

## NEM WHOLESALE MARKET SETTING REVIEW

### INITIAL CONSULTATION

#### 14 FEBRUARY 2025

### 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, building materials and food processing industries. Combined our members employ over 1 million Australians, pay billions in energy bills every year and in many cases are exposed to the fluctuations and challenges of international trade.

Thank you for the opportunity to make a submission to the NEM Wholesale Market Settings Review (the Review) Initial Consultation.

The EUAA supports the pursuit of net zero targets and a lower emissions stationary energy sector. As we transition from a highly centralised generation system dominated by dispatchable thermal generators to a highly decentralised system dominated by Variable Renewable Energy (VRE) a number of key challenges are becoming apparent that include:

- Traditional dispatchable fossil fuelled generators that to date have provided energy users with a bundle of services that were folded into the provision of energy including, energy (MWh), and system security (i.e. dispatchability, system strength, frequency and inertia) are exiting the market. This results in the unbundling of these services which now need to be provided (and priced) separately.
- While the provision of zero emission energy is of great value, VRE alone is not currently required (or able) to provide a number of these services vital to the reliable and efficient operation of the energy system. From an energy system perspective, 1MWh of energy from VRE is less valuable than 1MWh of energy from traditional sources. The supply of these unbundled services will come from a range of new and existing technologies that may require bespoke arrangements to deliver efficient outcomes for consumers.
- While batteries will play an important role in supporting intra-day capacity (i.e. 2hr to 4hr batteries) but are unlikely to play a role in economically managing inter-day challenges. Long-duration technologies that are capable of supporting system strength and reliability over an extended period of time will be required. Based on current technologies, this is likely to come from a combination of pumped hydro and gas fired generators.
- It appears that technologies that will deliver long-duration capacity will run infrequently with limited potential to generate revenue on a consistent basis. These random income events will be insufficient to underpin a successful business case meaning new market features will need to be added to the existing energy only market.
- We are also experiencing significant volatility in energy markets with negative spot prices in some jurisdictions becoming a regular occurrence, quickly followed by high spot prices in the days that follow. This adds additional risks for generators and retailers who are juggling a portfolio of assets and contracts. This risk, while in most cases can be hedged (noting that this is becoming more difficult in SA), is becoming more expensive, the cost of which is borne by consumers.

## KEY THEMES – A CONSUMER PERSPECTIVE

### Government v Market

Governments have been intervening in the NEM seeking to impact price signals for decades. Households have installed solar supported by 20 years of subsidies such as feed-in tariffs and deemed SRES certificates. Large scale VRE has been supported by the Federal LRET and a myriad of state-based subsidies. All of these government interventions mute market price signals to differing levels. In the case of large scale VRE, around 50% of the revenue is subsidy dependant. This isn't a criticism of these schemes, but a recognition that significant government intervention has sought to actively control aspects of the market to achieve a desired outcome.

The reason we raise this is because a fundamental question needs to be addressed as part of this review, being do we want governments or markets to be the primary driver of investment and consumer outcomes that are consistent with the NEO?

For example, if we assume the energy only market is incapable of delivering new investment and some form of capacity market is required to sit along-side it. If we then consider that a capacity market is like an insurance policy for a reliable NEM; at times it might look like a waste of money but when it's needed you are glad it's there. If this is the path, and it may well be, then who is in the best position to underwrite this insurance product, consumers via a capacity market or taxpayers via a government backed scheme? Or to be more precise, do governments trust markets enough to allow them to do the job or will they always want to keep a firm hand on the steering wheel? Critically, if governments seek to reach deeper into energy markets, what impact will that have on competition, market power and private investment. We look to the Review recommendations and ministerial approval of the outcomes to answer these questions.

### Consumers are focussed on outcomes not inputs.

All too often policy and market design is heavily influenced by those who provide the inputs (i.e. technology, finance). While ensuring market design supports investment, it is equally important that it doesn't come at an undue cost or risk for consumers who are far more focussed on the outputs of the energy system such as affordability, reliability and sustainability.

This consumer first, outcomes driven approach is reflected in the NEO but is not always reflected in the debate over policy and regulation where technology providers of the inputs argue for special support for the particular widget they want to sell with consumers or taxpayers required to foot the bill.

If we are seeking consumer focussed outcomes from this review we must move away from an input focussed debate to one that balances the need to enable efficient deployment of inputs with the affordability, reliability and sustainability outputs consumers want. Most consumers are largely technology (inputs) agnostic and don't particularly care what is being used to deliver the outcomes provided they are delivered efficiently (i.e. through efficient allocation of resources via competitive markets), that they are empowered to act in their best interest (without harm to others), that the market achieves a high level of reliability and that it is sustainable (environmentally and socially).

## **The NEM is a single ecosystem**

We often describe different user classes in the NEM such as residential, small to medium enterprise or commercial and industrial, as if they are operating in separate markets. They are not. They are all part of the same NEM ecosystem where the actions taken to change behaviour of one customer class (i.e. supporting CER such as solar PV or electric vehicles) can have serious consequences for other customer classes or market participants.

While the benefits of CER are many, the sheer volume now present in the NEM makes CER a major contributor to supply. However, the lack of any meaningful coordination of this new generator is creating serious problems for our market operator (AEMO) and market participants alike. In particular, the NEM is now more volatile both in supply and price due in part to the uncontrolled and uncoordinated role of rooftop solar PV, which has been described as an orchestra without a conductor.

Orchestration of CER, appropriate tariff design, community batteries and two-way network pricing can all assist in returning the NEM to a high level of coordination and ensure a more equitable transition. While not directly related to NEM Wholesale Market Settings, these actions also need to be considered as part of the overall strategy as it may be that a less disruptive NEM redesign is possible if we can deliver better outcomes for consumers at other parts of the energy value chain.

We believe it is within the scope of the Review to recommend the right market settings that would see more large scale VRE projects add storage and dispatchability capability to their projects as part of a whole of NEM orchestration strategy. These setting could include the ability of truly dispatchable VRE (i.e. capable of instantaneous dispatch of specific capacity over a designated time )to participate in a potential future capacity market (with penalties associated with non-delivery)

## **Future Market Design**

The Review should consider recommendations for a future market dominated by VRE (i.e. 85%), with interim measures in place to address particular market failures during the messy middle of the energy transition. However, we also encourage the Review to consider scenarios where government timelines for renewable energy deployment are not met so we can better understand what interim measures may need to be undertaken to maintain system security and availability of supply to meet consumer demand. We believe this would represent a prudent and responsible approach during the messy middle of the energy transition.

Any future consumer focussed market design or government program must have the National Electricity Objective (NEO) as its “shining light on the hill”. Importantly, all supply side participants must have the same obligation to deliver a product that is fit for purpose for the customer and that the product complies with all elements of the NEO, not just the parts that suit them or their technology. As we have said before, consumers are concerned about receiving outputs from the energy market that are affordable, reliable and sustainable. It is the obligation of suppliers to deliver those outputs regardless of the technology.

Specifically, the overarching obligation of market participants should be to ensure that assets supported by future market design or government program are capable of being dispatched when and where they are needed. Additionally, if a capacity market (or form of capacity market) is adopted, other market settings such as the Market

Price Cap (MPC) and Retailer Reliability Obligation (RRO) need to be reassessed and potentially reduced (in the case of the MPC) or removed (in the case of the RRO).

While we support initiatives that accelerate and coordinate emissions reduction activities in a commercially prudent manner, including the enhanced Capacity Investment Scheme (CIS) as a means of meeting the objective of 82% renewable energy by 2030. However, we remain concerned there are insufficient “exit ramps” for ongoing government support and seek a roadmap to an energy sector that no longer relies on ongoing subsidy. An energy market that is perpetually subsidised, either by taxpayers or energy consumers, only serves to hide the actual cost making markets inefficient and risks misallocation of resources. When considering additional government programs, we urge the Review to recommend appropriate exit ramps for these programs with the desire to move back to a long-term market design.

Finally, and market design or government program must ensure an equitable allocation of the costs and risks associated with the transition to net zero, as all too often energy consumers are expected to carry the heavy weight of market (i.e. shareholder and/or debt providers) risk that should sit with market participants. We firmly believe that this transfer of risk from market participants to consumers is inconsistent with the NEO.

## TOPIC ONE – INVESTMENT INCENTIVES

Renewable energy has enjoyed almost 25 year of Federal and State Government policy support, the most significant of which is the Large-Scale Renewable Energy Target (LRET) and more recently the Capacity Investment Scheme (CIS). This has been supplemented by various state government incentives such as the Victorian Renewable Energy Target<sup>1</sup>, NSW Government Energy Infrastructure Road Map<sup>2</sup> and the QLD Governments Energy and Jobs Plan<sup>3</sup>. Incentives for rooftop PV have also been significant and include the Federal SRES scheme and numerous state-based feed-in tariffs. A review of current Federal and State policies leads one to conclude that in 2025, policy and regulatory support for VRE has never been stronger.

When given the choice between a significant expansion of the existing LRET scheme, which is paid for by energy users, or a significant expansion of the CIS, which is supported by the Federal Treasury, the latter is our preferred option given the costs and risks associated with meeting 82% by 2030 are socialised across the tax base (the Federal Treasury), not energy users who are already feeling the strain of ever increasing energy bills.

Given all of these advantages VRE currently enjoys (i.e. lowest cost LCOE, strong investor and consumer demand, exit of fossil generators) the question must be asked, when does the public, either as energy consumers or taxpayers, cease underwriting the expansion of renewable energy? Assuming the 82% by 2030 target is reached, the renewable energy industry will simply be the energy industry.

Is the expectation that public support is required to not only achieve 82% by 2030, but beyond this date? At what point does public support reduce and we revert to the energy market (in whatever future fit for purpose form it takes) being the primary driver of investment decisions? These questions are particularly pertinent as we approach the 20-year-end of life of VRE facilities, that will either require refit or redevelopment to maintain the current VRE

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<sup>1</sup> <https://www.energy.vic.gov.au/renewable-energy/victorian-renewable-energy-and-storage-targets>

<sup>2</sup> <https://www.energy.nsw.gov.au/nsw-plans-and-progress/major-state-projects/electricity-infrastructure-roadmap>

<sup>3</sup> <https://www.energyandclimate.qld.gov.au/energy/energy-jobs-plan>

capacity. If underwriting continues, would the replacement/refitted facility be eligible for the same subsidy? If underwriting continues for green fields facilities but not brown fields, then developers will prioritise investment in green field projects and decommission existing VRE.

We see this question as fundamental to the Review where a clear answer is required to provide market bodies sufficient time to design appropriate future markets and to provide investors with a clear future investment pathway (including sunset dates for existing policy support).

Our clear preference is to see a gradual removal of existing subsidy schemes for both large and small scale VRE to be replaced with a market design, that most likely includes some form of capacity payments for certain outcomes, that sits alongside the existing energy only market. The cost-recovery of this capacity payment will be a key policy decision and we have two live examples being the NSW LTESA and proposed SA FERM schemes, where costs are recovered via energy users and the federal government CIS which is recovered via taxpayers.

It should also be recognised that policy support for deployment of renewable energy assets aside, significant other barriers remain that will hinder progress towards the 82% by 2030 target. Delays in planning for generation and transmission assets, community social licence, supply chain constraints, skilled labour shortages and escalating costs are all significant issues that could derail progress. Therefore, an expanded CIS nor a new NEM design alone are not a “silver bullets” (nor would an expanded LRET) and expectations of success may need to be tempered given there is only so much that governments alone can do.

## **TOPIC TWO – CONSUMER INTERACTION WITH THE WHOLESALE MARKET**

As we have already outlined our thoughts on the NEM as a single eco system, the relationships across customer classes and the need for a whole of system coordination or comments in this section will focus on the interaction of large commercial and industrial energy users with the wholesale market.

Some very large C&I customers are direct wholesale market participants and are therefore exposed to all the risks, rewards and responsibilities that comes with that. However, a vast majority of large C&I still purchase energy via some form of retail arrangement, usually via bilateral contracts. Traditionally their interaction with and exposure to the wholesale market has been managed by their retailer who pass through increases/decreases in wholesale prices plus a risk premium and margin they need to add. If wholesale market volatility increases so does the risk of participation, the cost of which is ultimately borne by consumers. Therefore, a less volatile NEM should be a good outcome for large C&I consumers.

Outside of direct connected customers, C&I customers are engaged in demand response and participation in the Reliability and Emergency Reserve Trader (RERT) mechanism.

Large C&I are regularly identified as a customer segment where significant demand response could occur. The experience of large C&I engaging with the wholesale demand response market tells a different story. Aside from a small number of very large loads (i.e. aluminium smelters that were engaged in this area anyway) there has been a very muted response. There are two primary reasons for this:

- A majority of large C&I load is not interruptible and to make them so would require significant plant/process redesign and capital expenditure. In the case of large commercial and/or retail loads, demand response could have a negative impact on the customer experience with the potential benefits seen as not worth the risk.
- For many non-essential loads, particularly in the manufacturing sector, while the scale of the non-essential load at a site appears to be large, it is often split between many circuits creating a costly exercise for the company to respond to demand reduction requests.
- There are significant financial and operational risks associated with demand response that create insurmountable barriers to the business case. Member companies advise that to help build a more sustainable business case for demand response a more reliable source of revenue would be required in addition to avoided costs (avoiding a high spot price) or spot price revenue.

Despite the barriers to demand response some large C&I have entered into demand response arrangements with retailers or 3<sup>rd</sup> party financially responsible market participants (FRMPs), either as part of the retail contract or as a separate offering from the retailer/FRMP. In this case the market risks are managed by the retailer/FRMP and the benefit of demand response is shared between the parties. We are aware of a few (but not many) such arrangements.

Where large C&I have engaged is via the RERT, primarily as short notice participants where they are only paid if they are activated. A small number of very large loads do participate in long-notice RERT where they are paid some form of standby or availability fee in addition to a market linked benefit when activated. One observation of RERT is that initially it was intended as a last resort safety net for the market operator. However, given the growing uncertainty of a messy and bumpy transition to net zero, RERT is being progressively used by the market operator as a primary means of balancing supply and demand.

If a capacity market is introduced as an outcome of this Review, the role of a number of existing measures needs to be considered with the potential to adjust or even remove some measures that no longer serve a purpose. The wholesale demand response market and the RRO would be two such measures that would require review.

What is often overlooked or not well understood is that large loads play a vital role in maintaining system strength and resilience. For example, in addition to acting as a system shock absorber that helps maintain frequency, large loads can play a vital role in securing the system restart efforts in the NEM by mitigating risks associated with uncontrolled solar generation and damaged transmission infrastructure caused by bushfires or other natural disasters.

We are seeking that these considerations be incorporated into the Reliability Panel's work to assess fit-for-purpose pathways that should be reflected in future SRAS procurement and suggest the Review interact with the reliability panel to understand these opportunities and respond accordingly.

### **TOPIC THREE – CHANGING NATURE OF SPOT ELECTRICITY PRICES**

As we have discussed in the previous section, consumer interaction with the wholesale market is growing and is likely to grow further. There are times when these interactions are contributing to market volatility and therefore are having a profound impact on electricity spot prices. EUAA members have been observing an increase in spot market volatility over the past few years, which has flowed through to contract prices that are higher than historical levels (although some moderation in contract prices have been observed recently). This volatility also appears to

have had a particular impact on those members with exposure to VRE PPA's, especially large scale solar PPA's which appear to be more impacted by the influence of rooftop PV than wind PPA's.

Given we are undertaking an unprecedented change in our energy system, a degree of volatility is to be expected. Members are looking to policy makers and our market bodies to act in a way that creates a smoother transition with less volatility.

Some members have also raised concerns regarding the concentration of market power, including the role of Snowy Hydro 2.0 once it is operational and the dwindling number of firming and FCAS service providers. The panel should be alive to the concentration of market power, not only in generation of dispatchable resources but in areas of FCAS and system strength.

## **Role of Gas**

The critical role that gas will play in ensuring a reliable electricity system is clearly articulated in the 2024 AEMO ISP (June 2024)<sup>4</sup> and a recent report produced by Simshauser & Gilmore from the Griffith University Business School titled "Policy sequencing: on the electrification of gas loads in Australia's National Electricity Market" (December 2024)<sup>5</sup>.

The EUAA have long argued the important role for gas in both hard to electrify sectors and electricity generation and had recommended that gas be included in the original design of the CIS. It is becoming very clear that, just as VRE and battery developers see too much risk involved with investments in a transitioning NEM, that developers of gas peaking plant are wary of similar risks.

We would also note that both the ACCC in their regular gas market reporting and AEMO in their GSOO, continue to warn of impending supply shortages. Additionally, the ACCC continues to highlight the high cost of gas for domestic consumers, including gas fired peaking plant. If we can't extract sufficient quantities of gas and have that gas offered at competitive prices to the domestic market, then the cost of the critical back-up that is provided will be significantly higher than it should have been.

## **TOPIC FOUR – ESSENTIAL SYSTEM SERVICES**

### **System Strength and Reliability**

A reliable well-functioning energy system is a non-negotiable outcome and a key obligation of energy market participants, peak regulatory bodies and governments. With the exit of synchronous machines, the services provided as part of a "bundle" are now progressively being unbundled into different service categories.

We have seen the evolution of these new markets, such as FCAS, over the past few years which we support provided the goal is to deliver the most efficient market outcomes for consumers, not just to support the business case for those providing the inputs.

Therefore, the EUAA recommends the panel focus on:

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<sup>4</sup> <https://aemo.com.au/energy-systems/major-publications/integrated-system-plan-isp/2024-integrated-system-plan-isp>

<sup>5</sup> [https://www.griffith.edu.au/\\_data/assets/pdf\\_file/0023/2064560/2024-10-NEM-Electrification-07.01.pdf](https://www.griffith.edu.au/_data/assets/pdf_file/0023/2064560/2024-10-NEM-Electrification-07.01.pdf)



- Development of open, transparent and competitive market frameworks that deliver system strength and reliability but only where a clear need has been demonstrated and where the solution is focussed on the long-term interests of consumers.
- In the absence of “do no harm” arrangements for generators, system strength should be the responsibility of the local TNSP and the new connecting assets (VRE and BESS) however we must ensure there are strong incentives for TNSP’s to provide the most efficient service.

## TOPIC FIVE – ENHANCING COMPETITION

The days of consumers being a price taker of a homogeneous energy product are rapidly coming to an end. The continued growth of rooftop solar, the expected growth of battery storage and electric vehicles, the roll-out of smart meters and continued improvement in technology such as smart appliances and home automation will increasingly provide opportunities for consumers to participate in energy markets, putting pressure on market participants to improve their service offering.

Aggregators will begin to play a greater role as the bridge between consumers and the energy market in which, it is hoped, they shield consumers from risk while allowing them to maximise benefits. Provided consumer protections are strong and there is rigorous oversight, the aggregation model adds another layer to competition, threatening the traditional customer-retailer relationship.

Large commercial and industrial customers are embracing these opportunities where they can. To date this has focussed on executing PPA’s with new market entrants, fuel switching where it’s viable, improving energy efficiency and engaging in some demand management (although this has been limited). The emergence of buying groups that bring volume and therefore a degree of negotiation power, could also play an important role as it helps to “level the playing field” somewhat.

The degree to which wholesale market settings need to be modified to facilitate more of these activities is a question the Review should consider. The answer could be that very few (if any) market setting need to change given the rapid evolution of technology and the emergence of new business models. The key issues are likely to be more centred on market rules to allow greater participation, the importance of consumer protection and security of consumer data.

However, competition and market power issues could still loom large depending on the answer to our initial question of the role of government v the role of the market. We see growing market power issues with the role of Snowy Hydro, especially with the completion of Snowy 2.0, being the dominant providers of dispatchability and financial risk products. As a publicly owned entity, this poses challenges for government.

We are also seeing a reduction in number of entities and assets who can provide system services. If the current trend continues the likely outcome looks to be a small number of service providers selling system services to an expanding market.

Dealing with these emerging market power issues must be a consideration of future policy and market design. This will be particularly important if governments decide to reach deeper into energy markets.