments

The critical missing element of the ESB's analysis is the climate constraints that Australian energy markets must operate under over the next 10 years. (The phrase "climate change" is notably absent from the ESB's 214 page options paper.) This is a major shortcoming of the entire process. We urge the ESB to follow the actions of the RBA, APRA and other regulatory bodies in integrating climate mitigation and adaptation risk into its decision making process. Without such consideration, Australia will continue to face a 'disorderly' transition to a zero emission future.

To have a reasonable chance of meeting our obligations under the Paris Agreement, the IEA has recently found that wealthy countries such as Australia must reduce their electricity sector emissions to zero by 2035.

The ESB should therefore consider all recommendations through the lens of how they will help Australia achieve these challenging goals as quickly and as cheaply as possible. This includes focusing on how investment in new, clean energy can be achieved through accelerated, rather than delayed, coal closures.

2. Reliability Adequacy Mechanisms

Iberdrola Australia considers that ensuring reliability is best managed through a suite of tools designed to complement efficient market signals through the NEM's energy-only spot market. This includes:

- Regular reviews by the Reliability Panel on appropriate market settings, including the reliability standard that best reflects consumers' preferences and the market price settings necessary to deliver that standard. While much of the focus is on the maximum price, we would urge consideration of the a revised cumulative price threshold (CPT). A revised CPT would create significant incentives for new entrant plants with material ramping capabilities.

- An Operating Reserves framework to allow state governments to achieve higher reliability targets if desired, to support additional investment in dispatchable capacity, and to manage unexpected events that, by definition, cannot be readily captured through “equilibrium” market modelling
- Appropriate signals through the Retailer Reliability Obligation and the Market Liquidity Obligation for a liquid forward contract market that values reliability, not just availability.
- Reducing the risk to investors of ad hoc interventions, particularly around extending the life of ageing coal generators with ‘one-off’ deals or mechanisms that provide revenue outside of the NEM gross pool.

2.1 The need for reliability not just availability

Seeking a certain *quantity* of capacity does not provide any guarantee of the *quality* of that capacity. Historically, capacity markets relied primarily on coal and gas generation, and could be linked to performance in peak demand.

However, these markets are increasingly controversial¹ in their treatment of emerging energy sources, including energy storage and portfolios of renewables² as well as demand response³. Performance linked obligations are critical, but can be difficult to define ex ante and rely on the market operator accurately forecasting future conditions.

As pointed out recently by End Game Economics⁴, the needs for ramping capability is likely to significantly increase in the future. Existing coal plants are completely incompatible with providing this capability. Instead, new technologies such as hydrogen-ready gas turbines, batteries and pumped hydro are likely to be required. Providing incentives that favour existing inflexible plant is likely to enhance the risk to system reliability, rather than reduce it.

In contrast, the NEM’s energy only market provides very strong incentives for participants to deliver both availability and reliability. For example, a 2,000 MW coal generator that is contracted stands to lose \$30 million per hour if it cannot reliably operate. Retailers who are exposed to customer load have strong incentives to contract effectively, and will do a better job in aggregate than a centralised operator.

We therefore recommend that the ESB focus on supporting existing financial markets, which requires a liquid contract market and well informed generators and customers.

¹ <https://www.argusmedia.com/en/news/2213487-spains-capacity-market-may-not-be-suited-for-batteries>

² <https://www.wa.gov.au/sites/default/files/2020-07/Information%20Paper%20-%20Storage%20participation%20in%20the%20Reserve%20Capacity%20Mechanism.pdf>

³ <https://www.energy-storage.news/news/shut-out-of-uks-capacity-market-battery-storage-register-as-dsr-instead-and>

⁴ <https://www.linkedin.com/feed/update/urn:li:activity:6806020575711129601/>

2.2 Modified financial RRO

We consider that a key element of the RRO is the MLO, that requires large market participants in a region to make narrow bid-spread offers on the ASX (or other approved exchanges). The ACCC has previously identified that horizontal market concentration is a potential source of inefficiency in the NEM.

Iberdrola Australia supports the MLO being active at all times, with a forward period of three years. This would provide greater price transparency for both generators and customers.

As a recent example, Iberdrola Australia sought pricing on a put/call option structure for 10 MW in FY23 and FY24 from two of the largest participants in the market operating in South Australia. Neither entity was able to provide pricing. It is simply unacceptable that liquidity is not being facilitated by the large oligopolistic market participants. Permanently requiring large participants to provide a buy/sell price spread for meaningful volumes would allow the market more price discovery in considering new investments.

It would also address the ESB's concern about short-term reliability for aging coal generators: generators would always have the opportunity to sell swaps (or caps, if appropriate) in a liquid forward market. They would then have clear price signals over the 42 month notice of closure period, allowing them to make clear commercial decisions to either contract (and provide revenue certainty) or close (or mothball) if forward prices do not warrant their operation.

2.2.1 Removing the T-3 trigger

The ESB has suggested that the existing RRO could be strengthened by removing the T-3 trigger, such that the RRO is "always on".

The purpose of the original T-3 trigger was to protect consumers from being forced to over-pay for levels of reliability they did not value. Specifically, additional obligations would only be placed on retailers if there was a market failure to meet the reliability standard, defined as AEMO projecting a breach of the standard three years ahead (T-3). T-3 was chosen to align with the timeframe for developing a new entrant generator, indicatively a gas turbine.

A breach of the reliability standard on shorter timeframes did not necessarily imply a market failure: instead, it might reflect market events that neither AEMO nor the industry projected, or simply extreme real-time conditions that would not be cost effective to design the system for (for example, short-duration but extreme heat waves leading to material coal outages). Building capacity for providing energy for only a few minutes every few years is inefficient. Enabling voluntary demand

response through widespread adoption of digital metering is a far more cost-effective option.⁵

The ESB has proposed that removing the T-3 would increase incentives on retailers and large energy users to contract for energy ahead of time. Given the limited time spent on evaluating this option by the ESB to date, it would be helpful for the ESB to first identify what has changed since the previous decision to implement a T-3 trigger.

A key change is that batteries are now a mature technology that can be developed more rapidly, with an advanced project likely to be able to be approved and constructed within 12-24 months (not including any connection delays due system strength modelling and/or a lack of proactive network development, which we expect to be addressed by TransGrid's System Strength rule change).

The ESB could also explore how removing the T-3 trigger would affect customer incentives for contracting. Given the cyclical nature of the NEM, there is some risk that customers choose not to contract when prices are low, despite the likelihood of prices rebounding, as happened from 2015 to 2017. It is important that the RRO be implemented thoughtfully. A retailer providing 'spot pass through' products may choose to accept low level spot risk (i.e. sub \$300/MWh pricing) but purchase caps for mitigating higher prices..

2.2.2 Capacity markets

Infigen does not support the proposed physical capacity market (physical RRO).

- The ESB has not articulated how this would actually drive investment in the long-term. For example, if developers are currently unable to secure long-term contracts for energy, it is unlikely they will secure long-term trades for new capacity products. Conversely, unless the ESB considers that consumers should pay higher costs for energy, capacity credits should not be designed to transfer additional profits to otherwise cost-effective projects.
- Capacity markets do not, of themselves, improve revenue certainty for generators. For example, capacity prices in PJM fell 41-64% in the most recent auction⁶, driven by emerging technologies as well as a complex regulatory regime.
- The current rules already prohibit coal units from closing within 42 months without permission. A new capacity product would only change operational decisions if the ESB does not expect generators to follow the existing rules and either:
 - The capacity market is designed to transfer additional profits from consumers to coal generators; or

⁵ <https://www.iaee.org/en/publications/newsletterdl.aspx?id=805>

⁶ BNEF

- Coal generators are uncompetitive in securing contracts, and so consumers must be forced to contract with them.
- If the ESB considers that existing notice to close rules are not sufficient for a smooth transition to clean energy, then the ESB could develop an appropriate penalty regime to generators who close without notice and therefore impose costs on the system (e.g., similar to the penalties on the existing RRO for non-compliant participants to pay a share of RERT costs). This could include offsetting the costs of a the proposed Operating Reserves mechanism.
- The original RRO was developed over 24 months, with extensive consultation from industry and consumer groups. No such analysis has been conducted for the PRRO, and therefore proceeding with this recommendation is guaranteed to result in unintended consequences for both consumer costs and reliability
- The ESB’s Deep Dive sessions revealed strong opposition from both industry and consumer groups.

Furthermore, the PRRO would be a significant reform to the energy market, requiring several years of development and implementation. Major reforms and market reviews risk a chilling effect on investment, where funders are either unwilling to commit to an uncertain future or require a significant risk premium – increasing costs to consumers.

Internationally, capacity markets have not been tested with high penetrations of renewable generation. The critical challenge with the market transformation is one of forecasting and uncertainty. This is best undertaken by market participants with the skills and experience to understand the spatial and temporal dynamics of the market.

2.3 Operating Reserves

The ESB appears to be approach Operating Reserves primarily as a ramping reserve – with analysis focused on typical ramps and whether market signals are sufficient to manage those ramps.

We agree that there is no need for a ramping market at this time. The MPC provides a very strong signal for retailers to make capacity available, where such capacity exists. However, there are “unknown unknowns” to manage, including emerging protected and “non-distinct” events that may not yet be fully quantified.

Critically, it seems likely AEMO will continue to procure RERT under the Interim Reliability Measures, despite the 0.002% reliability standard being continually met. An Operating Reserve of the design proposed by Infigen would be strictly better (a “reliability reserve” or “standing reserve”) – ensuring that resources are developed and made available at all times, but also allowing participants to decide in real-time *which* specific resources are made available to the energy market or the Operating Reserves market.

An ongoing requirement for additional reserves will necessarily tighten the supply-demand balance in the energy market, and accelerate the development of new, flexible, dispatchable resources, including demand response.

The Operating Reserves framework proposed by Infigen to the AEMC would allow state governments to directly operationalise targets for higher levels of reliability. For example, the volume of operating reserves could be set to meet an N-2 reliability requirement.

We therefore recommend:

- The ESB re-evaluate Operating Reserves as a Resource Adequacy Mechanism, with the design proposed by Infigen to the AEMC
- Focus on a service that procures resources to be triggered by AEMO as a reliability service (similar to RERT), through a market-based mechanism
- Consider the costs and benefits of this service compared to the existing RERT mechanism, including its ability to respond to non-credible events.

2.4 Exit frameworks

As noted by the ACCC and the Finkel Review, short-notice closures of aging coal power stations prevents the market to respond to expected high prices by delivering timely investment⁷.

The current rules already mandate that generators must not close without providing 42 months' notice unless an exemption is granted. If the ESB considers that generators will not follow the existing rules, then appropriate penalties should be applied (including coal bonds, as proposed by Grattan⁸).

Iberdrola Australia therefore does not support contracts to extend the life of coal generators:

- Australia has committed to the Paris Agreement, which requires net-zero emissions well before 2050, and a net-zero electricity sector by 2035 in Australia⁹.
- Delaying closures will increase the risk of “shocks” to the system when we do need to decarbonise, and prevent a smooth transition.
- It will represent a barrier to new entrant generators, who will be unable to make firm business cases to replace aging generation – a greater threat of intervention will increase financing costs, or defer investments, leading to higher costs to consumers.
- It creates a moral hazard, with the risk of a “death spiral” where all units threaten closure and seek a guaranteed revenue stream, with significant and growing costs to taxpayers (and possibly consumers).

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https://www.accc.gov.au/system/files/Retail%20Electricity%20Pricing%20Inquiry%E2%80%94Final%20Report%20June%202018_0.pdf

⁸ <https://grattan.edu.au/news/no-more-hazelwoods-a-proposal-to-ensure-coal-plants-close-in-an-orderly-way/>

⁹ <https://www.iea.org/reports/net-zero-by-2050>

- The ESB’s proposed contracts do not necessarily deliver *reliable* capacity; as with capacity markets, any availability payments must be coupled with strong performance obligations (linked to the real-time spot price).
- By displacing new more affordable resources, if coal units are not available at key times, it will also increase wholesale prices – at potentially high cost to consumers. Low coal availability in May 2021 demonstrates the likely outcomes if the system is forced to depend on coal units for supply.

The ESB should therefore recommend to governments not to pay units to remain online, but should instead strengthen the 42 month notice of closure requirements. If, however, the ESB does recommend establishing an Orderly Exit Management Contract framework, the ESB should explicitly recommend that contracts do not extend beyond 12 months – consistent the philosophy behind the proposed “always on” RRO, that reliability shortfalls can be reasonably addressed within 12 months.

By clearly advising governments of these risks, the ESB would help deliver timely and affordable resources to the market, and rapidly reduce emissions. The alternative is higher costs for delivering state renewable targets.

The ESB should note that under the Clean Energy Future package, billions of dollars of assistance was provided to coal-fired generators to address long-term asset devaluation as a result of climate change policy. Despite the carbon price being removed only 2 years later, this compensation was never paid back. Consumers and taxpayers should be transparently informed how much further ‘assistance’ is to be provided to these assets.

Obligations in contracts

The ESB could also make recommendations to governments that if they do decide to issue contracts, despite the issues raised above, that there are appropriate incentive for reliability of supply, not just capacity – delivering both reliability *and* affordability. The most transparent mechanism is market price exposures. We recommend that any contracts with coal generators *must* be accompanied by an obligation to sell financial derivatives to consumers: this will ensure availability, reliability, *and* affordability.

3. Essential System Services

Iberdrola Australia strongly supports establishing “missing markets” for system services. This includes:

- The rapid implementation of the Fast Frequency Response (FFR) rule change, replacing ad hoc AEMO and government contracts with a transparent market;
- Implementing the system strength rule change, to avoid connection delays and uncoordinated synchronous condenser deployment that will complicate AEMO modelling;

- Developing a market for narrow-deadband primary frequency control, alongside a wide-deadband safety net.

Iberdrola Australia also supports investigating an inertia framework, including optimisation with FFR.

The ESB could play a valuable role in coordinating the market bodies and industry to establish agreed definitions and standards for synthetic inertia from IBR (i.e., an inertial response that is proportional to ROCOF and is delivered automatically and instantaneously, rather than a triggered FFR response). This would allow more rapid uptake and integration of synthetic inertia into the future grid.

4. Transmission access reform

Iberdrola Australia supports the ESB in working with state governments to deliver effective frameworks for new REZs, and a coordinated approach. It is critical that AEMO plans for the rapid transition to renewables, which will involve both REZs and distributed renewables – maximising the benefit of the grid. Some form of initial access rights can help avoid a “rate of change” problem (as occurred previously due to policy uncertainty around the RET); this should be implemented as simply as possible to allow for rapid investment.

However, as noted in Iberdrola Australia’s previous submissions, Iberdrola Australia disagrees that there is a need for a wider reform of the grid. The ESB does not appear to have taken into consideration the significant feedback from stakeholders, the extensive consultation on COGATI, or the extensive consultation on the previously rejected Optional Firm Access regime. The Deep Dive Consultation sessions held by the ESB found virtually no support for any of the proposed mechanisms.

Conclusion

We look forward to the opportunity to continue to engage with the ESB. If you would like to discuss this submission, please contact Dr Joel Gilmore (GM Energy Policy & Planning) on joel.gilmore@iberdrola.com.au or 0411 267 044.

Yours Sincerely

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