



AUSTRALIAN
ALUMINIUM
COUNCIL LTD

Level 1,
18 National Circuit
Barton ACT 2600
Ph: 02 6267 1800
info@aluminium.org.au

Energy Security Board (ESB)
Via info@esb.org.au

10 February 2022

Dear Chair

Australian Aluminium Council Response to Project Initiation Paper Capacity Mechanism Project

The Australian Aluminium Council (the Council) represents Australia's bauxite mining, alumina refining, aluminium smelting and downstream processing industries. The aluminium industry has been operating in Australia since 1955, and over the decades has been a significant contributor to the nation's economy. It includes five large (>10 Mt per annum) bauxite mines plus several smaller mines which collectively produce over 100 Mt per annum making Australia the world's largest producer of bauxite. Australia is the world's largest exporter of alumina with six alumina refineries producing around 20 Mt per annum of alumina. Australia is the sixth largest producer of aluminium, with four aluminium smelters and additional downstream processing industries including more than 20 extrusion presses. Aluminium is Australia's highest earning manufacturing export. The industry directly employs more than 17,000 people, including 4,000 full time equivalent contractors. It also indirectly supports around 60,000 families predominantly in regional Australia.

The Council welcomes the opportunity to provide feedback to the ESB on the capacity mechanism. The ESB has been asked to deliver an efficient and effective detailed design on this mechanism by the end of 2022. The Council will focus its response on the Capacity Mechanism Project initiation paper (the Paper), but within the context of the broader Post 2025 NEM reforms.

The Council had previously articulated its concerns about an overlap between a capacity mechanism and a potential Operating Reserve mechanism. Therefore, the decision by the Australian Energy Market Commission (AEMC) to delay the publication on the draft determination on the Operating Reserve Market until the capacity mechanism design is complete is welcomed by the Council.

The Council appreciates the publication of an indicative timeframe for consultation to continue through 2022. While noting that this is only indicative, it is very useful in order to be able to appropriate plan for resourcing the Council's engagement in this important topic.

Aluminium industry and the National Electricity Market

Within the National Electricity Market (NEM) the Australian aluminium industry has four aluminium smelters and two alumina refineries which use more than 10% of the electricity consumed in the NEM. Accordingly, the Australian aluminium industry has a strong interest in electricity policy. Electricity typically accounts for around 30-40% of aluminium smelters' cost base, and therefore it is a key determinant of their international competitiveness. Alumina refineries, while not as electricity intensive as smelters, are also significantly

exposed to electricity policy. For the aluminium industry, it is the delivered cost (including transmission) of electricity which drives international competitiveness.

The electricity supply requirements of the aluminium industry, can be summarised as follows:

- least cost, and an internationally competitive electricity cost, as a minimum;
- consistent uninterrupted electricity supply;
- an ability to secure electricity supply under long-term contractual arrangements; and
- an ability to be compensated adequately for system services which smelters and refineries provide for the network and its stakeholders.

These outcomes need to be delivered within the framework of Australia's Paris Agreement emission targets.

Jurisdictional Derogations in a Capacity Mechanism

The Paper notes in the introduction that jurisdictional schemes are introducing additional uncertainty. The Council notes that in its response to the ESB, the Energy National Cabinet Reform Committee (ENCRC) has agreed to a number of principles to guide jurisdictional schemesⁱ. While these seek to establish a common approach across the NEM, this obligation is non-binding.

Further to this, the principlesⁱⁱ to guide capacity mechanism development provide for jurisdictions to derogate from the National Electricity Rules if they wish, following the process set out under the National Electricity Law (NEL). While the optionality of jurisdictional derogation is not new; the increased focus on variation for jurisdictions to develop their own path (clauses 11-14), leads the Council to be concerned that the market will not have just one new capacity mechanism, but a variety of mechanisms across the NEM. This will further add to the difficulty for major industrials to be able to find counter parties which are willing to bundle services and provide the long term contracts which are essential to underpin the capital investment industry requires.

The Council particularly focussed on the capacity mechanism; as discussions have previously indicated that subject to its design; it was considered that this may be one way under the Post 2025 Market Design, that the services currently provided by very large electricity consumers, as aluminium smelters could be valued; with a bankable certificate mechanism. The Council recognises that smelters, play multiple roles in the market, which are currently unpriced, or where the mechanism to value them is poorly aligned with operational practices. These services are entwined across resource adequacy, essential system services and two-sided markets; and a capacity market is just one way to value these services.

Design Objectives

The Council welcomes the recognition that the objective for the design process is to ensure investment happens at least cost and in a manner which increases confidence, thereby reducing the need for interventions. It also welcomes the recognition allow resources on *both the supply and demand sides* to be adequately rewarded for the reliability services they provide.

Furthermore, in addition to consideration of the design objectives for a capacity mechanism, consideration should also be given to what other changes will be required in the NEM to ensure a least cost outcome to consumers. In particular; there should be consideration to reducing the market price cap and other interactions with the existing market, which may otherwise result in generators double dipping for the same service.

In designing the Capacity Mechanism, Members of the Council are seeking a mechanism which incentivises the technologies and structures to ensure the grid supply can be maintained in a secure state during times of maximum duress, whether that be lack of supply to match demand or lack of demand to match supply. The Council acknowledges that without the development of such a mechanism, the NEM is currently heading towards a system which lacks the inertia and demand requirements required to address the risk of instability. In principle, the Council therefore supports the concept of a mechanism to address this, which could be a Capacity Mechanism (or potentially alternatively an Operating Reserve).

A well designed mechanism should ensure that the grid that continues to encourage development of new low to zero emissions generation, dispatchable demand and other technologies which can provide inertia, systems strength and dispatchability to maintain a reliable firm grid.

The Council believes the key elements of success in the design objectives for the Capacity Mechanism are:

1. Definition (s) of capacity;
2. Ensuring the governance framework is appropriate; and
3. Ensure any entities, including the demand site, who receive payments can dispatch.

Failure to achieve these three elements will lead to unintended consequences, increased cost and risk to consumers with little to no benefit. This was the experience in the early years of the West Australian (WA) capacity market and Demand Side Management. The Council believes that in addition to reviewing international examples, the ESB should further consider lessons learnt in WA, which do not seem to have been included in considerations to date.

Existing Contractual Terms

All of Australia's aluminium smelters have long term existing contracts. The expiry of these contracts for Australian smelters varies from 2025 to 2029 (with Bell Bay Aluminium in Tasmania the first to finish). However, other major industrial facilities; including alumina refineries; also have long term base load electricity contracts. Even smelters with existing long-term contracts are not immune to changes in the market, as contracts still contain a range of change-in-law provisions. These incumbent long-term contracts need to be recognised and grandfathered where there is design change in the market, given the importance of these contracts in underpinning minimum demand and dispatchable generation.

These contracts currently bundle many markets services, including capacity risk management, required to meet continuous electricity demand at an internationally competitive price. One of the key drivers for the new markets which are currently being designed, is declining and less predictable minimum demand. However, this does not recognise that industrial loads from smelters and refineries have *not reduced* their minimum load and therefore, the counterparty retains their ability to manage capacity and other services on these loads through existing NEM mechanisms. These existing contracts underpin dispatchable generation and system reliability, particularly when demand is low and variable renewable generation is high. However, these contracts are not immune to changes in the market as contracts may contain a range of change-in-law and other pass-through provisions, so there is a real risk that base load consumers could pay twice for additional market services introduced to provide reliable and secure supply for customers with highly variable demand. It will also be important to the capacity costs in any future market are able to be hedged.

International competitiveness of aluminium smelters depends on the ability to secure long term, well priced contracts. For smelters seeking to recontract, it is acknowledged that decarbonised electricity will be a core aspect of future contracts. The long term nature of these contracts also underpins the ability of smelters to make the substantial capital investment required to maintain international competitiveness. Increasingly, as other industries such as alumina refineries, seek to electrify their processes to reduce emissions these assets will also require long term competitive contracts to support the commercial investment required for transformative abatement.

For those assets which are seeking to re-contract or develop new long-term contracts, this is becoming increasingly difficult with increased numbers of markets. Counterparties are less able to supply bundled contracts and as noted above there is the real risk that through bundled contracts that pre-date particular changes to the market, large users pay twice. This making it harder for industry to manage contracts rather than focussing on their core purpose of value adding to Australia's resources.

Hence, in developing mechanisms to provide additional services, the Council's preference is that this should be by adapting the current wholesale market, rather than developing a plethora of new markets for each service. The Council's rationale for this is:

- The product being sold is quality electricity, and the services are all components which make up the production of electricity of the right *quality*.
- A single market price is more likely to support a liquid hedge market and provide consumers with greater ability to hedge. Currently, there are a limited number of price nodes across the NEM and a reasonably functioning hedge market. The introduction of additional non hedgeable markets leaves customers exposed to a greater proportion of electricity costs that are not readily contractable and could be volatile.
- These charges may end up being an add-on not covered by existing spot price hedge contracts, so customers with long-term contracts could end up paying extra charges on top of their agreed electricity charge for firm offtake.
- The more markets there are, the more difficult it will be to understand the interaction between them, and the less likely that each of these markets will be competitive and liquid, increasing financial risk in the contract market.
- The alternative of non-market procurement mechanisms for separate services is more likely to result in costs and inefficiencies falling largely on consumers through "smeared" cost recovery mechanisms offering no opportunity or incentives for mitigation.

Feedback to Stakeholder Questions

The Council has focussed its responses on specific questions where it has additional perspectives to share with the ESB.

1. Considering the design principles from Energy Ministers, are there any additional assessment criteria the Board should use when assessing identified issues and possible solutions?

While the principles focus on cost, the criteria do not. The Council believes that the criteria should include achieving the goals at least system cost, with cost and risk to be shared on a causer pays basis.

6. Are there design choices from these international examples that stakeholders consider will not work well in the context of the NEM?

The Council has members with experience in the centralised WA capacity market. While the Council notes the differences between the South West Interconnected System (SWIS) and the NEM; based on this experience, the Council would be concerned if liable entities (retailers and large customers) were required to procure capacity sufficient to cover all their actual load at the time of a reliability 'at-risk' period risks significant market-wide over-procurement (and consequent excessive costs) as ex-ante assessments of "actual load" at individual participant level are bound to be conservative. Conversely, the Council is concerned that a fully decentralised model would potentially present too much risk to consumers, who will end up paying. Therefore, the Council initially supports the further development of a *Hybrid Model (Option 1b)*. This provides the centralised control over the forecast while allowing the market to optimise pricing outcomes. In supporting this model, the centralised forecasts should be delivered using a transparent process and be able to be independently assessed (similar to reliability standards), with the centralised agency held to account for this.

13. Which of the procurement approaches is best suited to the NEM and why?

The Council believes that there may need to be a combination approach. For example, subject to the final design, capacity certificates may be included in a bilateral arrangement between large energy users and energy suppliers. However, there would also be the need for an additional market (auction or trading platform).

21. Are there any other issues the ESB needs to consider when developing the approach to penalties and compliance?

Based on experience in WA, the Council favours a rigorous ex ante assessment of capacity sources in determining physical certificate eligibility, rather than ex post. The Council would prefer AEMO put

compliance in place up front with less regulation. The Council's experience in WA was that the ex post governance and compliance arrangements, allowed for over procurement of capacity which could not practically be used by the market, resulting in significant costs to consumers. However careful consideration needs to be given to the incentives for certificate issuers to be physically available during at-risk periods – unlike the current RRO where sellers of qualifying financial contracts face high spot payout risks when supply-demand balance is tight, it is not clear what financial or other incentives certificate issuers would face if not available at these times.

When considering compliance periods being monthly or quarterly, the balance needs to be struck between the administration required for each compliance period; compared to the flexibility being sought by AEMO. This is particularly important if there is to be participation by the demand side; where this is not core business; and the administration overhead may be considerable.

One of the key issues will be the definition of capacity. As outlined in Table 1, under different models' capacity will have a different definition. This definition will then determine the applicability of a capacity mechanism for different industries, what capacity is needed for what purpose. As the ESB resolves this definition (Section 5.1), the key issue will be ensuring that only truly dispatchable entities are eligible to receive payment and ensure compliance processes support this.

Conclusion

The Council supports the development of a mechanism which incentivises the right technologies and structures to ensure the grid can be maintained in a secure state during times of maximum duress, whether that be lack of supply to match demand, or lack of demand to match supply. In principle, the Council therefore supports the concept of a mechanism to address this, which could be a Capacity Mechanism (or potentially alternatively an Operating Reserve); in which case the Council's initial preference would be a hybrid model. The key concerns to address during the next phase of consultation are the definition of the capacity which is to be met and the governance frameworks to ensure the cost and risk to consumers is minimised; while achieving the mechanism's goals. Increased understanding will be required of how this mechanism will interact with other parameters, such as a reduction of the market price cap.

The Council seeks a national climate and energy policy framework which is transparent, stable and predictable, while maintaining the economic health of the nation including vital import and export competing industries. The P2025 market design is a crucial aspect of this for the aluminium industry.

Given the importance of the P2025 market design for the aluminium industry, the Council is happy to provide further information on any of the issues raised in this letter and looks forward to continuing to work further with the Energy Security Board, the Department and other agencies on its development.

Kind regards,



Marghanita Johnson
Chief Executive Officer
Australian Aluminium Council
M +61 (0)466 224 636
marghanita.johnson@aluminium.org.au

ⁱ <https://www.energy.gov.au/sites/default/files/2021-10/Principles%20to%20guide%20jurisdictional%20schemes.pdf>

ⁱⁱ <https://www.energy.gov.au/sites/default/files/2021-10/Principles%20to%20guide%20Capacity%20Mechanism%20development.pdf>