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17 September 2025

To: NEM Review Secretariat
Re: NEM Wholesale Market Settings Review Draft Report Consultation

Thank you for the opportunity for the Institute for Energy Economics and Financial Analysis (IEEFA) to provide input to the National Electricity Market Wholesale Market Settings Review Draft Report.

IEEFA is an independent energy finance think tank that examines issues related to energy markets, trends and policies. The Institute's mission is to accelerate the transition to a diverse, sustainable and profitable energy economy.

IEEFA commends the NEM Review Panel in its holistic approach to the wholesale market settings review. The review considers the roles of retailers, consumers and suppliers, recognises both demand and supply-side resources and integrates short, medium and long-term considerations. It seeks to support jurisdictions to achieve their objectives within a consistent national framework, while also building on and integrating with existing processes in the National Electricity Market (NEM).

IEEFA's key comments on the review are as follows.

- By the time the Capacity Investment Scheme (CIS) completes its contracting process and the Panel's framework begins (around 2027), much of the NEM coal fleet will still be operating. The electricity sector will likely remain without a binding emissions constraint. Further, recent history shows governments repeatedly intervening to keep coal plants operationally viable, which may continue into the future. Consequently, as the Panel's framework begins, the market will remain subject to considerable uncertainty over when coal plants might close. This creates ongoing uncertainty surrounding how much new capacity is needed, when the new capacity must be built, and the appropriate price to contract for power. This uncertainty affects all participants, including coal plant owners.

- Given this context, we believe further consideration and explanation is needed on why it can be expected that market participants (with enhanced liquidity through the Market Making Obligation (MMO)) will be willing to contract projects (over their first seven years or so) at the scale and price necessary to support investment to replace aging coal and meet emissions reduction targets.

- The Panel should consider starting support through the Electricity Services Entry Mechanism (ESEM) in the earlier years of project life, given the coal exit uncertainty currently faced, then paring it back over time to only cover a project's later years of life.

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- The Panel should consider further means to reduce uncertainty around coal exits, including potential integration of coal exit timing with strategic reserves and/or the ESEM, to improve investor confidence and the market's ability to deliver stable long-term price signals.

- The Panel should consider how best to integrate emissions requirements into the ESEM and MMO for all categories of services, to align them with the National Electricity Objectives (NEO).

- The Panel should ensure that demand-side resources are treated on a level playing field with supply-side resources in the proposed ESEM, MMO and strategic reserve.

- The Panel should carefully consider and consult on the appropriate forms of demand-side resources that should be participative and/or visible, and the right pathways for achieving that.

- The Panel should reconsider the focus on transitioning to a higher fixed component in network tariffs, as it is not necessarily a fairer approach to managing network costs, and could lead to detrimental side effects.

- IEEFA recommends the Productivity Commission undertake a first-principles review of the economic regulation of distribution networks, given that distributed energy resources (DER) can provide network services like easing congestion, to avoid augmentation or replacement of network infrastructure.

We thank the Panel for the significant work and engagement undertaken throughout the NEM Review process.

Please find our full submission response contained in the following pages. We invite any questions on matters mentioned in this submission.

Kind regards,

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The ESEM and the MMO

- **<u>IEEFA supports</u> the Panel's long-term investment certainty focus.** Overall, IEEFA agrees with the Panel's focus on delivering long-term investment certainty as it will be key to delivering the pace and scale of investment required. A number of stakeholders identified this as a key gap:
    - **Tilt:** "Delivering appropriate longer price signals is critical to enabling private sector investment."[1]
    - **Clean Energy Council:** "Stronger long-term investment signals are needed… This need for long term certainty is where targeted intervention is most needed"; "Investors increasingly want long term stable returns, less merchant exposure".[2]
- **<u>IEEFA recommends</u> further analysis and consultation be undertaken on the NEM's readiness to rely on the market (with additional liquidity) to support the initial years of the project's life.** Overall, IEEFA would like to see more evidence from the Panel that a reliance on the market (with enhanced derivatives liquidity) in the initial years of project life, with ESEM contracts only supporting the later years of the project life, will be enough to deliver the investment required to meet emissions reduction goals.
    - The Panel is recommending a reliance on the market (with enhanced derivatives liquidity) to support projects in the initial years of their lives. It is not clear to IEEFA that buyers are willing and able to contract with projects (at the scale required to meet emission targets) for the first 7 years of project life, with government only needing to provide enhanced revenue certainty from years 8 onwards.
    - Iberdrola's submission, for example, implies that the front end of the investment window is the main challenge – as per below.
        - **Iberdrola:** "Uncertainty over the timing of scheduled coal closures or of future government interventions makes timing of large investments, particularly in long-duration storage, difficult. This *investment uncertainty is primarily at the front end of the investment window and might require some mechanism for reducing risks for the early years of operation*, as well as providing certainty for consumers that capacity will be ready."[3]
    - We are unsure if encouraging greater liquidity in the derivatives market will be sufficient to deliver enough investment certainty to projects up until about year 7. We would like to see more evidence on this point and more exploration of the market dynamics.

[1] Department of Climate Change, Energy, the Environment and Water (DCCEEW). NEM Review - Initial Consultation - Tilt submission. 14 February 2025.
[2] DCCEEW. NEM Review - Initial Consultation - Clean Energy Council submission. 14 February 2025.
[3] DCCEEW. NEM Review - Initial Consultation - Iberdrola submission. 14 February 2025.

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- **IEEFA recommends the Panel consider starting support through the ESEM in the earlier years of project life, given the coal exit uncertainty currently faced, then paring that support back to a project's later years over time.**

  By 2027 when the new framework begins, it is likely that a substantial volume of coal-fired generation will still be operating. At the same time there will be uncertainty about whether sufficient new renewable capacity will be delivered to enable timely coal retirements.

  This creates significant uncertainty in market pricing and demand for contracts to underpin construction of new projects. Participants will be asked to commit to contracts of up to 7 years (before the ESEM contract support starts from year 8 onwards) in circumstances where the underlying supply-demand balance is highly uncertain.

  For example, although coal generators may have announced closure dates, there is a chance they will remain open beyond their announced dates. The Orderly Exit Management Framework (OEMF) could enable individual coal generators to stay in the system for longer than previously expected if they bring forward their exit dates and the relevant jurisdiction's minister is not satisfied with the reliability outlook, which could exacerbate uncertainty.

  This coal exit timing uncertainty is not within the control of individual participants and is particularly acute in the first seven or eight years of the new framework (i.e. 2027 to 2035) as there are seven coal generators which have announced closure in those years (Eraring 2027, Yallourn 2028, Callide B 2031, Bayswater 2033, Vales Point B 2033, Gladstone 2035, Long Yang A 2035).[4]

  The intent is for the market to transition over time toward a greater role for private contracting. However, the degree of uncertainty over the coming years will make market participants uncomfortable with entering into long-term contracts. To address this, the Panel should consider whether the ESEM support should commence earlier than year 8, then step back as coal plants retire and the uncertainty band narrows.

- **IEEFA recommends an independent, technology agnostic analysis on system requirements be undertaken to inform the ESEM procurement approach.** The Panel notes that certain technologies may receive support for the whole life of the project, and others only for the later years. We are concerned that there could be a tendency for governments to leap to what they think is the right technological answer and then design criteria to suit that technology. This can lead to overinvesting in technologies which can turn out to be prohibitively expensive or inefficient.

  In IEEFA's view, to minimise costs to consumers and/or taxpayers there is a need for an independent, transparent and detailed quantitative or formulaic analysis of what the electricity system needs to meet reliability and security requirements and the alternative technological options which could satisfy these requirements. This should then determine

[4] AEMO. Generating unit expected closure year 2025. Accessed 17 September 2025.

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the desired characteristics for new plant that need to be procured which is technologically agnostic. So rather than specifying the need for a specific technology like pumped hydro or gas turbines, the analysis might specify the need for plant that could be called upon within, for example, 24 hours of notice and have on hand enough energy to deliver capacity continuously for 12 hours. In this example a six-hour battery might even be allowed to qualify, but it would have to ensure it could charge up fully within the 24-hour notice period and then agree to only dispatch at half its rated capacity (which would be 12 hours) over the period it was called upon.

Under such a technologically agnostic procurement approach, bidders would be free to specify the duration over which they needed ESEM support, and the winning bidders would be determined through a competitive evaluation of best value for money.

- **IEEFA recommends the financial contracts-focused approach be examined to determine if it is sufficient.** The MMO and ESEM are being designed around specific financial contract types. However, it is unclear whether financial contracts for bulk energy, shaping and firming alone will be sufficient to support new projects, or if long-term off-take agreements (such as PPAs) will be required to provide the level of certainty investors need.

  The Panel has not examined this issue in detail, and the submissions we reviewed provided little clarity on whether a financial contracts-based approach will be adequate, or whether PPAs will be key. The Panel could further explore whether governments should play a stronger role as off-takers – by entering into government PPAs and then on-selling them to the market – as a way to enhance investment certainty for new projects and enhance liquidity.

- **IEEFA recommends the ESEM be designed to procure a mixture of bulk energy contracts from projects where the project proponent accepts volume risk, as well as run of plant output where volume will be variable. The ESEM procurement agency could then blend multiple projects' run of plant output into bulk energy contracts to be on-sold to the market.**

  IEEFA accepts that there are some benefits from asking project proponents to accept a degree of volume risk in procurement contracts. This should help direct project developers to consider how they can select sites and design projects not just for maximum output (per dollar of capital) but also consistency of output. It will also hopefully assist the market to transition towards a readily tradeable contract that can support a greater range of buyers and sellers and therefore enhance economic efficiency.

  However, those that are best placed to manage the variability of output from wind and solar plants will ultimately be those with larger, diversified portfolios of projects. Given the ESEM procurement agency will probably have the largest and most diversified portfolio of contracted projects in the country, it will be better placed than most to manage the variability in output of individual projects. It should be able to blend the variable output from multiple projects to get a combined portfolio which provides an underlying base

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level of output which is highly reliable (over say a duration of a quarter). It could then repackage this contracted run of plant output into standardised bulk energy contracts that could be on-sold into the market.

We therefore believe there is merit in the ESEM procuring a mixture of standardised bulk energy contracts and run of plant contracts. We do not have a view about the balance between these two forms of contracts. Ultimately this should be informed by tender pricing outcomes. For example, if run of plant contracts turn out to be substantially cheaper than standardised bulk energy contracts then that should shift the balance towards this type of contract.

- **IEEFA recommends the Panel consider in more detail how best to integrate emissions requirements into the ESEM and MMO for all categories of services.** Bulk, shaping, firming and Essential System Services procurement will all need to be aligned with the National Electricity Objectives (NEO) and relevant emissions reduction targets. This would cover off the need to "clarify how… greenhouse gas emissions targets apply to projects procured to provide firming services, to provide certainty for investors."[5]

- **IEEFA recommends that ESEM quantities and timings be laid out far enough into the future to deliver investor confidence.** The quantities of electricity services procured by the ESEM are proposed to be determined by "requirements of government policies referenced in the Australian Energy Market Commission (AEMC) Targets Statement."[6] Therefore, changing government policy environments may lead to significant uncertainty for investors. As jurisdictional government terms can be as low as three years, the AEMC targets – and accordingly the ESEM quantities to be procured – may change significantly after just a short time, eroding investor confidence. The Panel should consider the best means to procure ESEM quantities that would maintain investor confidence and system reliability and security. For services like Essential System Services in particular, a rigorous approach will be needed that takes into account many factors.

- **IEEFA recommends the Panel consider how to reconcile federal and jurisdictional emissions reduction targets when procuring ESEM quantities.** The AEMC target statements[7] cover both federal and jurisdictional emissions reduction targets. The Panel should consider how to reconcile jurisdictional targets and the federal target in procuring ESEM quantities – particularly testing the framework's robustness to target adjustments.

- **IEEFA recommends the Panel consider how to ensure demand-side resources are well integrated into the ESEM and MMO.** It is vital that the ESEM and MMO are designed appropriately so that demand-side resources such as demand response are able to compete on a level playing field with supply-side resources. Tender processes and financial derivatives exchanges may be harder for smaller players and demand-side resources to access, so consideration should be given to enable those resources to participate competitively in the ESEM. Further, the contract design process needs

[5] NEM Review Panel. National Electricity Market wholesale market settings review draft report. August 2025. Page 21.
[6] NEM Review Panel. National Electricity Market wholesale market settings review draft report. August 2025. Page 21.
[7] AEMC. Emissions targets statement under the national energy laws. June 2025.

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adequate representation by demand-side technology companies and representatives. Financial support structures should be carefully considered to provide a level playing field for all participants.

- **IEEFA looks forward to further details around the contract design, as this will be key to success.** The contract design process will be key to enabling the ESEM and MMO to deliver on the Panel's objectives. In the absence of details on which contracts underly the mechanisms, it is difficult to determine how effective the mechanisms could be in delivering the scale and speed of investment required. IEEFA looks forward to reviewing further details on this.

- **IEEFA recommends ESEM over-procurement risk be mitigated.**

    - The risk of over-procurement appears to be low, given that the mechanism "relies upon markets for the observable future and only intervenes for the later years of project lifespans…. If far too much is procured, observable contract prices will be too low to support new investment and ESEM auctions will either be unnecessary or fail to attract economic projects."[8]

    - However, the Panel says that some technologies that "face barriers beyond the tenor gap" may receive ESEM support through the whole lifetime of the project rather than just the later years – with the examples of offshore wind and long-duration storage provided by the Panel.[9] Therefore, an over-procurement risk exists for these technologies, and care should be taken in the design of the ESEM to prevent over-procurement of these technologies and/or the relevant category of services they sit within.

    - The overinvestment risk for high-emissions assets should be addressed and mitigated by the Panel. If the ESEM supports high-emissions assets to be introduced into the system with support over part or all of their lifetime, this could lock high-emissions assets into the system for 15 years or even more, limiting the NEM's ability to reduce emissions quickly.

- **IEEFA recommends ESEM under-procurement risk be mitigated.**

    - The Panel recommends that new energy projects be supported through the market for the initial years of the project's life (years 1-7 for example). However, it is unclear if the market will be able to deliver the quantities of electricity services required at the pace of change needed to meet government targets. The Panel should consider this risk in the design of the ESEM and MMO.

- **IEEFA recommends a symmetrical cost recovery framework.** The ESEM's cost recovery and rebate framework should be symmetrical. Specifically, any net gains

[8] Ibid. Page 165.
[9] Ibid. Page 164.

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realised by the ESEM should be returned to consumers on the same basis and to the same extent as net losses are recovered from consumers.

- **IEEFA supports the Panel's recommendation to ensure the ESEM is able to consider market concentration when running tenders.** IEEFA supports the Panel's recommendation that participants that exceed a certain market share could be excluded from ESEM contracts as this would help increase competition. IEEFA supports the Panel's suggestion that the Australian Energy Regulator (AER) publish benchmarks on market competition as they would be helpful in supporting transparency.

IEEFA additional points on long-term investment

- **IEEFA supports ARENA being tasked to "accelerate the development and deployment of zero emissions technologies that provide firming at scale."** Zero-emissions firming will be key in a grid dominated by wind, solar and storage.

- **IEEFA supports the Panel's recommendation to phase out the Retail Reliability Obligation "once energy ministers are satisfied the ESEM and the Panel's proposed market making obligation are working effectively**." There could be significant overlap between the Retail Reliability Obligation, the ESEM, the MMO, and other existing mechanisms in the NEM. Effort should be taken to reduce duplication and ensure the system is as efficient as possible.

- **IEEFA supports the Panel's recommendation that energy ministers consider opportunities to rationalise NEM forecasting and planning documents.** There are a number of forecasting and planning documents, which could lead to duplication and inefficiency, and IEEFA supports the consideration of opportunities to streamline forecasting and planning.

  Previously IEEFA has recommended explicit information be provided to indicate how soon it would be possible to close the next coal-fired power plant by adding replacement resources. We believe explicit reporting on this front would be helpful.[10] Further, we believe demand-side opportunities are heavily under-represented in energy planning and forecasting processes, and that co-optimisation between demand- and supply-side solutions in energy planning will be necessary to understand the least-cost pathway towards a decarbonised energy system and economy. Energy ministers should consider these dynamics when streamlining NEM forecasting and planning documents.

- **IEEFA supports the Panel's recommendation that "Energy ministers should pursue reforms to improve consistency in the treatment of load, storage and generators connected at distribution and transmission level, to ensure a level playing field."** IEEFA supports the sentiment of this, as biases towards supply-side resources over demand-side, or transmission over distribution, could lead to higher system costs than necessary. Genuinely exploring all options is key to reaching the lowest-possible-cost

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energy system. Previously IEEFA has recommended a level playing field be made between networks and non-network solutions such as DER, by reviewing the economic regulation of distribution networks.[11] We have also previously recommended that the Integrated System Plan (ISP) should consider the demand side more comprehensively.[12]

Strategic reserve

- **IEEFA supports the Panel's consideration of a strategic reserve.** This could provide additional confidence around the timing of coal exits by building additional buffer into the system.

- **IEEFA recommends the Panel consider the interaction between the strategic reserve and other mechanisms.** Consideration is needed on how a potential strategic reserve would interact with existing NEM mechanisms and processes. This includes: the Reliability and Emergency Reserve Trader (RERT); the market price settings; the Interim Reliability Measure (IRM); and the Retailer Reliability Obligation (RRO). These mechanisms have overlapping functions and cannot be assessed in isolation. Some points the Panel should consider regarding the interaction between these reserves include the following.

    - Reforming the RERT may be one effective way to develop a strategic reserve, and avoid duplication and inefficiency.

    - It may be efficient to remove the RRO and the IRM once a strategic reserve is developed.

    - It may be efficient to loosen the reliability standard once a strategic reserve is developed, to reflect the new reality in which the market is no longer the only tool to deliver reliability. As such, having a tight reliability standard and a separate strategic reserve system could 'gold plate' the system and lead to overinvestment.

- **IEEFA recommends a formulaic approach be developed to procuring the quantity of reserves.** The Panel has outlined that the Reliability Panel could provide advice on the costs and benefits of procuring out-of-market reserves, and jurisdictions could then nominate the amount of services to be procured.[13] However, IEEFA recommends that a formulaic approach be taken to procuring out-of-market reserves: i.e. if a certain reliability breach is forecast, reserves can be procured. A formulaic approach would help prevent overinvestment in this type of service. It would also deliver more certainty and transparency to the market.

[11] IEEFA. Reforming the economic regulation of Australian electricity distribution networks. 31 May 2024.
[12] IEEFA. Submission to the Australian Energy Market Operator's Draft 2024 ISP Consultation. 1 March 2024.
[13] NEM Review Panel. National Electricity Market wholesale market settings review Draft Report. August 2025. Page 188.

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- **IEEFA recommends emissions requirements be included in the strategic reserve design.** This would align strategic reserves service with the NEO with respect to emissions.

- **IEEFA recommends demand-side measures be considered on an equal basis with supply-side when procuring strategic reserves.**

- **IEEFA recommends appropriate cost recovery frameworks be developed and consulted on for the strategic reserves service.**

- **IEEFA supports the Panel's proposal that "Projects that are not available when contracted would be subject to penalties."**[14]

Coal exit certainty

- **IEEFA recommends more detail be worked through around how the medium-term projected assessment of system adequacy (MT PASA) would effectively extend the notice of closure rule.** The Panel recommends that the MT PASA be extended to five years and made public to provide more clarity around generation availability. The Panel states "This requirement to provide availability projections would have the effect of extending notice of closure from the existing 42 months to five years."[15] IEEFA considers the extension of the MT PASA to be a helpful measure; however it appears to be limited in the amount of certainty it would provide. We note that the MT PASA is subject to change – with the Panel stating that "participants include few planning outages beyond one year and tend to provide identical availability projections in years 2 and 3". Therefore, we question whether it would provide as much certainty as the notice of closure rule. The Panel should explain in further detail how this measure would act, or should act, to effectively extend the notice of closure, and if there are any penalties for not adhering to MT PASA predictions (as there are for notice of closure requirements).

- **IEEFA supports the Panel's consideration of aligning ESEM new entry with coal exits and recommends this be considered in more detail.** The Panel has outlined that the ESEM could "align new entry with retirement dates for large thermal generators."[16] This should be explored in more detail, to ensure replacement capacity is available in advance of coal exits. Further exploration by the Panel of how the ESEM would tie in with the OEMF and the strategic reserves would also be helpful.

- **IEEFA recommends the Panel consider how the strategic reserve could be tied in with coal exit timelines to provide more certainty around coal exits.** The Panel should explore how they could align the strategic reserve with coal exit dates, as this could also help ensure reserves are available to provide a buffer when coal exits.

[14] NEM Review Panel. National Electricity Market wholesale market settings review Draft Report. August 2025.
[15] Ibid. Page 147.
[16] Ibid. Page 167.

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- **<u>IEEFA recommends</u> the Panel consider in more detail how to deliver coal exit certainty.** The extension of the MT PASA may not deliver the necessary certainty (as it is subject to being updated) and the OEMF does not set out a certain comprehensive coal exit schedule stretching out into the future.

  The OEMF is designed to help keep a coal generator in the system if reliability would be breached were it to exit. To IEEFA's understanding it only covers generators that have notified that they are going to close earlier than expected. Further uncertainty is added because various aspects in the framework are subject to jurisdictional discretion (i.e. certain stages of the framework are progressed based on if the minister believes that there is the need for a backstop or if the minister believes and agreement cannot be reached[17]) and aspects of the framework are subject to change.[18]

  IEEFA recommends the Panel consider additional ways to deliver coal exit certainty. We have provided suggestions below.

  - **<u>IEEFA recommends</u> the Panel introduce a continuous "coal replacement target monitor", monitoring progress towards being able to close the next coal-fired power stations by installing new assets, alongside a requirement to close once the gap is closed.** We consider that ongoing monitoring of the reliability gap – accompanied by a commitment or rule that once the reliability gap is closed, the power station will exit (either under the OEMF[19] or another framework) – would provide much more certainty and transparency to the market around coal exits. The ongoing monitoring of the reliability gap should be regularly reported on and published publicly.

  - **<u>IEEFA recommends</u> the Panel consider introducing financial and engineering audits of coal generators to provide more certainty around coal exits.** In an earlier submission IEEFA recommended that a relevant institution *"Undertake financial and engineering audits of coal power plants to provide information on how much longer they could reasonably run for, and the costs associated."* [20] We note that the OEMF includes technical and financial due diligence reports for generators in the framework; these could be performed on all coal generators and published publicly to inform the market.[21]

[17] DCCEEW. Orderly Exit Management Framework Industry Briefing. December 2024.
[18] For example, see Office of Energy and Climate Change. Orderly Exit Management Framework Consultation Paper. December 2023. Page 30. "If the completion of the transmission project is identified as an adjustment event and it is delayed, then the duration of the voluntary agreement or Notice for Mandatory Operation may be prolonged."
[19] IEEFA notes that under the OEMF, "The Jurisdiction Minister may terminate the MOD on reasonable grounds, which is anticipated to include where they are satisfied the system needs reasons for the MOD are no longer apparent. This is to minimise market impacts and costs to consumers." DCCEEW. Orderly Exit Management Framework: Response to Stakeholder Submissions. June 2024. Page 54.
[20] IEEFA. Submission to the National Electricity Market review. 14 February 2025.
[21] DCCEEW. Orderly Exit Management Framework Consultation Paper. December 2023.

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The spot market and the treatment of price-responsive resources

Price-responsive resources' visibility and participation

- **IEEFA supports the Panel's view that "each resource should be able to choose the most suitable pathway given its characteristics."**[22]

- **IEEFA recommends further analysis and consultation with industry and consumer groups be undertaken to come to a reasonable position on the appropriate participation pathway and visibility level of different resources.** The Panel recommends that resources participate through the WDRM and IPRR frameworks. However, the IPRR framework is untested as of yet, and the WDRM framework is limited in its application. IEEFA recommends further work be done to determine the appropriate pathways for demand response to participate, and whether or not new frameworks, markets or mechanisms need to be developed, or if work needs to be done to improve existing frameworks. Further work should be done to determine: which resources should be required to participate or to be visible; what the appropriate pathways for participation or visibility would be; the costs of complying with these pathways; what is appropriate to be made mandatory; and the NEM-wide benefits of the participation of these resources.

- **IEEFA recommends the Panel complete further analysis on the costs, risks and implications of mandatory participation in certain frameworks.** There may be unintended consequences of mandatory involvement in certain frameworks. For example, a customer who is already participating in demand response through a contract with their retailer, on being required to participate via the "dispatch mode", may decide it is too expensive, too complicated or not possible to flex their demand in the way they historically have been doing, and then cease demand response altogether. Further analysis is needed on the impacts on retailers, commercial & industrial (C&I) users, consumer energy resources (CER) customers and other relevant stakeholders of mandatory involvement in certain frameworks.

Other spot market and CER recommendations by the Panel

- **IEEFA recommends the Panel consider the risks associated with taking such a long-range forward-looking view of the market price settings.** There are risks with taking such a long-range forward-looking view of the market price settings (up to 15 years as the Panel has mentioned). It relies on ability to forecast and understand energy system dynamics far into the future to set the market price settings. This could drive forecasting errors, which could deliver inefficient market price settings.

  A high Market Price Cap (MPC) incentivises investment in new technologies to bring spot prices down. However the ESEM also aims to deliver investment in new technologies.

[22] NEM Review Panel. National Electricity Market wholesale market settings review Draft Report. August 2025. Page 65.

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The NEM Review Panel should consider any duplication between these mechanisms, and whether particular mechanisms support certain technologies or services over others, given that, according to the Panel's report, "AEMC modelling has found the MPC supports the entry of traditional peaking plants like open cycle gas turbines but is unlikely to support higher-cost or more capital-intensive technologies, such as pumped hydro."[23] As the paper has suggested, it will be necessary for the Reliability Panel to "consider the impact of the ESEM and align long-term signals with other market functions".[24]

Consumer benefit observations

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

- **IEEFA supports the inclusion of simple, fair retail contracts as a suite of potential options on offer to consumers.** Our analysis suggests there could be considerable benefits from greater demand-side participation in the NEM. For consumers who are well placed to participate in the market, well designed pricing structures and incentives are key. However, there is likely to remain a large cohort of consumers who do not wish to engage in the market so actively, or who are simply unable to respond to price signals. It would be sensible for such customers to have easy access to simple, fair electricity contracts.

- **IEEFA recommends further analysis be undertaken around multi-year contracts**. While contracts of longer length provide greater certainty for consumers, they may present a different risk profile to retailers, which has implications for any premiums to consumers. Further engagement with consumer advocate groups such as Energy Consumers Australia may be advisable to understand consumer preferences on this matter. This topic may also be relevant to the ongoing Default Market Offer (DMO) review, and the Panel should ensure any recommendations account for that process.

Observation 2: Consider reforming network tariff structures to ensure they are more equitable and better aligned with wholesale market dynamics

- **IEEFA recommends household energy resources that reduce demand in peak periods be rewarded for doing so.** A recent IEEFA report found that household energy resources can provide significant value to the grid by reducing demand in peak periods and should be rewarded for doing so.[25] An appropriately-sized solar system and household battery could eliminate a home's contribution to peak demand on an average day in many regions across much of the year. This reduction in network peak demand can reduce the need for future network investment, which should be appropriately rewarded. However at present, this is not occurring. IEEFA's report stated that:

[23] Ibid. Page 114.
[24] Ibid. Page 115.
[25] IEEFA. A focus on homes, not power plants, could halve energy bills. 9 July 2025. Page 37.

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- *"Our modelling identified peak demand reduction as a key benefit of household energy upgrades. However, the rewards for providing these services are weak.*
- *"Households on a time-of-use tariff will benefit from using a battery to reduce their energy consumption in the evening, and will also have an incentive to import energy from the grid in the middle of the day. However, this benefit is modest relative to the actual wholesale value of electricity at those times of day.*
- *"Very few retailers offer a feed-in tariff that is higher in the evening period than the middle of the day. This means, after losses are considered, households lose money by exporting from their battery during the evening peak, despite this being valuable for the system as a whole.*
- *"While reforming electricity prices alone is unlikely to drive significant change, it is still essential that consumers have access to fair rewards for the services they are providing to the grid.*
- *"Improved pricing structures would provide opportunities for engaged consumers to configure their batteries to operate in ways that support the grid, or for more service providers to provide innovative solutions to automate this for consumers."*

- **IEEFA recommends the Panel scrutinise the statement** that "as greater uptake of behind the meter batteries occurs, many households will have a much lower overall consumption (including during many peak periods) **but will still use the grid almost entirely on the largest peak demand days**".[26] We suspect this statement could well be incorrect given the average size of batteries we are now seeing installed under the Federal Government's Cheaper Home Batteries Program – which now average close to 20kWh, as well as the increasing size of solar systems (average close to 9kW).[27] While peak demand conditions may lead to an increased reliance on grid electricity (compared to a yearly average), in most states a household with a 20kWh battery and 9kW solar system is not likely to be fully grid-reliant on the largest peak days. In most parts of the NEM, peak conditions currently occur on hot summer days, when there is still ample opportunity to charge batteries via rooftop solar and discharge this in the evening to reduce peak demand contributions. IEEFA's modelling identified potential challenges during winter in regions with high heating load (that may experience a winter-peaking energy system in future). However even this could be mitigated by charging batteries from the grid during the middle of the day, when wholesale prices are still likely to be low.[28]

- **IEEFA recommends the Panel reconsider the focus on transitioning to a higher fixed component in network prices, as it is not necessarily a fairer approach, and could have detrimental side effects.** Such an approach may lead to consumers with low

[26] NEM Review Panel. National Electricity Market wholesale market settings review Draft Report. August 2025. Page 215.
[27] Tristan Edis, RenewEconomy. (2025) 'Bigger home batteries are taming the solar duck – and creating more room for rooftop PV'. 11 September 2025.
[28] IEEFA. A focus on homes, not power plants, could halve energy bills. 9 July 2025. Page 21.

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energy consumption (and low peak demand contributions) paying a similar share of network costs as high-consuming customers, who typically earn higher incomes. In addition, "analysis of owned homes reveals that less well-off homes install solar at a similar or greater rate than more well-off households," so high-income households with relatively low adoption rates of solar would receive further benefit from a shift towards high fixed component network charges.[29] Shifting to a higher fixed component in network tariffs could also significantly limit consumers' opportunity to reduce their energy bills by investing in energy efficiency or CER, and may unfairly impact consumers who have already made such investments. Such investments can be beneficial for improving network utilisation and mitigating future investment needs, which could have a material impact if emerging loads like electric vehicles are regularly charged during peak demand periods.

Further, transitioning more network costs into a fixed component *conflicts* with the goals of the second part of the Panel's recommendation to offer dynamic network tariffs to manage local constraints. The Panel recommends to "facilitate distribution-level energy resources to participate in regional markets and use dynamic operating envelopes and dynamic network tariffs to manage local constraints."[30] However, by moving more of the network cost into the fixed tariff component, dynamic network tariffs would provide less of a signal to manage local constraints and support efficient market engagement.

- **IEEFA recommends the Productivity Commission undertake a review of the economic regulation of distribution networks**. The increased uptake of DER – particularly batteries – presents new opportunities for consumers to reduce their reliance on network services. Under the current regulatory approach, there is a concern that this could lead to a situation where non-DER households may pay an increasing share of network costs.[31] While moving towards fixed network prices might appear to solve this concern, it fails to solve two other fundamental issues:

  (1) whether households that legitimately reduce their reliance on network services via DER are entitled to be rewarded for this; and

  (2) whether consumers should be liable to pay down networks' regulatory asset base (RAB) in full, if those assets are overbuilt for the services that are required of them.

  IEEFA refers to its prior recommendations that a fundamental review of the way distribution networks are regulated in Australia is necessary to tackle this problem: *"The current system is based on the assumption that distribution networks are the monopoly providers of network services. However, increasingly, distributed energy resources (DER) owned by households and businesses can provide network services, including easing congestion to avoid augmentation or replacement of network infrastructure. Internationally, momentum is growing towards reform of the economic regulation of electricity networks, with overseas jurisdictions introducing contestability and payments*

[29] Mountain and Burns, Victorian Energy Policy Centre. Is rooftop solar a play-thing of the well-to-do? 2021
[30] NEM Review Panel. National Electricity Market wholesale market settings review Draft Report. August 2025. Page 78.
[31] NEM Review Panel. National Electricity Market wholesale market settings review Draft Report. August 2025. Page 218-219.

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for DER to provide network services, totex regulation and performance incentives for decarbonisation. IEEFA recommends the Productivity Commission undertake a first-principles review of the economic regulation of distribution networks, which would identify ways to ensure efficient costs of network services in a high-DER world."[32]

Observation 4: Consider extending the National Energy Customer Framework to cover new energy services, including CER aggregation, and explore the introduction of an overarching consumer duty to protect customers engaging with more complex service offerings

- **IEEFA recommends more transparency be provided to the end consumer regarding Virtual Power Plants (VPPs).** Currently there is limited transparency to the end consumer around how Virtual Power Plants (VPPs) are being operated.[33] For example, to make a fully-informed decision to enrol in a VPP, consumers would need to understand whether the revenue they are likely to earn through the VPP would exceed the revenue that could be generated via alternative strategies to manage their battery. Such information is generally not available. IEEFA recommends more transparency be introduced around VPPs.

Additional high-level comments on the review

- **IEEFA recommends the Panel consider how to ensure that emissions-intensive generators are called on to produce power as little as possible**. Low-emissions generators will need to operate more, and high-emissions generators operate less, in order to meet emissions reduction targets. A price on carbon would be the most effective way to ensure this outcome is achieved. As the Panel has mentioned, this is out of scope, but other ways to achieve this should be considered.

- **IEEFA recommends the Panel undertake analysis of the costs and benefits of the proposed mechanisms.** Assessing the costs and benefits of the ESEM, MMO, and measures to improve price-responsive resource visibility and participation would help ensure the mechanisms are robust, cost-effective, and deliver the greatest system benefits.

[32] IEEFA. Reforming the economic regulation of Australian electricity distribution networks. 31 May 2024. Page 4.
[33] IEEFA. A focus on homes, not power plants, could halve energy bills. 9 July 2025. Page 21.