SUBMISSION

RESERVE SERVICES IN THE NEM – DIRECTIONS PAPER
11 FEBRUARY 2021

EUAA
Energy Users Association of Australia

INTRODUCTION

The Energy Users Association of Australia (EUAA) is the peak body representing Australian commercial and industrial energy users. Our membership covers a broad cross section of the Australian economy including significant retail, manufacturing, food and materials processing industries. Combined our members employ over 1 million Australians, pay billions in energy bills every year and expect to see all parts of the energy supply chain making their contribution to the National Electricity Objective.

Our members are highly exposed to movements in both gas and electricity prices and have been under increasing stress due to escalating energy costs. These increased costs are either absorbed by the business, making it more difficult to maintain existing levels of employment or passed through to consumers in the form of increases in the prices paid for many everyday items.

We welcome the opportunity to respond to the Reserve Services in the National Electricity Market Directions Paper (Directions Paper) and appreciate the work being carried out by the AEMC and ESB to synthesise the many parallel policy and regulatory processes currently underway.

ENERGY MARKET TRANSFORMATION

The EUAA fully appreciates the magnitude of the transformation that our energy markets are experiencing and the potential impacts on cost, risk, reliability, security and environmental sustainability. This transformation is no more profound than in energy generation where, over the last 20 years we have moved from a government owned, highly centralised, thermal generation fleet to a predominantly privately owned, highly dispersed generation fleet that is progressively dominated by non-synchronous Variable Renewable Energy (VRE).

There are many positives associated with VRE and the transition to a low emissions energy market is well underway. However, as highlighted on numerous occasions in the Directions Paper, VRE generation is creating "variability and uncertainty in power system conditions."

Therefore, the large scale integration of VRE is posing new and significant challenges for energy markets including those associated with maintaining system strength and reliability.

In the face of these changes, regulators, governments and industry have already begun significant work and made substantial investments to manage the issues that VRE is creating including:

- The Retailer Reliability Obligation (RRO)
- Enhancements/refinements to RERT
- Snowy 2.0 and associated transmission investment
- Significant investments in large scale batteries (private and government investments)
- Increasing investments in gas fired power generation
- NSW Electricity Road Map which includes a strong focus on "dispatchability"
- Federal governments UNGI program

Putting government investments aside, it is clear there is significant interest in grid scale battery investment already occurring with the most recent announcement being a $2.4B 1,200MW battery at Hunter Hill in NSW being proposed by CEP Energy[1]. This and many other investments in dispatchable and flexible resources are being made in response to existing market settings and price signals.

As the Discussion Paper identifies on page 12:

> *"Under current energy market arrangements, price signals provide the primary incentive to secure the required energy supply to match demand. The aim is to ensure that system reliability objectives are met over both the short-term (pre-dispatch) and long-term (over several years). This incentive also secures the provision of reserves as generators manage their ability to respond to changing market conditions.*
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> *Therefore, the buying and selling of electricity, as well as associated financial products via contract and spot markets is the main mechanism through which this occurs. Market participants make investment and operational decisions based on these market signals. Prices in the spot and contract markets provide signals for adequate generation and demand-side resources to be built and dispatched, as well as information about the balance of supply and demand across different places and times."*

It seems clear that private investors and market participants are behaving in a way that reflect the desired outcome of current arrangements.

More broadly, when it comes to energy supply, energy users are technology neutral and simply require a product that is provided at least cost, that is safe, that is reliable, that is fit for purpose and progressively that it is environmentally sustainable.

Therefore, it is our strong desire to ensure that all market participants, including VRE generators, face the costs and risks they are either directly responsible for, or are in the best position to manage. Equally, we believe that the more of these costs and risks that are directly exposed to competitive forces, the more likely it is that consumers will benefit from a least cost outcome.

Given this, we tend to favour policy and regulatory responses that are guided by the "causer pays" approach. This is why we support continuation of the "do no harm" concept as a prominent guiding principle to ensure fair and reasonable outcomes are achieved for all market participants.

Facing these costs and risks directly would incentivise appropriate investment and operational decisions by market participants with the cost of compliance either being absorbed into the overall cost base of the market participant or passed through to consumers (either in part or in full) depending on their competitive position.

Therefore, in assessing any rule change, including those in the Directions Paper, we urge the AEMC to give consideration to the most appropriate method of incentivising market participant behaviour recognising that simply creating another market may not always lead to the least cost outcome for consumers and may in fact deliver windfall gains to some market participants. It may be that a regulatory response based around "causer pays" and "do no harm" principles could deliver the right balance between cost and risk allocation across all market participants.

[1] https://www.afr.com/companies/energy/hunter-set-for-world-s-biggest-battery-20210204-p56zji

GENERAL COMMENTS

We believe the AEMC has provided an excellent overview of the key issues facing an evolving NEM and has identified a number of problems that may require further action to resolve.

The EUAA see that:

- Increasing penetration of VRE will continue to create issues associated with system strength and reliability.
- The inevitable retirement of large synchronous generation, the type of which provides services the NEM required for successful operation (i.e. system strength, firming capacity) creates a need for investment in technologies that replicate these vital services.
- The increasing number and impact of market interventions (i.e. RERT, participant directions) by AEMO is a concern and we must seek ways to eliminate the need for these.

The Directions Paper clearly identifies that increasing penetration of VRE is the cause of a number of the issues that need to be addressed. While the AEMC role is to seek out market responses to emerging issues we believe a broader set of principles should be considered.

For example, it is not unreasonable for consumers to expect that all generators deliver a product that is fit for purpose and "does no harm". Therefore, part of the overall regulatory response should include stricter generator standards and some obligation to replicate or replace the services that are being withdrawn from the market. We understand some of these issues are being tackled in other ESB workstreams (i.e. system strength, ahead markets).

In this way the risks and costs of the changing market are borne in the first instance by the generator, who, unlike consumers, is in the best position to manage them. These costs will eventually be recovered from consumers but will be exposed to market forces which is likely to deliver lower cost outcomes. We believe this principle should inform further work in this area as it informs our assessment of these rule changes.

Consistent with this, when looking at any rule change request, policy option or regulatory design, the key questions for energy users are:

- Has a genuine need been established or gap identified that can't be resolved within existing market and commercial arrangements (or with modest adjustments to existing arrangements)?
- Where does this fit into the overarching policy and regulatory approach (i.e. is there a potential overlap with other reforms)?
- Once a clear need has been established, what is the optimal approach to bring about the desired outcome such that it delivers the least cost outcome for consumers recognising that both markets and regulation can deliver this outcome?
- Has a robust cost benefit analysis been conducted that demonstrates irrefutable positive outcomes for consumers?
- Are the costs and risks appropriately apportioned?

RESPONSES TO SPECIFIC RULE CHANGES

Rule change proposed by Infigen Energy - Dynamic Operating Reserves

- While the need for investment in more dispatchable resources is undeniable, based on evidence of current and planned investment in this area it does not appear that a material gap in current market and/or commercial arrangement exists at this time.
- Therefore, we do not believe this rule change currently fits into the overarching policy and regulatory approach.
- While some of the approaches put forward in the Direction Paper seem reasonable, we do not believe that creating a new market mechanism is warranted at this time.
- We have not seen any robust cost benefit analysis that demonstrates better long-term outcomes for consumers as a result of this rule change.
- If this rule change were to proceed, cost and risk associated with it (i.e. purchase of firming contracts) would in the first instance need to be borne by market participants (i.e. VRE generators) who would then need to absorb this into their overall cost base.

In our submission to the ESB Post 2025 Market Design Consultation Paper, 19 October 2020 (page 11), we indicated our support for *"further consideration of an operating reserve".* We continue to be open to considering the need for an operating reserve market, however as we have already highlighted and as the Directions Paper states on page 23[2] significant investment is already occurring.

"For example, AGL has recently announced a longer duration 250 MW (1,000MWh) battery to be installed in South Australia"

While on page 24 it states,

"Since this assessment was undertaken a number of projects have been announced but not yet committed. This includes a 300 MW battery in Victoria to be commissioned in late 2021 (which is supported by the Victorian Government) and a 250 MW battery in South Australia to be commissioned by 2024 (which has no financial support from government). This assessment also does not appear to include a range of other investments in dispatchable capacity not yet committed. In NSW alone, for example, this includes:

- *a 250MW gas peaking plant at Newcastle and four large-scale 50 MW batteries (as part of AGL's strategy to replace Liddell's capacity)*
- *a 320 MW gas peaking plant at Tallawarra*
- *a 50 MW battery at Darlington Point, and*
- *5 projects funded under the NSW Government's Emerging Energy Program.*

In addition, there are a range of storage projects in earlier stages of development which may or may not proceed to commitment and commissioning. These will be further encouraged under the NSW Government's Electricity Infrastructure Roadmap, which will support 12 gigawatts (GW) of new capacity across a number of renewable

[2] https://www.aemc.gov.au/sites/default/files/2021-01/Reserve%20services%20directions%20paper%20-%205.01.2021%20-%20FINAL.pdf

energy zones in NSW and 3 GW of new firm capacity by 2030. The capacity mix on the power system will continue to evolve, with changes driven by market incentives and government intervention.

We also note that the recent CSIRO GenCost 2020-21 Consultation Draft Report[3] shows a continuation of reductions in large scale battery costs which is likely contributing to increasing investor and market participant interest.

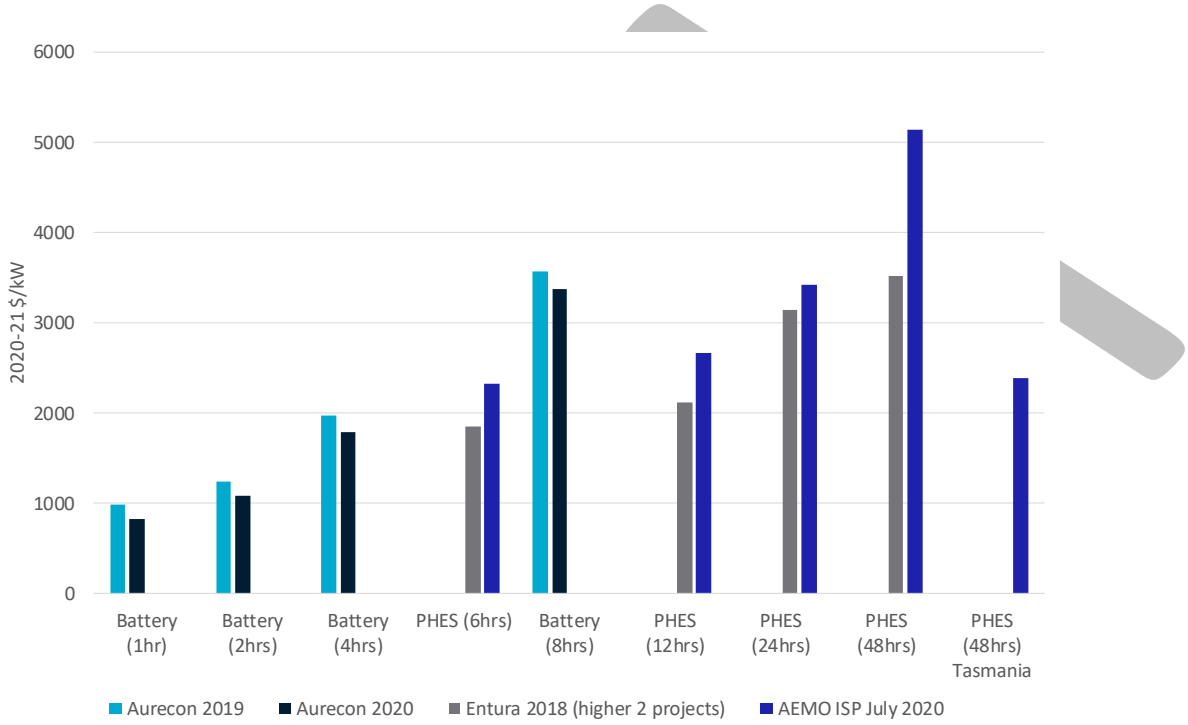

Figure 2-3 Capital costs of storage technologies in $/kW (total cost basis)

We also note that AGL have recently commissioned the 210MW Barker Inlet gas fired power station in South Australia. Origin Energy have also announced a 100MW expansion of their Mortlake gas fired power station[4] while large scale batteries are already in operation in South Australia (i.e. Lake Bonney Wind Farm) with more planned.

It appears that market participants are seeing opportunity to progressively invest in batteries as they move down their cost curve and already see ample opportunity and sufficient financial incentive being provided by existing market arrangements. We would also expect that large energy players with a significant portfolio of renewable assets will continue to incorporate these assets into their highly diversified energy asset portfolios.

This recent evidence of investments being made in the type of technology that this rule change is designed to encourage makes us cautious of jumping too soon into creating a new market framework and/or incentive when it appears existing market framework and/or incentives are already doing the job.

However, it is not reasonable to think that the future challenges of the rapidly evolving market will prove too great for existing frameworks to cope, which is why we are not completely ruling out this rule change, but it is difficult to make the case for a near term change, given the evidence of investment already occurring.

3 https://publications.csiro.au/rpr/pub?list=BRO&pid=csiro:EP208181&expert=false&sb=RECENT&n=10&rpp=25&page=1&tr=2408&dr=all&dc4.browseYear=2020

4 https://www.standard.net.au/story/6850535/south-west-gas-power-plant-plans-250m-expansion/

Rule change proposed by Delta Electricity

The following extract of table 5.1 that appears on page 29 of the Directions Paper would indicate that the AEMC are not convinced of the need for additional incentives for ramping services.

RESERVE REQUIREMENT	OBSERVATIONS / ANALYSIS	IS THERE A MATERIAL PROBLEM / ISSUE?	COULD A RESERVE SERVICE ADDRESS THIS PROBLEM?
Expected requirement for reserve capacity to meet forecast ramping events, such as evening peak ramps.	Ramping requirements for scheduled capacity will increase in magnitude and frequency as more VRE enters. These ramping requirements are designed to be met under current energy market arrangements through the current reliability settings.	A problem has not been identified, but one cannot conclude with certainty its absence. The energy market price is designed to attract reserves to meet this need over time.	A reserve service could be used to provide for such expected ramping requirements. This would likely affect prices in energy and FCAS markets over time.

Specifically we are drawn to this statement:

"A problem has not been identified, but one cannot conclude with certainty it's absence. The energy market price is designed to attract reserves to meet this need over time."

- We agree with the sentiment expressed by the AEMC. Our view is that it does not appear that a material gap in current market and/or commercial arrangement exists at this time.
- Therefore, we do not believe this rule change currently fits into the overarching policy and regulatory approach and would not be in the best interests of consumers.
- We do not believe that creating a new market mechanism is warranted at this time. In fact, creation of such a market could conceivably result in market participants being paid for what is essentially BAU.
- We have also not seen any robust cost benefit analysis that demonstrates better long-term outcomes for consumers as a result of this rule change.
- Rather than absorbing costs and risk associated with their operation, this rule change is likely to result in consumers covering operational costs and risks faced by generators that we consider should be part of their BAU operations.

Options to address uncertainty and variability

We are very supportive of the initiatives proposed by the AEMC to address uncertainty and variability being:

- Improving the accuracy of net demand forecasts – improving the forecasting of VRE resources and increasing the ability of AEMO to access and interpret this date to better manage the system is a key objective and has the potential to reduce the instances of market interventions and incurring unnecessary costs.
- Developing and publishing more information for the market.
- Pursuing potential market/system enhancements (whilst being conscious of costs).
- Continue to improve the integration of flexible resources – the lack of clear, real time data being available to the market operator is a serious concern. To date, the role out of rooftop PV is a missed opportunity to install smart meter technology (other than in Victoria) that would have provided the market operator with the required insight and control over the energy system. This mistake can't be repeated with future role out of PV and in the future, batteries and electric vehicles, all of which much come with a requirement to install smart meter technologies.
- Adapting system definitions – we would caution that in changing system definitions we need to ensure we don't start to "normalize" variability and volatility so as to allow participants to avoid responsibility for issues they create. We need to stay firm on the principles of "causer pays" and "do no harm".

Reserve service design options

As we do not believe a rule change is warranted at this point in time we do not have a strong preference for a particular design option.

If, in the future a reserves market was to be established, then the option put forward by the AEMC being an optimized version of the Infigen proposal seems to be a reasonable starting point for further discussion, analysis and assessment.

Sincerely,

Andrew Richards
Chief Executive Officer