AUSTRALIAN ENERGY REGULATOR

GPO Box 3131
Canberra ACT 2601
tel: 1300 585 165
www.aer.gov.au

Our Ref: 30,672,305

1 October 2025

Tim Nelson
Panel Chair

Department of Climate Change, Energy, the Environment and Water
GPO Box 3090
CANBERRA, ACT 2601

Sent by email to: [redacted]

Dear Tim

Re: NEM wholesale market settings review draft report

The Australian Energy Regulator (AER) welcomes the opportunity to respond to the Review Panel's NEM wholesale market settings review draft report.

We consider the Review is both important and timely in ensuring the NEM's wholesale market design continues to deliver secure, reliable and low-emissions energy at the lowest cost to consumers.

Australia will not achieve its climate goals without a well-functioning electricity system with appropriate market settings to deliver long-term, robust signals to reward investment when and where it is needed.

We therefore welcome the Review's emphasis on preserving an efficient spot market, improving the visibility and participation of flexible resources, and establishing a framework to support timely investment in firmed renewable generation and essential system services.

We consider these reforms essential to ensuring the NEM continues to provide reliable, secure and affordable electricity for consumers while enabling an orderly and efficient transition to net zero.

With this in mind, our submission provides observations and reflections on a number of recommendations in the draft report informed by the AER's responsibilities and insights into the NEM.

Theme 1 – Ensuring effective operation of the spot market

Recommendation 1: Maintain the real-time regional energy-only spot market

The AER notes the Panel's recommendation to retain the current energy-only spot market and that known inefficiencies in its operation are more appropriately addressed through incremental reforms rather than an overhaul of the spot market design.

As we noted in our 2024 Wholesale Energy Market Performance Report, "there is no perfect market design, but trade-offs between different elements."[1] The decision to retain the spot market rather than introducing a new design, such as a capacity market, is likely to require alternative changes to address future challenges like ensuring that effective capacity and investment signals are created. Throughout this submission, we would like to raise some of the potential outcomes of this recommendation for the Panel to consider.

Recommendation 1D: Facilitate distribution-level energy resources to participate in regional markets

The draft report recommends against creating a separate distribution-level wholesale energy market at this time (Recommendation 1D), given the implementation costs and added complexity for participants would be significant. While the AER does not have a view on whether distribution-level wholesale energy markets are required at this time, we would add that the Panel should also consider the conditions under which introducing distribution-level markets could deliver a net benefit to consumers.

At present the wholesale market signals do not explicitly consider the local network limits and constraints. We note that dynamic operating envelopes and dynamic network prices could help to manage local constraints. But in the long term where the number of price-responsive resources is forecast to increase, a whole of system perspective to managing CER may to desirable to maximise the value of CER. As part of the defining roles and responsibilities for power systems and market operations (M3.1/P5.1) workstream the CER Taskforce is considering how to ensure the actor responsible for distribution system operations is able to take whole of system outcomes when managing CER.

Recommendation 2: Require a broader range of price-responsive resources to be visible or dispatchable to participate in price formation

We broadly agree with Recommendation 2B for aggregated CER, including virtual power plants, above a certain threshold to participate in central dispatch through the Voluntary Scheduled Resource (VSR) mechanism or through the Wholesale Demand Response Mechanism (WDRM) framework. This includes all CER aggregation services to be scheduled from 2030. We note that this will effectively mean AEMO will be the market operator for aggregated CER. We note this may be an interim arrangement as the role of aggregating CER is being considered as part of the CER Roadmap's defining roles and responsibilities for power systems and market operations (M3.1/P5.1) workstream.

Recommendation 4: Ensure the efficient and competitive functioning of the real-time energy-only spot market

In relation to Recommendation 4A, we agree that the increase of technology enabled bidding in the NEM has been rapid and that it will continue to escalate significantly as the NEM becomes more dependent on variable generation. This requires an ongoing coordinated

[1] AER, *Wholesale Energy Market Performance Report*, December 2024, p 4.

approach between market bodies and the ACCC to develop regulatory responses to support greater transparency and to ensure that rebidding and algorithmic bidding contribute to efficient price formation, forecasting, frequency management and price discovery. We suggest the Panel also include broader consideration of the use of artificial intelligence to manage physical generation, storage and dispatchable assets and the interconnectedness to market outcomes in addition to its use in bidding.

Recommendation 4C: Minimise the impact of transmission network outages on the energy-only spot market

The AER suspended the Market Impact Component (MIC) of the Service Target Performance Incentive Scheme (STPIS) with the release of version 6 of the transmission STPIS in April 2025. Through a review, we determined the MIC was no longer fit for purpose in the context of the energy transition and not providing effective incentives for a TNSP to minimise the impact of network outages on the electricity wholesale price.

To consider alternative arrangements to the MIC, we have now established an industry working group. The working group includes representatives from the market bodies, generators, TNSPs and consumer groups and will consider both financial incentives and conduct obligations for TNSP to minimise the impact of network outages on the electricity wholesale price. We expect the working group will conclude in mid-2026 and any conclusions from the working group may help inform the development of solutions to replace the MIC.

Theme 2 – Maintaining liquidity in the derivatives market

Recommendation 6: Establish an always-on market making obligation (MMO)

The AER is generally supportive of the proposed recommendations to establish an always-on Market Making Obligation (MMO). To achieve the desired benefits to enhance contract market liquidity it is necessary to ensure appropriate price discovery and execution mechanisms are in place for the relevant contracts. In addition, we see the success of the MMO being dependent on whether the relevant derivative products can provide sustainable risk management outcomes and the extent to which credit and market risk measures support broad accessibility.

As the draft report highlights, the MMO has significant overlap with the Market Liquidity Obligation of the RRO, which would need to be addressed if the MMO is adopted. Based on our learnings from administering the MLO, thought should be given to adopting the market share threshold used in the MLO to determine obligated market participants. As highlighted in the AEMC's recent review of the RRO, consideration of a lower threshold may be required to ensure an adequate number of participants are captured.

We note the Panel has considered alternative options to address liquidity and transparency, including requiring accounting separation, and that it considers the MMO is likely to achieve the price transparency and liquidity required. We support the Panel's proposal that active monitoring of the performance and impacts of the MMO is necessary to determine whether additional measures will be necessary. We consider there may still be value in requiring accounting separation to support the effectiveness of the MMO as well as other elements of efficient market operation such as Observation 1 to enable benchmark price transparency.

We note Recommendation 6B proposes AER's involvement in the development of derivative contracts and likely administration of the scheme. We see the benefits of the proposal, however, there are significant complexities in developing innovative derivatives contracts

that are fit for purpose, desired by market participants, capable of supporting the required investment signals to support transition and management of the resulting market risk. Therefore, we consider the additional work the Panel is currently undertaking with industry, energy derivative specialists, exchange(s) and central clearing house(s) is a critical input to the framework that should be in place before the AER takes over responsibility for convening to define the contracts eligible for the MMO. We are committed to continuing to work with the Panel and industry to test the approach.

Overall, the AER welcomes discussion on elements of the MMO in more detail to clarify how the MMO and co-design process of derivative contracts would work in practice, if it were implemented.

Theme 3 – Unlocking long term investment in new energy services

Recommendation 8A: Establish an Electricity Services Entry Mechanism (ESEM) to facilitate investment in the NEM

The AER supports the intent behind Recommendation 8 to establish an Electricity Services Entry Mechanism (ESEM) within the National Electricity Rules to facilitate investment in the NEM. Investors currently face a number of structural barriers that hinder timely and efficient entry, including the tenor gap between buyers and sellers, ongoing uncertainty around coal retirements and policy settings, and the absence of nationally consistent frameworks to deliver firming, shaping and essential system services. In tandem with the proposed always-on MMO as well as the fungibility and standardisation of the contracts, the ESEM may have the potential to provide durable and market-linked investment signals needed to support an orderly transition in the long-term interests of consumers.

A key design choice is the length of market risk potential bidders must bear – the longer the time, the more limited the pool of potential bidders. Under the current proposal, potential bidders would need to be able to bear market risk from years 4 through 7 of a project, as commercial and industrial customers only tend to contract for 1 to 3 years and the forward market is 3 years long. This would strongly favour businesses with either very large balance sheets or that are vertically integrated so would be able to afford to take this risk. This could result in auctions being short and contracts overpriced as well as increased market concentration.

An effective framework, implementation and operation of the ESEM will be crucial to ensure the desired objectives are achieved. For instance, how the proposed design will ensure:

- the ESEM efficiently interacts with other market reliability settings, including the Market Price Cap
- confidence in the governance of the scheme (including transparent management of risk, conflicts and financial implications and outcomes)
- fair and transparent procurement processes that are designed with flexible and adaptive mechanisms that allow for procurement to respond to evolving market structure and conditions
- mechanisms to support robust forecasting processes and inputs including consideration of market concentration, competitive dynamics, spot market indicators, regional interdependencies, technological change, evolving policy settings and forecasted consumer impacts and benefits

- mechanisms necessary to support disciplined procurement (including location) at least-cost and for the absolute lowest level needed (self-limiting) to limit impacts to the short- and medium-term derivatives markets, smooth the pricing curve and support the necessary growth and liquidity in the short-medium term derivatives markets
- fair and efficient on selling (recycling) processes to support competition, smooth volatility and impacts to liquidity and the forward pricing curve.

The AER suggests the Panel may need to consider whether the need for retailers to buy recycled contracts will be affected if the ESEM reduces market volatility. Or if, for instance, the Panel considers that sufficient intraday volatility will remain to require retailers to purchase recycled contracts to manage. In either case, it would be important to understand how this might inform the procurement decisions of the ESEM Implementation Body.

We strongly agree with the Panel's position that the scheme operations should be governed by a principle of maximising benefits to electricity users and thus, minimising costs. In terms of the proposal for residual costs or rebates to flow to electricity users we would advocate for further consideration on forecasted benefits (for example smoothing out volatility and forward pricing curve, reducing cost of risk management, supporting long term investment). If the rebate proposal advances, for transparency and accountability, we would encourage publishing performance metrics such as forecasting, procurement benefits realised against the aggregated impacts of cost recovery. In-built review and adjustment mechanisms to accommodate flexibility as transition advances will also be important.

In terms of the proposed principles guiding ESEM governance, we note the Panel's confirmation that the sovereignty of each jurisdiction will be respected as the ESEM is implemented. While we are supportive of this, as regions become more interconnected, we encourage incorporating an in-built review and adjustment mechanisms to support flexibility.

Additionally, we consider there would be merit in considering how to avoid potential ESEM governance issues where the expected functions of the ESEM implementation body may overlap, or appear to overlap, with existing planning and procurement roles under the NER. For instance, this could occur with AEMO's responsibilities as market operator or under the Integrated System Plan and Electricity Statement of Opportunities. This may also be relevant to Recommendation 9F if considering rationalising forecasting and planning functions.

<u>Recommendation 8B: Provision of essential system services</u>

The AER agrees with Recommendation 8B that "Where cost-effective, projects facilitated through the ESEM should also be able to provide essential system services (ESS)." As the draft report notes, the availability of ESS such as inertia and system strength will continue to be important for the NEM as it transitions to a low-emissions future. Considering the ability of projects to deliver ESS alongside bulk zero-emissions energy, shaping and firming services through the ESEM can help ensure greater coordination, capture co-benefits and help ensure long-term efficiency.

To help ensure this effectively complements and does not hinder other ESS procurement processes we agree it will be important to clearly define the ESS requirements and to transparently explain how ESS considerations influenced ESEM procurement. In addition to these, however, we note that AEMO and the ESEM administrator may also need to transparently show how any procurement via the ESEM (which focuses on the longer-term) has been reflected in forecasting ESS requirements such as TNSP responsibilities to procure NSCAS, system strength and inertia services.

Recommendation 8C: Considering market concentration when running tenders

The AER supports Recommendation 8C to establish a framework to ensure the ESEM is able to consider market concentration when running tenders. Competition in the NEM remains essential to ensuring efficient investment, innovation, and affordable consumer outcomes. While new entrants have reduced concentration in recent years, ownership of dispatchable generation assets is still relatively concentrated. Poorly designed tenders risk inadvertently creating or reinforcing market power.

However, we suggest that concentration should not be addressed through a standalone mechanism. Rather, it should be considered holistically within the broader role of the ESEM coordinator in designing and running tenders. For instance, the ESEM coordinator could consider advice from the AER on the potential market concentration impacts as one of a range on inputs in considering proposals in an ESEM tender round. This approach would allow concentration risks to be assessed alongside other key objectives such as ensuring liquidity, supporting smaller players with credit barriers, and delivering efficient contracting outcomes. This may help avoid unintended consequences including less efficient outcomes overall if a less flexible, and more restrictive approach were adopted – for example if a hard threshold metric were used across all ESEM tenders to approve or veto awarding contracts.

Recommendation 8D: Establish a new, longer-term out-of-market reserves service

The AER supports Recommendation 8D to establish a new longer-term out-of-market reserves service to cover high-impact, low likelihood events. An out-of-market reserve service could, in principle, provide jurisdictions with additional insurance and allow them to manage risks that in-market mechanisms cannot readily address.

However, there is a risk that the framework could be used conservatively and over-procure reserves. This could increase costs to consumers in a jurisdiction without a delivering a proportional reliability benefit. Any out-of-market reserve service must therefore strike a balance between the value of additional reserves and the risk of over-procurement. These services should also be supported by clear governance arrangements to ensure procurement decisions remain transparent, proportionate, and informed by robust advice from the Reliability Panel.

Recommendation 9: Aligning the regulatory settings, innovation ecosystem and existing policies and programs with the ESEM

The AER supports Recommendation 9 for Governments and market bodies to pursue a coordinated suite of reforms to ensure regulatory settings, the innovation ecosystem, and existing policies and programs are aligned with the ESEM. Australia's success in transitioning to a model with more renewable energy generation and storage will be influenced by how quickly new technology and innovation will be able to enter the market.

The AER is fostering this innovation with the Energy Innovation Toolkit – an interactive website and online portal that provides businesses and innovators with clear guidance on navigating the regulatory regime, exploring opportunities to launch new technologies, and understanding compliance obligations. Sitting alongside the Toolkit, the regulatory sandbox also facilitates proof-of-concept trials, including time-limited waivers and trial rule changes, to test and demonstrate innovative technologies, business models, and market arrangements in a controlled environment. In March 2025, the AER used the regulatory sandbox to grant a trial waiver to PLUS ES to install up to 1,000 kerbside, pole-mounted electric vehicle (EV) chargers across NSW and SA. This is the second waiver granted by the AER through the Energy Innovation Toolkit, and is testing alternative, more accessible kerbside meter types,

with the intention of making EV charger installation more straightforward and cost-effective to ensure roll-out keeps pace with EV uptake.

In this context, the AER considers innovation essential for promoting long-term efficiency in the NEM. The AER's trial waiver function is designed to enable the testing and integration of new technologies and alternative business models, helping the system adapt to changing supply and demand, supporting more efficient use of resources, and ensuring regulatory and market settings evolve alongside industry developments.

Recommendation 9F: Rationalise NEM forecasting and planning documents to avoid inconsistencies and duplication

We agree that opportunities to rationalise NEM forecasting and planning should be taken to help avoid inconsistencies and duplication. However, the Panel may benefit from incorporating this as a consideration in designing the ESEM framework from the outset, rather than waiting to consider opportunities after it is established.

As we noted in relation to Recommendation 8A, we consider there would be merit in considering how to avoid potential ESEM governance issues where the expected functions of the ESEM implementation body may overlap, or appear to overlap, with existing planning and procurement roles under the NER. For instance, this could occur with AEMO's responsibilities as market operator or under the Integrated System Plan and Electricity Statement of Opportunities.

Recommendation 9G: Improving consistency of load, storage and generators connected at distribution and transmission level

The AER agrees with Recommendation 9G to pursue reforms to improve consistency in the treatment of load, storage and generators connected at distribution level to ensure a level playing field. We note that AEMC has not formed a preference but has noted potential solutions including establishing 'local energy hub' arrangements allowing distribution network service providers to make prospective investments to support future generation and storage connection (with appropriate regulatory oversight to ensure prospective expenditure is efficient); and allowing negotiated arrangements at distribution level.

As monopoly providers of essential infrastructure, decisions around access, connection, pricing and system design have far-reaching implications for competition, participation and efficiency particularly in downstream markets where new business models, service providers and consumer offerings are beginning to emerge. Structured trials can inform which functions should rest with the regulated monopoly, which are better suited to competitive provision, and how roles and responsibilities might evolve over time. In this way, sandboxing becomes a critical tool for navigating uncertainty, addressing structural inefficiencies and enabling a more dynamic, decentralised and consumer-centred energy system.

Theme 4: Ensuring consumers benefit

The AER generally supports the identified areas where complementary and coordinated reforms could better align the energy market framework with evolving consumer needs. This includes supporting consumers to access retail products that meet their preferences; ensuring customers are appropriately rewarded for contributing to reduced network costs; and updating consumer protection frameworks for new energy services including energy management services, aggregation and virtual power plants.

It will be important, however, to ensure that these reforms are designed in a way that delivers enduring benefits without introducing unnecessary risks or complexity. In this context, we provide comment on the observations below.

Observation 1: Support the development of simple, multi-year fixed price retail contracts

Further consideration needs to be given to Observation 1: 'Support the development of simple, multi-year fixed price retail contracts' by enabling benchmark price transparency and reviewing barriers such as early exit fee restrictions. While there would be some benefits to retailers, who may be able to secure longer term customer contracts, this could also introduce greater risk premiums charged to consumers on long term contracts due to the potential for changes to future costs (i.e., higher than anticipated wholesale costs).

Producing long-term non-binding benchmark cost stacks, which would likely need regular revisions (such as is the case with setting the DMO each year), may also lead to customer confusion or dissatisfaction with these longer-term offers. We note that there is currently no publicly accessible information to reliably inform consumers on the likely trajectory of future wholesale prices. This means that consumers may end up locked into unfavourable plans for multiple years.

As we noted in response to Recommendation 6, requiring accounting separation between a vertically integrated business's generation and retail arms may assist developing more robust and effective benchmark prices.

Observation 2: Consider reforming network tariff structures

We note that flat tariffs, and, to an extent generalised TOU tariffs, may not necessarily align with the time or location of critical network peaks and, where this occurs, are not purely reflective of future network costs. The pace of network tariff reform towards dynamic pricing has been influenced by:

- technological advances (as the pace of reform is necessarily linked to smart meter roll out)
- stakeholder support and engagement, such as a preference for postage stamp pricing for small customers, and
- policy developments, like two-way pricing only enabled since 2024, or state regulations in Victoria requiring distributors to offer flat network tariffs to all customers unless they have EV fast chargers, despite the high level of smart meter penetration.

We agree that network tariffs charged to retailers should drive efficient network utilisation and can be aided by other measures such as Dynamic Operating Envelopes and controlled load. Developments in network tariffs, such as solar soak periods, seek to drive this utilisation by encouraging electricity use during the middle of the day (by customers who are able to respond). The shift towards tariffs that better drive efficient utilisation has been iterative with each round of tariff structure statements, which is currently in the third round.

The development and adoption of such measures will become increasingly important to enable and simplify value stacking of both network and wholesale value as consumers generally lack visibility of the wholesale market and are therefore not well-placed to respond to market fluctuations. Measures such as Dynamic Operating Envelopes and controlled load can help ensure the full potential of CER orchestration is captured as more consumers engage further with CER orchestration and the flexible load available to retailers increases. Consumers who control their own CER generally lack visibility of the wholesale market and therefore cannot respond to market fluctuations.

As more controlled loads come under retail management, CER can be operated in a way that responds to both network and wholesale signals through the provision of controlled load

tariffs. For example, SA Power Networks, which has had time-of-use tariffs with a solar soak period for small customers since 2020 (including controlled load tariffs with the same charging windows and retailer managed supply), demonstrated a significant response to its solar soak period, with an approximately 27% increase in controlled load electricity usage in the solar soak period from May 2021 to May 2025.

This alignment can be supported by technologies capable of providing precise signals based on location and network needs, avoiding issues resulting from static peak and off-peak windows. The development and adoption of this technology will become increasingly important to prevent electricity products being overly complicated for many consumers to understand and to ensure the full potential of CER orchestration is captured as more consumers engage with CER and the flexible load available to retailers increases.

Any shift toward more fixed pricing structures requires careful consideration of equity and distributional impacts. Under the current tariff structure design, allocating a portion of residual costs to usage charges enables distributors to maintain price signals that are strong enough to encourage behavioural change, yet moderate enough in off-peak periods to avoid distorting LRMC-based signals. This approach also aligns with longstanding consumer and consumer advocate preferences to limit excessive fixed charges.

As the energy system evolves and consumer export and flexible demand become more prevalent, it will be critical that there are signals for reducing future network costs through incentivising shifting of consumption and generation. Any rebalancing of tariffs needs to ensure cost recovery remains efficient and equitable. As such, there is scope for rebalancing towards higher fixed costs, as two-way pricing could better align the recovery of export service costs with those who benefit from them, while also supporting the incremental rebalancing of fixed costs that distributors have undertaken since 2014. However, a move towards higher fixed charges in network tariffs also risks undermining the value for consumers (either directly or via their retailer or third-party aggregator) to reduce demand during peak periods. This could result in lower network utilisation and potentially higher network costs overall if additional investment is required.

Observation 3: Consider updating the methodology for regulated retail price benchmarks

For each annual DMO process, the AER reviews the wholesale methodology to ensure it remains reflective of actual retailer contracting practices. With transparency and predictability being important factors to many stakeholders, the current methodology relies on ASX-traded energy derivatives. However, if and when new types of energy derivative contracts are created and readily traded, such as those created from the wholesale market settings review, we would expect to consult on including these in the wholesale methodology to ensure it remains fit for purpose and reflective of how retailers manage risk and exposure to the wholesale market. We therefore do not consider a specific requirement is needed, as it is a practice the AER currently undertakes and will continue to do so in the future.

Observation 4: Consider extending the National Energy Customer Framework to cover new energy services

Through the transition it will be important to create a consumer protection framework that is fit-for-purpose for the evolving energy market. Many of the future energy services are captured under the Australia Consumer Law and not the energy specific provisions of the National Energy Customer Framework (NECF). The AER's Review of consumer protections for future energy services recommended changes to the NECF to adequately protect consumers in the evolving energy market and support consumer trust in the energy transition. This could be done by expanding the scope of the NECF to capture new energy services and introducing an overarching consumer protection duty supported by outcomes-based principles.

To capture new energy services within this framework, the scope of the NECF must be expanded by changing key definitions – for example, to include the provision of any energy service that sells, on-sells, exports, controls, constrains, prevents or otherwise has a substantial impact on the flow of electricity to and from a customer's premises. Existing prescriptive requirements for traditional energy providers (including authorisation processes) should be retained, reviewed and potentially reduced over time where appropriate.

Continued engagement

Please do not hesitate to contact me on [redacted] or at [redacted] to discuss this further.

Yours sincerely

Ag Executive General Manager, Consumer & Markets