

Reliability Panel
c/- Australian Energy Market Commission
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AUSTRALIAN
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COUNCIL LTD

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Dear Panel

Re: Review of the reliability standard and settings guidelines

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

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 and uses 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.

Review of the Reliability Standard and Settings

The Council has considered how the Review of the Reliability Standard and Settings Guidelines Consultation Paper (the Paper) contributes towards meeting the needs of the aluminium industry and the content has been tested against the Council's view of design principles for an electricity system (See *Attachment 1*). Aluminium smelters generally have long-term electricity contacts. As each smelter, refinery and extruder has unique electricity arrangements, the Council will reserve its comments on the Paper to a high level.

The Paper notes that AEMO forecasts no breaches of the reliability standard (0.002% USE) until 2029 although there is forecast to be a breach of the interim reliability measure (0.0006% USE) for NSW in 2023 when the Liddell power station is expected to retire. In recent years reliability has been challenged by less predictable events, such as bushfires and storms, which led to transmission outages and islanding of regions.

At the same forecast period, the NEM is undergoing substantial changes in both the physical power system as well as overlapping reforms, through existing AEMC processes as well as the Post 2025 Market Design.

Role of Aluminium Smelters in maintaining Reliability and Stability

Aluminium smelters already offer a range of services and functions which support the network over varying weather, network demand and operating conditions, including Reliability and Emergency Reserve Trader (RERT) and Frequency Control Ancillary Services (FCAS). Smelters' large and fast-acting interruptibility helps secure and restore stability to the network before and after contingencies occur. The industry has increasingly been called upon to support grid stability and reliability, as the challenges in managing the grid increase. Amongst the roles played by very large and continuous smelter loads are:

- Buffering the erosion of minimum scheduled demand;
- Support for the continued economic commitment and operation of large-scale synchronous generation (noting that de-commitment of synchronous units due to inadequate base demand levels can regularly remove large blocks of inertia and system strength from the system);
- Supply of certain essential system services, such as contingency FCAS;
- Potential participation in "backstop" reliability schemes such as RERT or Interim Reliability Reserve (IRR); and
- Enhancing system resilience through rapid unscheduled interruptibility in the case of extreme high impact events, which like more extreme weather conditions are occurring increasingly frequently in the NEM and are increasingly complex to match with dispatch in real time.

Only some of the current services are explicitly remunerated, nor is their overall "real option" value recognised – namely the flexibility that retention of these large loads provides in future choices of physical and economic mechanisms to stabilise the system and market. In the absence of these loads the measures required to maintain secure and resilient operation of the grid are likely to require significant additional investment and cost to all consumers.

Reliability Standards and Settings Guidelines

When considering the principles, to meet the National Energy Objective (NEO), the Panel needs to balance price risk with reliability and other risks. While Council members value reliability, the challenges faced in the transition of the grid mean impacts on consumers are wide ranging; not just reliability.

In a fast transitioning physical and market design, the Panel needs to be suitably flexible to be able to consider all material information; and including form, level, application and form of indexation for the standard, caps, threshold and floor. However, this needs to be done within a strong governance framework; to ensure the Panel has an appropriate risk appetite that reflects the needs of customers and is neither excessively cautious nor imprudent. The Council would support greater flexibility in the setting of the standards, provided it is matched with robust consultation and review processes.

The Council is happy to provide further information on any of the issues raised in this letter and look forward to continuing to work further with the Australian Energy Market Commission on these matters to improve the commercial arrangements supporting a competitive, reliable and secure NEM.

Kind regards,



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Attachment 1

Australian Aluminium Council - Electricity System Design Principles

Engender Australian advantage

Support a future where Australia's world class energy resources are translated into internationally competitive, low emissions, reliable energy to ensure industrial production, emissions and jobs are not exported to other countries. As Australia transitions away from a thermal fleet and towards increasingly variable and distributed generation, industrial load provides a physical and commercial "ballast" to the grid. The value of this load as both ballast and interruptible supply needs to be recognised in the development of competitive frameworks.

Avoid shocks to all market participants, including consumers

The approach to transition should be consistent with a rapid evolution, rather than revolution, in electricity reform processes. Transition should seek to avoid shocks and discontinuities where possible and rule makers should work to ensure the preservation of existing commercial contracts (grandfathering) to prevent disadvantage to all market participants who are willing to invest and contract for the long term.

Deliver improvements throughout the transition, not just in the long term

The short term versus long term balance in interpreting the National Electricity Objective is skewed in favour of the long term, which can lead to short term disadvantage. There needs to be a more risk-based approach to changes which reflects the certainty around short term costs and the uncertainty of long-term benefits. The staging of the transition must be recognised, as well as the final outcome, looking for benefits along the pathway. In considering the most beneficial end point, the benefits and costs of the transition, should also be considered.

Recognise the starting point and state-by-state variation in any design

The current energy-only market has not been able to deliver perfect competition, some regions are more balanced than others and many regions have relied on major Government investment to provide supply and manage the transition. Future market reforms need to recognise that the playing field within the market does not start from a basis of levelized competition, regulations will be required which encourage competition in the services which are needed to balance the current imperfections and in jurisdictions where the current market competition levels are unable to drive efficient outcomes. In designing new structures that recognise the reality of the starting point an important principle of design is that the cost of regulation should not exceed the private benefits.

User participation should be voluntary and recognise the complexity of participation

Even for large, sophisticated industrial users, the procurement of electricity is primarily seen as an input into production; rather than being the core process for the business itself. As the emphasis in market design switches to more demand side participation, assumptions need to be continually tested regarding the complexity of requirements to participate. It is important to recognise that demand site participation will impact on both operational processes and safety; and has the potential to distract from the core business processes of end users. It requires complex technical considerations within the businesses of industrial users that interact with the market. Outsourcing participation to an intermediary does not remove the need for the business to manage its physical interface with the market. Accordingly, services that industrial users could provide – such as demand management, stability, ancillary services, and emergency response – should be provided on a voluntary basis and need to be adequately compensated for.